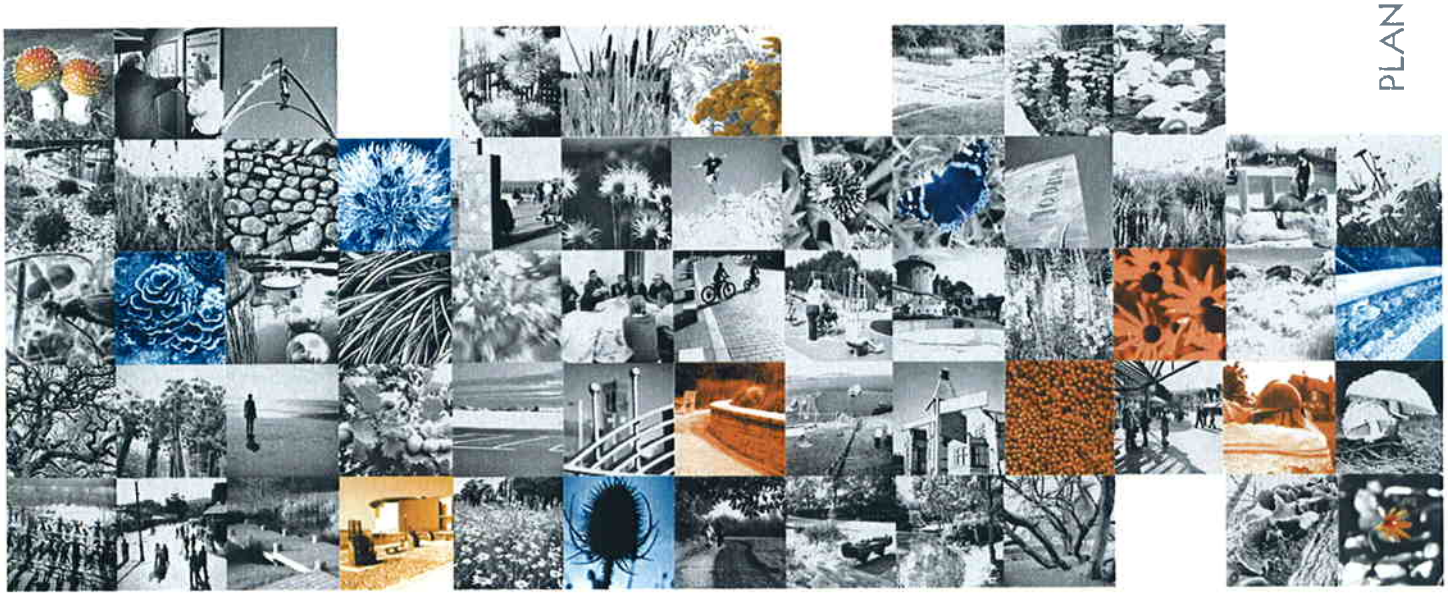
PLANNING DESIGN ENVIRONMENT



Merseybank Avenue, Chorlton
Code for Sustainable Homes Design Stage
Ecological Assessment

FINAL
August 2012

Produced for

Wates Living Space NW
The Royals
Fourth Floor
353 Altrincham Road
Sharston
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Written:	Checked:	Approved:
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Section A1: Contact Details

Ecologist's Details

Company name: TEP – The Environment Partnership

Company address: Genesis Centre
Birchwood Science Park
Warrington
WA3 7BH

Contact name: Ian Holland

Contact telephone number: 01925 844080

Developer / Client Details

Company name: Wates Living Space NW

Company address: The Royals
Fourth Floor
353 Altrincham Road
Sharston
Manchester
M22 4BJ

Contact name: Mr Ian Sharrocks

Contact telephone number: 0161 9468800

Section A2: Development Details

BRE Reference Number:
To be confirmed by the client
BRE Client Number:
To be confirmed by the client

Development Name: Merseybank Avenue, Chorlton.

Development Address: Merseybank Avenue, Chorlton, M21 7WR.

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Section B1: ecologist's qualifications

B1.1 Do you hold a degree (or equivalent qualification, e.g. N/SVQ level 5) in ecology or related subject?

Yes ☑ No ☐

If yes, please provide details: BSc (Hons) Earth and Environmental Science
MSc Environmental Management

B1.2 Are you a practising ecologist with a minimum of 3 years relevant experience within the last 5 years? *Relevant experience must clearly demonstrate a practical understanding of factors affecting ecology in relation to construction and the built environment and will include acting in an advisory capacity to provide recommendations for the ecological protection, enhancement and mitigation measures e.g. ecological impact assessments.*

Yes ☐ No ☑

If yes, please provide details

B1.3 Are you bound by a professional code of conduct and subject to peer review?[1] *I.e. a **full member** of one of the following organisations will be deemed suitable: Chartered Institution of Water and Environmental Management (CIWEM); Institute of Ecology and Environmental Management (IEEM); Institute of Environmental Management and Assessment (IEMA); Landscape Institute (LI).*

Yes ☐ No ☑

If yes, please provide details:

If 'no' has been answered for any question in Section B1 then the requirements of a 'suitably qualified ecologist' under Code for Sustainable Homes has not been met. The ecology report CANNOT be used in the Code for Sustainable Homes assessment unless it is verified by an individual who is 'suitably qualified' (see section B2 below).

[1] *Peer review is defined as the process employed by a professional body to demonstrate that potential or current **full members** maintain a standard of knowledge and experience required to ensure compliance with a code of conduct and professional ethics*

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Section B2: Report Verification

Details on verifying an ecology report for a Code for Sustainable Homes assessment

B2.1 The verifier of the report must provide written confirmation that they comply with the definition of a 'suitably qualified ecologist' (as detailed above in Section B1).

B2.2 The verifier of the report must confirm in writing they have read and reviewed the report and found it to:

a. represent sound industry practice
b. report and recommend correctly, truthfully and objectively
c. be appropriate given the local site conditions and the scope of works proposed
d. avoid invalid, biased and exaggerated statements.

B2.3 Written confirmation from the third party verifier on all the points detailed under 1 and 2 above (for section B2) must be included in an appendix to this guidance.

B2.4 The Code for Sustainable Homes ecological assessment for Merseybank Avenue has been checked and verified by Lindsey Cunniff, a suitably qualified ecologist. Please refer to Appendix 1 for written confirmation regarding the points in section B2.2 and a copy of Lindsey Cunniff's CV.

As the report has been verified by an individual who does meet these requirements it can be used in the Code for Sustainable Homes ecological assessment.

Section C: Site Survey

C.1 Have the findings of the ecology report been based on data collected from a site survey(s)[2]?

Yes ☑ No ☐

If yes, please provide details to justify this (e.g. date (s) and scope of site survey (s))[3]

As 'yes' has been answered to Question 1 of Section C then the ecology report can be used to determine compliance with the requirement of the relevant Code for Sustainable Homes credits.

[2] *The site visit(s) and survey(s) must be conducted at appropriate times of the year when it is possible to determine the presence, or evidence of the presence, of different plant and animal species*

[3] *The contents of the ecology report must be representative of the site's existing ecology immediately prior to the commencement of initial site preparation works.*

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Findings of Site Survey and Investigation

C.2 The Merseybank Avenue site covers an area of 2574m^2 and is centred on Ordnance Survey Grid Reference SJ 82667 91776. The site comprises an occupied building, fertile grassland and a number of trees around the north, south and west borders. A representative photograph is shown below.

Figure 1 – Merseybank Avenue Development Site



C.3 Details of the site layout were provided by Wates Living Space NW. A site survey was undertaken by Natasha Seaward and Richard Hughes in May 2012, after possession of the site by the developer prior to activities commencing on site. A photographic record of the site was taken during the site visit.

C.4 The site survey involved desk based analysis before undertaking a site visit to establish the site condition and its locale. A walkover survey was felt to be the most appropriate method of survey based on initial desk based analysis.

C.5 Plans provided by Wates Living Space NW and produced by TEP used to inform this assessment include:

a. Topographical drawing– reference number: 14569-3D;
b. Proposed Site – reference number: 1173-pp-site-f (No Rev);
c. Merseybank Bat Building Assessment (TEP Ref: 3456.001);
d. Merseybank Arboricultural Implications Assessment – (TEP Ref: 3456.002); and
e. Detailed Planting Plan: Drawing number D3456.003 (No Rev).

Current Ecological Significance

C.6 The Merseybank Avenue site is located in Chorlton, approximately four miles south of Manchester town centre. The local landscape is predominantly made up of residential dwellings and lowland woodland. The wider landscape consists of residential and retail buildings to the north and west with areas of woodland and grassland to the east and south.

C.7 The site is defined by Merseybank Avenue to the south and by residential buildings to the east and west. Scattered trees are located immediately outside of the northern boundary.

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C.8 The developable area in question is identified in the existing topographical drawing (reference number: 14569), located within Appendix 2 of this report and is the area on which the assessment has been based.

C.9 Figures 2 and 3 show the location of Merseybank Avenue at the local and wider landscape scale.

Figure 2 – Approximate location of Merseybank Avenue within local landscape context



©Google 2012

Approximate Merseybank Avenue site boundary

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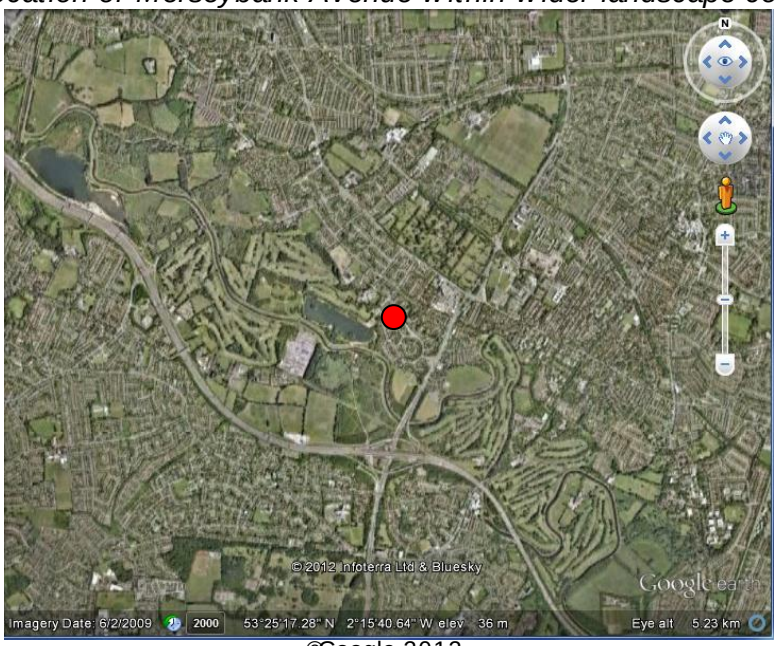
Figure 3 – Location of Merseybank Avenue within wider landscape context



©Google 2012

Approximate location of Merseybank Avenue development site.

Site Habitats

Building Footprint

C.10 The site is dominated by a building which is currently occupied located to the south of the site. A bat survey was undertaken on the building (TEP Report Ref 3456.001) and although no evidence of bats was observed during the survey, the building was considered to have moderate potential for roosting bats within the wooden soffit box that surrounds the roof on all four sides.

C.11 It has been recommended that before any works can commence that would affect the soffit boxes surrounding the building further nocturnal surveys will be required to determine the presence/absence of roosting bats. In accordance with industry best practice these surveys should comprise 2 dusk emergence and/or dawn re-entry surveys undertaken between May and September.

C.12 If no bats are found during these initial 2 surveys it can be concluded bats are not roosting within the building. If bats are found then a licence application will need to be submitted to Natural England before any works can commence.

Hardstanding

C.14 Areas of hardstanding comprise a footpath surrounding the existing building and an entrance road and car park for the site. This habitat has no ecological value.

Fertile Grassland

C.15 The site consists of fertile grassland located to the south-east and centre of the site. This habitat type is deemed to be of limited ecological value due to low structural diversity.

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Lowland Woodland (scattered broadleaved trees, shrub and scrub vegetation)

C.16 A range of species were identified on site including *cherry sp.*, sycamore, lombardy poplar, horse chestnut, red horse chestnut, common lime, Norway maple, apple, whitebeam, Swedish whitebeam, hawthorn, cherry laurel, tree of heaven, *lonicera sp.*, prunus shrub, holly, privet, bramble, cotoneaster, buddleia and common dogwood. These trees and scrub were located predominantly around the north, south and west boundaries.

C.17 Lime, hawthorn, dogwood, whitebeam, cherry, horse chestnut, red horse chestnut, apple, Swedish whitebeam, *lonicera sp.*, prunus shrub, holly, privet, buddleia, bramble and cherry laurel are native species or of known wildlife value. These trees and scrub are of ecological value due to the foraging and shelter opportunities they provide to local wildlife.

C.18 The proposed site plan (reference number: 1173-pp-site-f (No Rev)) indicates that all vegetation on site will be removed to facilitate development apart from one cherry tree located in the south-east corner and two sycamores located at the north of the site. Wates Living Space NW must ensure clearance works take place outside of the British bird breeding season[4] (March-early September), or that a nesting bird check undertaken by a suitably qualified ecologist beforehand to verify the presence/absence of nesting birds.

C.19 A number of trees are located around the boundary of the site particularly in the north-east corner and along the southern boundary. These trees are outside the developable area but should receive appropriate protection in accordance with BS5837:2012 'Trees in relation to construction'. During the construction phase of works disturbance should be kept to a minimum, taking into account the British bird breeding season.

C.20 A ground level assessment of the trees and scrub vegetation, conducted during the ecological assessment site survey (TEP reference: 3456.002) confirmed that they do not contain the features suitable to support roosting bats.

Fauna

C.21 All sites are examined to assess the likelihood that they could be used as roosting habitats for bats as it is a criminal offence to kill, injure or disturb bats, obstruct access to bat roosts, or to damage or disturb roosts (Wildlife and Countryside Act 1981, Countryside and Rights of Way Act 2000). A bat survey undertaken by TEP (Report Ref: 3456.001) identified that the soffit boxes located around the building had bat potential and so recommend a further 2 dusk emergence and/or dawn re-entry surveys be undertaken. The bat survey report should be referred to for further information.

C.22 No evidence of badger setts was recorded during the site survey and it is felt that the topography of the site is not suitable to support them.

[4] *All birds, their nests and eggs are protected by law under the Wildlife and Countryside Act 1981 – this makes it an offence, with certain exceptions , to deliberately take, damage or destroy the nest of any wild bird while it is in use or being built. It is also illegal to take and destroy the egg of any wild bird.*

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C.23 In accordance with Code for Sustainable Homes guidance, all sites are assessed for habitats which are suitable for amphibians such as great crested newts and other protected species, including water voles. There are no watercourses or bodies on the site; however, Chorlton Water Park (a lake) is approximately 270m south of the site boundary and the River Mersey is approximately 330m south west of the site.

C.24 The waterbodies are a significant distance from site and a large number of roads and residential houses form a barrier to migration. Furthermore there is limited potential on site to support great crested newts or water voles. Therefore, there are unlikely to be any implications for the development with regards to great crested newts or any other amphibians and/or water voles. If at any time however these are suspected on site then works must cease immediately and a licensed ecologist contacted.

C.25 Figures 4 and 5 show examples of the habitats found on site



Figure 4. Fertile grassland in centre of site



Figure 5. Trees located at the east of site

Section D: Details from site survey

D1.0 Evaluation Criteria for Eco1: Ecological Value of the Site

D1.1 Is the construction zone of low or insignificant ecological value[5]?

Yes ☐ No ☑

If yes, please provide a brief statement explaining how it has been deemed to be of low or insignificant value.

Assessment

D1.2 To satisfy Eco1, and obtain the 1 credit available, the developer must ensure wherever possible, development is on land that already has limited value to wildlife, discouraging the development of ecologically valuable sites.

[5] *The development site is defined as any land used for buildings, hard standing, landscaping, or site access; including areas used for temporary site storage, buildings and any other land where construction work is carried out (or land being disturbed in any way), plus a 3 metre boundary in either direction around these areas.*

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D1.3 As described in section C.10 – C.25 the site is dominated by a building, fertile grassland and scattered lowland woodland.

D1.4 The trees, shrubs and scrub vegetation in the development site consists of native species or those of known wildlife value which provide foraging and shelter for local wildlife.

D1.5 All trees, scrub and shrubs apart from one cherry tree located in the south-east corner and two sycamores located at the north of the site will be removed to facilitate the development. It must be ensured clearance works take place outside of the British bird breeding season (March – early September) or a nesting bird survey undertaken by a suitably qualified ecologist beforehand.

D1.6 A daytime bat survey was carried out on the building to be demolished. Although no evidence of bats was observed during the survey, the building was considered to have moderate potential for roosting bats within the wooden soffit box that surrounds the roof on all four sides.

D1.7 Before any works can commence that would affect this part of the building, further nocturnal surveys will be required to determine the presence/absence of roosting bats.

D1.8 In accordance with industry best practice these surveys should comprise 2 dusk emergence and/or dawn re-entry surveys undertaken in-between May and September and all recommendations should be followed as detailed in the Bat Building Assessment (Report Ref: 3456.001)

D1.9 There are no implications regarding any other protected species but if suspected on site at any time work must cease immediately and an ecologist contacted.

D1.10 The site is of ecological value due to the presence of native trees which can provide foraging and shelter for local wildlife. As the majority of features of value will be removed from site ***0 CSH credits*** *can* be awarded under Eco1.

D2.0 Evaluation Criteria for Eco2: Ecological Enhancement

D2.1 Has the developer / client required you to provide advice and recommendations for enhancing site ecology?

Yes ☑ No ☐

If yes, please provide a brief statement outlining all the key[6] recommendations and all your additional[7] recommendations

D2.2 The following recommendations have been based on the proposed site plans which identify areas of new building, hardstanding and landscaping.

D2.3 The key site recommendations, all of which must be implemented are:

[6] *Key recommendations: the client / developer will be required to adopt / implement all key recommendations.*
[7] *Additional recommendations: the client / developer will be required to adopt / implement at least 30% of additional recommendations.*

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a. pesticide use such as weedkillers, insecticides, slug pellets and fungicides are to be kept to a minimum to prevent any cumulative effects within the animal food chain;
b. implement good horticultural practice within the planting scheme e.g. use peat-free composts and mulches and application of non-residual pesticides;
c. ensure trees, shrubs and scrub vegetation are removed outside of the British bird breeding season (March – early September) or conduct a nesting bird survey beforehand to verify the presence/absence of nesting birds;
d. ensure 40% of the tree planting within the scheme is native, with a further 10% of known wildlife value;
e. ensure 30% of the shrub and herbaceous planting is native or of known wildlife value;
f. adhere to all recommendations regarding the trees on and surrounding the site as detailed in the Arboricultural Impact Assessment (Report Ref: 3456.002);
g. adhere to all recommendations regarding bats as outlined in the Bat Building Assessment (Report Ref: 3456.001); and
h. incorporate at least 2 bird or bat boxes in to the development.

D2.4 At least 2 of the following additional recommendations must be implemented:

a. ensure 60% of the shrub and herbaceous planting is native or of known wildlife value;
b. ensure 60% of all tree planting is native with a further 10% of known wildlife value;
c. incorporate a seed mix consisting of at least 5 native species or species of known wildlife value for at least 50% of areas due to be turfed;
d. incorporate at least 4 bird or bat boxes on the buildings;
e. plant native climbers on at least 10% of the building and fence elevations; and
f. plant 100 bulbs within the landscaping scheme.

Assessment of Ecological Enhancement

D2.5 If the recommendations as detailed above are implemented, then ***1 credit*** can be awarded under Eco2.

D2.6 A review of the planting schedule put forward confirms that key recommendation (d) and (e) have been achieved plus additional recommendation (b). Therefore, Wates Living Space NW must ensure key recommendations (a), (b), (c), (f), (g) and (h) and one other additional recommendation are achieved in order for the one credit available to be awarded.

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D3.0 Evaluation Criteria for Eco3: Protection of Ecological Features

D3.1 Are there any existing features / areas of ecological value[8] on the site and boundary area?

Yes☑ No ☐

If yes, please provide brief statement outlining the advice / recommendations given for protecting **all** existing features and areas of ecological value.

Assessment

D3.2 Eco3 aims to protect existing ecological features from substantial damage during the clearing of the site and completion of construction works. The following protection measures have been produced following the completion of a site visit and review of the proposed plans.

D3.3 The proposed site plan (reference number: 1173-pp-site-f (No Rev)) shows that all trees and shrub vegetation apart from one cherry tree located in the south-east corner and two sycamores located at the north of the site will be removed during the construction phase of works. Virtually all birds are protected under the *Wildlife and Countryside Act 1981*, as amended, while nesting. Potential nests and nesting birds have implications for land clearance within the site. Measures can be taken which will aid in minimising the impact and avoid injuring/killing or damaging/destructing birds and their nests. The developer must ensure they:

- carry out any necessary tree works, shrub and/or scrub clearance during autumn, winter or early spring (late September-February inclusive) to avoid the bird nesting season; and
- if clearance or tree works is required during the nesting season, an ecologist or suitably trained person must carry out checks on vegetation and the building to ensure no nesting birds are present prior to the works.

D3.4 Trees located outside of the developable area, at the north-east corner and southern boundary of the site, should be appropriately protected from damage during the clearance and construction phase of works, in accordance with BS5837:2012 'trees in relation to construction'.

The following recommendations should be implemented:

a. Trees should be protected in accordance with BS5837:2012 (*Trees in relation to construction – recommendations*); and
b. Fencing should be implemented to the tree canopies (as a minimum) to protect sufficient roots for survival and preserve their integrity until the completion of construction works (i.e. no vehicular access, storage of materials or potential contaminates within the protective area).

[8] *If a feature of ecological value is to be removed as part of the development works, e.g. site clearance, then this credit cannot be achieved. If you have deemed the development site to be of low or insignificant ecological value (Eco 1) then there will be no features of ecological value to protect. If there is an area(s) or feature(s) of low or insignificant ecological value you wish to advise be retained and enhanced / improved.*

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D3.5 All recommendations outlined in the Arboricultural Implications Assessment (Report Ref: 3456.002) should be followed. This includes (but is not limited to) recommendations regarding tree work, mitigation for the removal of trees, and post construction tree care.

D3.6 Further to this all recommendations made within the Bat Building Assessment (Report Ref: 3456.001) must be adhered to throughout the development. These are summarised below however the full reports should be referred to for further information:

- Before any work to the roof can commence, further nocturnal surveys will be required to determine the presence/absence of roosting bats.
- In accordance with industry best practice these should comprise 2 dusk emergence and/or dawn re-entry surveys undertaken in-between May and September (the optimum survey period is between May and August).
- If no bats are found during these initial 2 surveys it can be concluded bats are not roosting within the building and no further surveys will be required. If bats are found during the initial surveys then a licence application will need to be submitted to Natural England before any works can commence.

D3.7 As the proposed site plan (reference number: 1173-pp-site-f (No Rev)) shows that all native trees which are of ecological value apart from one cherry tree located in the south-east corner of the site are to be removed from the site ***0 CSH credits*** can be awarded under Eco3.

D4.0 Evaluation Criteria for Eco4: Change of Ecological Value of Site

D4.1 Are you able to provide the following information for before and after construction habitat types; and an estimate of the number of floral species present per habitat type (based on appropriate censuring techniques and confirmed planting regimes)?

Yes ☑ No ☐

D4.2 A detailed scheme has been provided by Wates Living Space NW and the following information can be provided:

a. a brief description of the landscape and habitats surrounding the development site;
b. the total site area before and after development; and
c. details of the site pre-construction.

a. description of landscape / habitats surrounding the development site

D4.3 It is important to assess the typology of the surrounding landscape as this is unlikely to change throughout the development. This site is immediately bounded by residential buildings on all sides.

b. the total site area before / after development

D4.4 The total area of the site is 2574m^2. This is will not change post development.

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c. ecological diversity if the site pre / post construction

D4.5 Tables 1 and 2 show the areas of the different habitat type pre and post construction and the associated number of species per habitat type.

*Table 1 – Site details **before** development*

Habitat Type[9]	***Area of Habitat m²***	***No. Species per habitat type***
Lowland Woodland	1217	16* (actual)
Fertile Grassland	609	11.6
Building Footprint	265	0
Hardstanding	483	0
Total:	2574	27.6

* Species identified on site which are native or of known wildlife value include: Cherry, lime, hawthorn, dogwood, horse chestnut, red horse chestnut, apple, Swedish whitebeam, cherry laurel, lonicera sp., prunus sp., holly, privet, buddleia, bramble and whitebeam.

*Table 2 – Site details **after** development*

Habitat Type	***Area of Habitat m²***	***No. Species per habitat type***
Lowland Woodland	423	15*
Building Footprint	702	0
Hardstanding	1408	0
Typical Garden Planting	41	0
Total:	2574	15

* Species identified on site which are native or of known wildlife value to be retained on site include: Cherry. Species listed on the planting schedule which are native or of known wildlife value include: carex flacca, carex nigra, deschampsia cespitosa, geranium pratense, persicaria bistorta, sedum spectabile, ilex aquifolium, lavandula angustifolia, lonicera pileata, prunus laurocerasus 'zabelliana, pyracantha coccinea, betula pendula, pyrus calleryana 'chanticleer' and narcissus pseudonarcissus.

D4.6 Only those species that are native or have wildlife value can be included within calculations, and species can be awarded to habitat types only on provision of a planting schedule.

D4.7 Has your client / developer requested you to carry out the calculation for Eco 4 Change in Ecological Value of Site[10]?

Yes ☑ No ☐

If yes, please provide all stages of calculations and state what the total change is detailing:

a. ecological calculation before development.
b. ecological calculation after development.

[9] *Habitat types will include natural areas, e.g. various grasslands and woodlands; as well as areas of the built environment, e.g. buildings, hard landscaping. The area of each habitat type when added together must always equal the total area of the development site.*

[10] *The calculation must be carried out in line with the methodology provided in the most current version of the Code for Sustainable Homes Guidance.*

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D4.8 4 credits are available under Eco4 for steps taken to minimise reductions in the ecological value of the site and to encourage improvement / enhancement. Credits are awarded as follows:

Credits Available	Criteria
1	Minor negative change: between -9 and -3
2	Neutral: between -3 and + 3
3	Minor enhancement: between + 3 and + 9
4	Major enhancement: greater than + 9

a. ecological calculation before development

D4.9 An existing site topographical drawing (reference number: 14569) has been provided by Wates Living Space NW and supplemented by habitat measurements from TEP. Table 3 shows the area of the different habitat types pre-construction and the associated number of species per habitat type.

D4.10 Fertile grassland is given a standard score of 11.6 species as defined in BRE guidance. Therefore, the site achieves a relatively high score prior to development due to the amount of grassland located on site.

*Table 3 – Ecological calculations **before** development*

A Plot type	B Area of Plot (m2)		C Species No.		D Site Score (species x plot area)
Lowland Woodland	1217	x	16	=	19472
Fertile Grassland	609	x	11.6	=	7064
Building Footprint	265	x	0	=	0
Hardstanding	483	x	0	=	0
(1) Total site area =	2574			(2) Total =	26536
				Totals Site Score / Total Site Area = (2)/(1)=	**10.31**

D4.11 The ecological diversity of the site prior to development is + 10.31.

b. ecological calculations after development

D4.12 The Detailed Planting Plan (Drawing No: D3456.003) shows that all features other than 3 trees will be removed to facilitate development.

D4.13 Areas of new landscaping have been identified as well as areas of hardstanding throughout the development. A proposed planting schedule for the development has been provided and the ecological calculations reflect this.

D4.14 Where new habitats are being created or where floral species are being planted as part of a landscape design, only those species which are native or have known attraction to local wildlife can be included in the calculations. Information within the following tables is aimed to inform the planting schedule.

D4.15 Table 4 shows the area of the different habitat types post construction. Following on from this further assessment will then be undertaken to assess the

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number of species required to enhance the sites ecological diversity and, therefore, obtain a higher score within Eco4.

*Table 4 – Ecological calculations **after** development*

A Plot type	*B Area of Plot (m2)*		*C Species No.*		*D Site Score (species x plot area)*
Lowland Woodland	423	x	15	=	6345
Building Footprint	702	x	0	=	0
Hardstanding	1408	x	0	=	0
Typical Garden Planting	41	x	0	=	0
(1) Total site area =	2574		(2) Total =		6345
Totals Site Score / Total Site Area =			**(2)/(1)=**		**2.47**

The ecological diversity of the site after development is 2.47

*Table 5 shows the **change** in ecological value prior to and post development*

Total no. of species after development		*Total no. of species before development*	*Total change in species*
2.47	-	10.31	**-7.84**

Currently the proposed development would achieve ***1 Credit*** under Eco 4 due to there being a minor negative change of between -9 and -3 species.

D4.16 Whilst further credits could be achieved, the size and nature of the Merseybank development means that the implementation and maintenance of the necessary improvements could prove costly and time consuming. It would involve a conversion from hardstanding to planting which is likely to be unfavorable with both the developer and homeowners.

D4.17 Enhancements to the development scheme will be subject to review based on amendments to the landscape scheme and planting schedule; no additional credits may be awarded until changes to the landscape scheme have been provided.

Section E: Summary

E.1 Details of the development layout were made available by Wates Living Space NW. Additionally this information was supplemented by a site and desk based study of the site. Information provided was used to inform category 9 of the BRE's Code for Sustainable Homes Assessment.

E.2 The site occupies an area of land off Merseybank Avenue and primarily comprises a pre-existing building which is currently occupied, fertile grassland and a number of trees around the north, south and west borders.

E.3 Legislative issues which are relevant to this site include:

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a. **Breeding birds**: clearance of trees, shrub and scrub vegetation must be carried out outside of the British bird breeding season (March-September).
b. **Bats**: Before any works can commence that would affect the soffit boxes surrounding the building, further nocturnal surveys will be required to determine the presence/absence of roosting bats. Please refer to the full report (Report Ref: 3456.001) for further information.
c. **Protection of trees:** All recommendations outlined in the Arboricultural Implications Assessment (Report Ref: 3456.002) should be followed. This includes (but is not limited to) those regarding tree work, mitigation for the removal of trees, and post construction tree care.
d. **Other protected species:** although the presence of other protected species is considered unlikely, if any are suspected on site at any time works must cease immediately and an ecologist must be contacted.

E.4 The site is of ecological value due to the foraging and shelter offered by native lowland woodland species. As the majority of features will be removed to facilitate development ***0 CSH credit*** *can* be awarded under Eco1.

E.5 If all key recommendations and two of the additional recommendations are implemented within the development scheme then ***1 CSH credit*** can be awarded under Eco2.

E.6 As there is an ecological value to the site and the site plan indicates the removal of all features, ***0 CSH credit*** can be awarded under Eco3.

E.7 Based on an assessment of the current landscape scheme ***1 CSH credit*** can be awarded under Eco4.

E.8 From categories Eco1 to Eco4 (inclusive), based on the current information provided a total of ***2 CSH credits*** are available to the developer providing all key and 2 additional recommendations are implemented as detailed under Eco2

E.9 If an amended scheme is to be produced further information in relation to detailed landscape scheme and planting plan alterations will need to be provided before further credits may be award.

Section F: Report Validation

Signature of validation

I confirm the information provided in this document is truthful and accurate at the time of completion.

Name of ecologist:

Signature of ecologist:

Date:

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Appendix 1:
Report Verification and Ecologist CV

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Warrington, Caernarfon, WA3 7BH

3rd August 2012

Our Ref: 3456.003/LC

Lindsey Cunniff is dealing with this matter
Direct Dial: **01925 844006**
Email: **lindseycunniff@tep.uk.com**

BREEAM Office
BRE
Garston
Watford
WD25 9XX

Dear Sir / Madam

MERSEYBANK AVENUE, CHORLTON – CODE FOR SUSTAINABLE HOMES ECOLOGICAL ASSESSMENT VERIFICATION CONFIRMATION

In accordance with the report verification section of the Merseybank Avenue Code for Sustainable Homes ecological assessment (reference 3456.003) please accept this letter as written confirmation that I comply with the criteria of a suitably qualified ecologist.

I hold a Masters degree in Landscape Planning & Management, from Manchester University, and am a Chartered Landscape Architect (Management Division). Therefore, in accordance with the suitably qualified ecologist guidelines I am bound by a code of conduct and am subject to peer review maintaining the high standards of knowledge and experience required to ensure compliance with the codes of conduct.

I have been practising ecology for over 3 years and I am a Principal Environmental Consultant in a multi-disciplinary environmental practice. I have enclosed a copy of my CV which provides detail of the wide range of environmental projects in which I have been involved.

I can confirm that I have read and reviewed the report as referenced above and can certify that the report:

- Represents sound industry practice
- Reports and makes correct, truthful and objective recommendations
- Is appropriate to the local landscape context and the scope of the development proposed
- Does not present invalid, biased or exaggerated statements.

Please accept this written confirmation as my acceptance of the content of the report in its entirety in accordance with the criteria listed above. If you have any queries then please do not hesitate to contact me and I will be happy to discuss the matter further

Yours faithfully

Lindsey Cunniff
Principal Environmental Consultant
TEP

Enc: Curriculum Vitae

carbonclear CARBON NEUTRALITY PAS 2060
ISOQAR REGISTERED Cert No. 4916 ISO 9001 ISO 14001 OHSAS 18001
INVESTOR IN PEOPLE

Directors
Ian Grimshaw BA(Hons) MA(LM) MSc CMLI MRTPI
Francis Hesketh BSc(Hons) CMLI MICFor CEnv MIEEM
Cath Neve BSc(Hons) MA(LM) CMLI

Other offices
Milton Keynes
Kent
Newcastle

PLANNING DESIGN ENVIRONMENT

LINDSEY CUNNIFF MLPM (Hons) MLI

ENVIRONMENTAL CONSULTANT

Qualifications Masters of Landscape Planning and Management, University of Manchester (2004)
Member of the Landscape Institute

Employment

2005 to date	TEP – The Environment Partnership
2004 - 2005	Landscape Manager, Groundwork

Summary

Lindsey has a Master's degree in Landscape Planning and Management, and is a Chartered Landscape Architect (Management Division). She is a proficient environmental project manager experienced in production of feasibility studies, strategy and action planning, green infrastructure planning, management plans, protected species schemes, EcoHomes and BREEAM assessments and contract management.

Lindsey understands local and landscape scale planning and management ensuring a holistic approach to green infrastructure and greenspace strategy. Further to this Lindsey has a strong understanding of applied and emerging policy and strategy at local, regional and national level ensuring that all projects accord with the strategic objectives of partners and stakeholders and that these objectives are embedded within the project.

Consultation including stakeholder workshops are often an integral part of projects delivered by TEP's environmental regeneration team. Lindsey has a wide range of experience in preparing and delivering consultation events ensuring they are tailored to both the needs of the client and the audience to which they are being addressed.

Work at TEP to date has included the ongoing development and promotion of the concept of Green Infrastructure planning. She has been involved in work in the North West, East and West Midlands and South Hampshire. Lindsey is also developing the greenspace strategy offer of TEP.

Lindsey has also been involved in a number of habitat creation and protected species projects for a number of large housing developers including Persimmon Homes and Redrow Homes. This has involved community liaison, submission of licences for the disturbance of protected species and supervision of contracts for the translocation of species.

This understanding of ecology in relation to development has allowed Lindsey to apply this knowledge to the production of EcoHomes and BREEAM assessments. Lindsey has been instrumental in the development of EcoHomes within TEP and has developed a wide client base that relies on this service ranging from assessors, house builders, housing associations and construction companies.

Lindsey has also undertaken work on behalf of English Partnerships as part of the green estates term contract. Lindsey manages the administration of a traveller management contract covering all EP land within the North of England facilitating the eviction and cleansing of sites following a traveller incursion.

Prior to commencing employment at TEP, Lindsey worked for Groundwork St Helens, Knowsley, Sefton & Liverpool this background enables her to bring a strong community dimension to the environmental regeneration team.

ENVIRONMENTAL REGENERATION

Project: East Midlands Green Infrastructure Scoping Study

Client: East Midlands Regional Assembly

Identification of a number of regeneration priority areas across the East Midlands where investment in Green Infrastructure will lead to wide public benefit. Working with stakeholders, the current provision of Green Infrastructure and the multi-functionality of the component greenspaces is being determined, together with the extent to which this provision meets accepted standards. Finally, barriers and opportunities to Green Infrastructure delivery are being identified.

Project: Making the Most of the North West Coast

Client: North West Coastal Forum

Making the Most of the North West Coast contains a suite of locally relevant, small scale projects that was originally submitted to the ERVNE programme.
The strategic and policy relevance of the MMNWC programme was investigated and, through a detailed evaluation process, the potential social, economic and environmental benefits of the programme and its constituent projects were analysed. Those projects that were most likely to efficiently deliver a range of benefits, together with an assessment of potential funding sources and a series of recommendations for the programme's implementation and long term operation were presented in a MMNWC Programme Portfolio.

Project: West Midlands Brownfield to Greenspace Scoping Study

Client: West Midlands Regional Observatory

The Brownfield to Greenspace Study sought to identify the most efficient and effective way of dealing with brownfield land in the West Midlands.
Through stakeholder consultation and strategic analysis, the potential for developing a PBRS for the region was investigated, and options put forward as to how such a system could be supported and utilised by partners across the West Midlands.

Project: Lancashire Woodland Vision

Client: Lancashire County Council

The preparation of a woodland vision for each of the Landscape Character Areas defined in the Lancashire Landscape Character Assessment and Strategy. The vision will seek to guide the development of woodlands and the associated activities across Lancashire.

Project: Stepping Stones Community Woodland and Greenspace Project

Client: Stepping Stones Countryside Management

The project looked to analyse the feasibility of establishing a community forest around Leicestershire. This involved detailed mapping of current land uses coupled with functional analysis of each parcel of land which may play a role in the development of the green infrastructure resource.
The feasibility study led to a further commission focussing on the production of a strategy and action plan which will guide the development of the community woodland and greenspace project.

Project: Sefton Key Improvement Sites

Client: Sefton Council

The delivery of a Neighbourhood Renewal Fund project focusing on the physical environmental improvement of areas of derelict, underused and neglected land highlighted by the local community as local detractors. The project is grounded in the principal of community involvement with local residents, guiding the selection of sites, the use of materials and designs to be utilised within the programme.

Project: South St Helens and North Halton Bridleway Feasibility Study

Client: St Helens Council

The production of a feasibility study to identify safe off-road routes for horse riders and cyclists following the identification of a significant deficit of safe routes within the two Boroughs. The route will be developed as a key tourism resource increasing the sustainability of the rural economy through the provision of opportunities for diversity and expansion.

LAND STEWARDSHIP

Project: **Term Consultancy for Landscape Management, Arboriculture and Traveller Liaison**

Client: **English Partnerships**

Delivery of traveller liaison services for English Partnerships covering the North of England, facilitating the eviction and ensuing cleansing of English Partnerships Land after a traveller incursion.

Project: **Kersall High School Woodland Management Plan**

Client: **Miller Homes**

Production of a woodland management plan to ensure the long term management and stewardship of an area of mature woodland adjacent to a proposed residential development. Vision and objectives were developed to guide the site management is conjunction with recommendations for the enhancement of site ecology and the proposed works and methods required to ensure the continuing enhancement of the woodland resource.

ECOLOGY

Project: **Buckton Grange Reservoir**

Client: **Redrow Homes**

The delivery of ecological support in relation to the remediation of the Buckton Grange Reservoir. Detailing ecological implications for breeding birds, invertebrates and amphibians during remedial works and putting forward recommendations for the mitigation of any possible negative effects on site ecology.

Project: **Field Farm, Buckley**

Client: **Persimmon Homes**

Provision of ecological support for the residential development of the Field Farm site. Involving the production of licences for the disturbance of great crested newts and badgers, habitat creation and mitigation works, production of site management plan, development and agreement of commuted sum figures to secure the ongoing management of the site and, letting of a capital works contract to undertake habitat enhancement works.

Project: **Pentre Lane**

Client: **Persimmon Homes**

Submission of licence for the disturbance of great crested newts and supervision of the contract on site.

Project: **Kersall High School EcoHomes**

Client: **Miller Homes**

Assessment of the change in ecological value of the former Kersall High School Site Salford identifying the ecological impact that the redevelopment of the site will have on the existing site ecology. Recommendations were put forward to the client in relation to the enhancement of the site to ensure the development has a positive impact on site ecology.

Project: **The Works BREEAM Offices**

Client: **Co-Design Architects**

Analysis of the ecological impact using BREEAM Offices guidance 2006 of the redevelopment of an area of derelict land into Office Space including recommendations for ecological enhancement of the development site. The project also involved the production of a site management plan to ensure the long-term stewardship of the landscape features within the site.

Project: **Staley House Bespoke BREEAM**

Client: **Rowlinson Construction**

Assessment of the ecological value of communal open space surrounding key worker accommodation in Stalybridge. The assessment calculated the ecological value of the site prior to after completion of the development using the ecological calculator provided by BRE. The report also included the production of a site management plan to guide long-term management of the site. The assessment was undertaken using bespoke guidance produced for the site by BRE.

Appendix 2:
Developable Area

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UNABLE TO SURVEY ALL EAVE & RIDGE
LEVELS DUE TO TREE CANOPYS

STUMP 32.01
STUMP 31.81
STUMP 31.76
AREA OF DENSE SAPPLING-LIKE TREES
C/L Ht.1.5
CAONPY LINE
BRAMBLES & DENSE FOLIAGE
STUMP 32.05
C/L Ht.0.8
32.44 Ht.10.0
31.98 Ht.10.0
32.12 Ht.15.0
32.07 Ht.12.0
32.09 Ht.7.0
32.31 Ht.15.0
32.37 Ht.15.0
32.30 Ht.15.0
32.34 Ht.15.0
32.22 Ht.15.0
32.25 Ht.8.0
32.35 Ht.10.0
32.36 Ht.13.0
32.39 Ht.9.0
PT1 382600.288E 391883.660N 32.071
PT2 382628.325E 391899.295N 31.983
SC1 382626.322E 391876.414N 31.953
SC2 382600.213E 391867.699N 32.193
SC3 382626.635E 391839.060N 32.178
SC4 382648.537E 391851.422N 31.977
SC5 382649.136E 391867.150N 32.088
PB1 382618.356E 391861.328N 31.994
BRICK WALL Ht.1.7
BRICK WALL Ht.1.5
BRICK WALL Ht.1.9
BRICK WALL Ht.0.35
BRICK PILLAR Ht.1.5
SHRUBS
HEDGE
BUSHES
GRASS
TARMAC
PAVING
BLOCK PAVING
GRAVEL
CONC
ROCK
COBBLES
RD HUMP
P/R Ht.0.25
P/R Ht.1.5
C/B Ht.1.8
C/P Ht.1.55
I/R Ht.1.2
SOFT PLAY AREA
PLANTER
SHUTTER
STEP UP
SIGN
BARLOW MOOR COMMUNITY CENTRE
MERSEYBANK AVENUE
MANOR LODGE
1-4 WATERSIDE CLOSE
MH(UTL) CL31.84
MH(UTL) CL32.09
MH(UTL) CL31.97
MH(UTL) CL32.11
MH CL32.10 IL30.68
MH CL32.05 IL30.85
IC CL32.23
MH CL31.84 IL30.44
IC/EL
EL BOX
BIN
HYD
CATV
LP
DP
GV
SV
TWL32.26
TWL32.16
THL32.14
THL32.17
EL34.49
EL34.55
EL34.56
EL36.53
EL37.14
EL38.32
EL37.73
EL37.94
EL37.10
RL38.17
RL40.04
RL41.53
RL41.57
RL39.78
RL39.09
RL39.90
RL43.14
RL43.27
RL43.90
EL39.63
EL39.64
EL39.82
EL39.65
EL36.68
EL37.68
EL36.66
EL37.23
EL37.21
EL37.22
19
26
28
34

Appendix 3
Suggested species list for planting scheme

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Suggested species lists for planting schemes (native and exotic)

a) Vascular Plants (native herbs, bulbs/tuberous and grasses/sedges)

Native Herbaceous Species suitable for housing areas (grassland, borders, shade)		
Botanical Name	**Common Name**	**Comments**
Achillea millefolium	Yarrow	
Achillea ptarmica	Sneezewort	damp
Ajuga reptans	Bugle	shade
Alliaria petiolata	Garlic mustard	shade
Cardamine flexuosa	Wavy bitter-cress	shade
Cardamine pratensis	Cuckoo-flower	damp
Centaurea nigra	Knapweed	
Eupatorium cannabinum	Hemp agrimony	
Filipendula ulmaria	Meadowsweet	damp
Galium mollugo	Hedge bedstraw	
Geranium pratensis	Meadow cranesbill	
Geranium robertianum	Herb Robert	shade
Geum urbanum	Herb Bennett	shade
Glechoma hederacea	Ground-ivy	shade
Hypericum maculatum	Imperforate SJ-wort	
Hypericum perforatum	Perforate SJ-wort	
Hypericum tetrapterum	Square-stemmed SJ	damp
Hypochaeris radicata	Cat's-ear	
Lathyrus pratensis	Meadow vetchling	
Leucanthemum vulgare	Ox-eye daisy	
Linaria vulgaris	Common toadflax	
Lotus corniculatus	Birds-foot trefoil	
Medicago lupulina	Black medick	
Myosotis sylvatica	Wood forget-me-not	
Persicaria bistorta	Bistort	
Plantago lanceolata	Ribwort plantain	
Primula vulgaris	Primrose	shade
Prunella vulgaris	Self-heal	
Pulicaria dysenterica	Fleabane	damp
Ranunculus acris	Meadow buttercup	
Rumex acetosa	Common sorrel	
Silene dioica	Red campion	
Silene vulgaris	Bladder campion	
Sonchus arvensis	Corn sow-thistle	
Stachys sylvatica	Hedge woundwort	
Stellaria holostea	Greater stitchwort	
Succisa pratensis	Devil's-bit scabious	
Trifolium pratense	Red clover	
Trifolium repens	White clover	
Veronica chamaedrys	Germander speedwell	shade
Vicia cracca	Tufted vetch	
Vicia sepium	Bush vetch	

Bulbs and Tuberous Species		
Botanical Name	**Common Name**	**Comments**
Allium ursinum	Wild garlic	shade

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Crocus nudiflorus	Autumn crocus	Non-native
Crocus vernus	Spring crocus	Non-native
Crocus x stellaris	Dutch crocus	Non-native
Galanthus nivalis	snowdrop	Non-native
Hyacinthoides non-scriptus	Bluebell	shade
Iris foetidissima	Stinking iris	
Iris pseudacorus	Yellow flag	
Muscari armeniacum	Grape-hyacinth	Non-native
Narcissus cultivars	Garden daffodil	Non-native
Narcissus pseudonarcissus	Wild daffodil	
Ornithogalum angustifolium	Star- of - Bethlehem	Non-native

Native Grass Species and Sedges		
Botanical Name	**Common Name**	**Comments**
Agrostis capillaris	Common bent	
Agrostis stolonifera	Creeping bent	damp
Alopecurus pratensis	Meadow foxtail	
Anthoxanthum odoratum	Sweet vernal-grass	
Brachypodium sylvaticum	False-brome	shade
Carex flacca	Glaucous sedge	damp
Carex hirta	Hairy sedge	
Carex nigra	Common sedge	damp
Cynosurus cristatus	Crested dog's-tail	
Deschampsia cespitosa	Tufted hairgrass	damp
Deschampsia flexuosa	Wavy hairgrass	shade
Festuca ovina	Sheep's fescue	
Festuca rubra	Red fescue	
Holcus lanatus	Yorkshire fog	
Holcus mollis	Creeping soft-grass	
Luzula campestris	Field woodrush	
Melica uniflora	Wood melick	shade
Milium effusum	Wood millet	shade
Poa annua	Annual meadowgrass	
Poa pratensis	Smooth meadowgrass	
Poa trivialis	Rough meadowgrass	

b) Woody Species: North-West, Native Trees, Shrubs and Climbers

Native Woody Species		
Botanical Name	**Common Name**	**Comments**
Alnus glutinosa	Alder	
Betula pendula	Silver birch	
Betula pubescens	Downy birch	
Corylus avellana	Hazel	
Crataegus monogyna	Hawthorn	
Cytisus scoparius	Broom	
Frangula alnus	Alder buckthorn	Damp acid area
Fraxinus excelsior	Ash	
Hedera helix	Ivy	
Ilex aquifolium	Holly	
Lonicera periclymenum	Honeysuckle	

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Malus sylvestris	Crab apple	
Populus nigra betulifolia	Black poplar	Not N of Ribble
Populus tremula	Aspen	
Prunus avium	Wild cherry	
Prunus spinosa	Blackthorn	
Quercus petraea	Sessile oak	
Quercus robur	Oak	
Rosa arvensis	Field rose	
Rosa canina agg.	Dog-rose	
Rosa pimpinellifolia	Burnet rose	
Rubus fruticosus	Bramble	
Rubus idaeus	Raspberry	
Salix caprea	Goat willow	
Salix cinerea	Grey willow	
Salix pentandra	Bay willow	
Salix purpurea	Purple willow	
Salix repens	Creeping willow	
Sambucus nigra	Elder	
Solanum dulcamara	Bittersweet	
Sorbus aucuparia	Mountain ash	
Taxus baccata	Yew	
Tilia cordata	Small-leaved lime	
Ulex europaeus	Gorse	
Ulmus glabra	Wych elm	
Viburnum opulus	Guelder-rose	
Long-established exotics (Archaeophytes)		
Salix alba	White willow	
Salix fragilis	Crack willow	
Salix viminalis	Osier	
Tilia x europaea	Lime	

c) Exotic Wildlife Friendly Species,
From "Gardening with Wildlife in Mind", English Nature, 2005

Exotic Herbaceous Species suitable for attracting wildlife to housing areas		
Botanical Name	**Common Name**	**Comments**
Aubretia deltoidea	Aubretia	
Monarda didyma	Bergamot	
Rudbeckia hirta	Black-eyed Susan	
Borago officinalis	Borage	
Primula chungensis	Candelabra primula sp	Damp areas
Cynara cardunculus	Cardoon	
Nepeta x faassenii	Catmint	
Malva sylvestris	Common mallow	
Chrysanthmum segetum	Corn marigold	
Onopordon acanthium	Cotton thistle	
Euphorbia cyparissias	Cypress spurge	
Hesperis matronalis	Dame's violet	
Verbascum nigrum	Dark mullein	
Lamium orvala	Dead-nettle	
Foeniculum vulgare	Fennel	
Tanacetum parthenium	Feverfew	

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Geranium renardii	French cranesbill	
Centaurea macrocephala	Giant hardhead	
Cephalaria gigantea	Giant scabious	
Echinops bannaticus	Globe thistle	
Solidago spp	Goldenrod species	
Lunaria biennis	Honesty	
Sedum spectabile	Ice-plant	
Stachys lanata	Lambs lugs	
Melissa officinalis	Lemon balm	
Pulmonaria officinalis	Lungwort	
Aster spp	Michaelmas daisies	Single varieties only
Linaria purpurea	Purple toadflax	
Centranthus ruber	Red valerian	
Geranium macrorrhizum	Rock cranesbill	
Mentha suaveolens	Round-leaved mint	
Salvia officinalis	Sage	
Saponaria officinalis	Soapwort	
Scabiosa atropurpurea	Sweet scabious	
Symphytum tubersosum	Tuberous comfrey	
Lamium album	White deadnettle	
Achillea filipendulina Gold Plate	Yarrow	

Exotic Shrub and Tree Species suitable for attracting wildlife to housing areas		
Botanical Name	**Common Name**	**Comments**
Berberis x stenophylla	Berberis	
Ceonothus divergens	Californian lilac	
Caryopteris x clandonensis	Caryopteris	
Prunus lauroceraus	Cherry laurel	
Clematis tangutica	Clematis species	Climber
Clematis montana	Clematis species	Climber
Olearia macrodonta	Daisy-bush species	
Escallonia spp	Escallonia species	
Pyracantha angustifolia	Firethorn	
Ribes sanguineum	Flowering currant	
Fuchsia magellanica	Fuchsia	
Hebe Midsummer beauty	Hebe	
Leycesteria formosa	Himalayan honeysuckle	
Amelanchier lamarckii	June-berry	
Lavandula angustifolia	Lavender	
Choisya ternata	Mexican orange-blossom	
Myrtus communis	Myrtle	
Pyrus communis	Pear	
Rosmarinus officinalis	Rosemary	
Pinus sylvestris	Scot's pine	
Cotoneaster fridgidus	Tree cotoneaster	
Parthenocissus quinquefolia	Virginia creeper	

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Appendix 4:
Information on Bird and Bat Boxes

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Bird Boxes

Schwegler 1B Bird Box, natural brown



The most popular box for garden birds, the 1B appeals to a wide range of species, and is the official nest box of National Nest Box Week. The box can be nailed to the trunk of a tree, or hung from a branch. Schwegler boxes have the highest occupation rates of all box types. They are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting. They can be expected to last 25 years or more without maintenance. With standard 32mm diameter entrance hole

£19.96 net ***£23.95 inc VAT***

The Bird House



A decorative yet practical nest box designed for fixing to a tree trunk, wall or fence using the bracket on the back. It will attract similar species to the standard 1B box. Robust and durable Schwegler woodcrete construction

£29.12 net, ***£34.94 inc VAT***

Pembroke FSC Nest Box



A traditional nest box with a gable roof and 32mm entrance hole. Made of FSC softwood, external dimensions 14.5cm x 14.5cm x 26cm high (to top of gable). Suitable House and Tree Sparrows, Blue and Great Tits, Nuthatches and Pied Flycatchers.

£8.47 net, ***£9.95 inc VAT***

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Wooden Bird Box

A simple wooden bird box with sloping roof, suitable for the smaller garden birds. Made from substantial 2cm thick softwood. 14cm w x 18cm d x 26cm h (backplate 33.5cm h). The standard model has a 32mm diameter entrance hole attractive to a wide range of smaller garden birds.

£8.47 net, ***£9.95 inc VAT***



Schwegler ISP Sparrow Terrace, Stone Colour

Provides insulated accommodation for up to 3 families of sparrows. House sparrows are gregarious and prefer to nest close to each other. Made from long-lasting, breathable woodcrete. Stone colour.
No maintenance required.
Designed for fixing to walls (not suitable for fences or sheds due to the weight of the box).

£58.29 net ***£69.95 inc VAT***



Schwegler 9A House Martin Double Nest

These woodcrete nests are durable and ready for immediate use when birds return each summer. Easily fixed under the eaves on the outside walls of buildings, at least 2 metres from the ground. The backing board may be painted to match the building.
Model 9A is a double unit with two nests mounted side by side on a backing board, as shown. Model 9B is similar to the 9A above but with one single nest

£24.96 net ***£29.95 inc VAT***
Schwegler 9B Single House Martin Nest
£15.28 net ***£18.34 inc VAT***



Positioning considerations: Bird boxes should be positioned facing in a south-east to

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north direction to avoid high temperatures, with a clear flight path to the nest without any clutter directly in front of the entrance. Tilt the box forward slightly so that any driving rain will hit the roof and bounce clear.

Bat Boxes

Schwegler 1FQ Bat Roost



The 1FQ from Schwegler is an attractive bat box designed specifically to be fitted to an external wall of a house, barn or other building.

Inside the box, rough pieces of wood are incorporated into the back of the box which are good insulators and are used by the bats as perches. The internal layout offers three different areas with varying degrees of brightness and temperature.

This durable box is easy to attach to most walls, requires no maintenance or cleaning and will last for decades.

£70.79 net ***£84.95 inc VAT***

Schwegler 1FF Bat Box



The rectangular shape of the 1FF bat box makes it suitable for either trees or buildings. It can be attached to the sides of buildings or in sites such as underneath bridges.

The box provides a natural stable environment for roosting bats. The flatness of this box provides a narrow crevice-like internal space suitable for Pipistrelle and Noctule.

£49.96 net ***£59.95 inc VAT***

Positioning Considerations: Bat boxes should be located where they will receive the maximum amount of sunlight (south, south-west and south-east). However, it is helpful to install 2 or 3 boxes in more than one aspect to allow a choice of roosting conditions and provide a range of temperate. The bat boxes should be a minimum of 2 meters above ground and avoid placing above windows, doors and wall climbing plants.

Suppliers (prices correct as of April 2012):

Alana Ecology
www.alanaecology.com

The Code Store
www.thecodestore.co.uk

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Appendix 5:
Wildlife Garden Appendices

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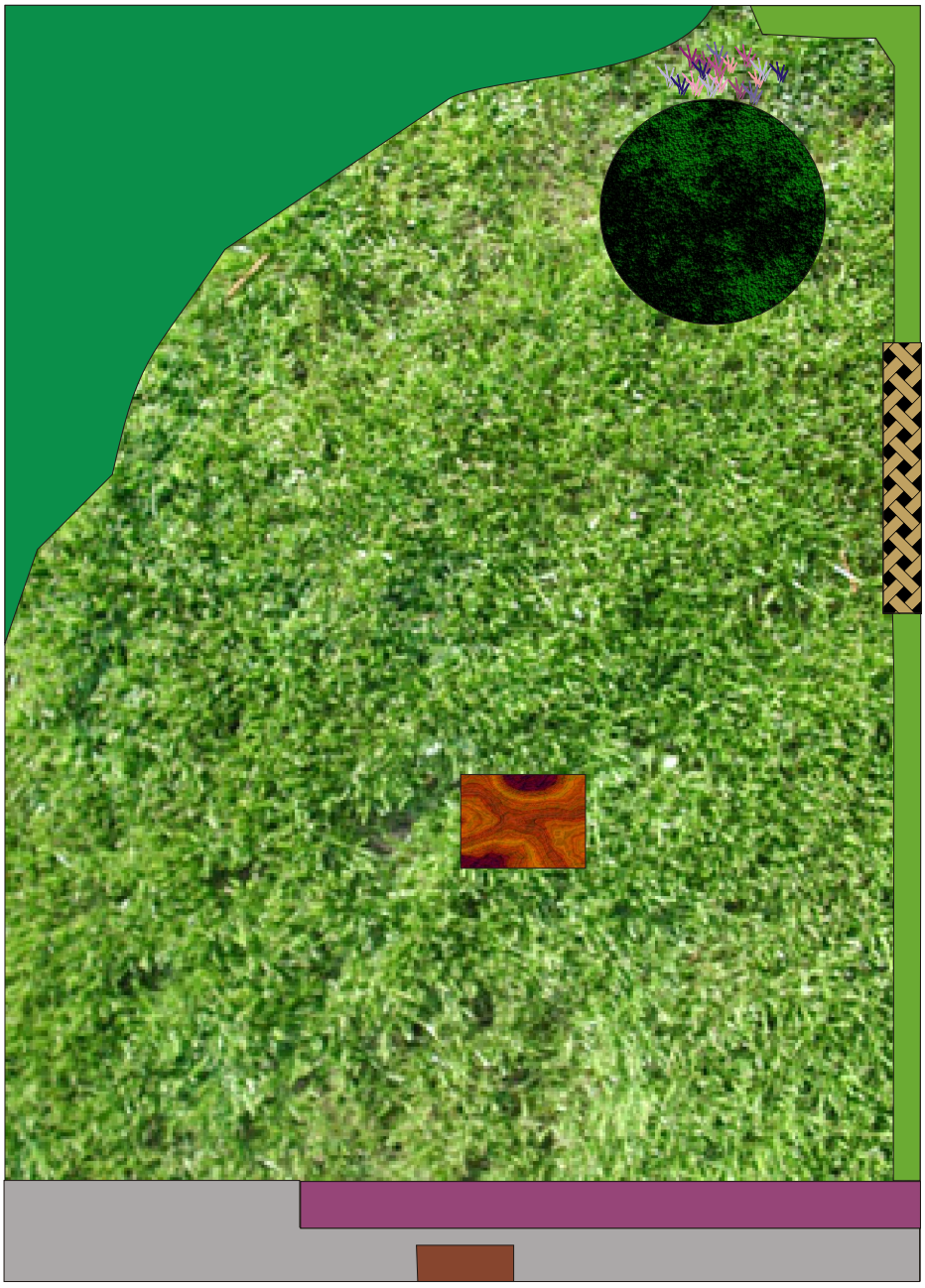
Wildlife Garden Planting

The diagram below illustrates how wildlife friendly features could be added into new gardens. It would not be necessary for a garden to have all of the features illustrated in the diagram below for it to be considered as having wildlife value, however each of the elements bulleted here should be included.

- At least 70% of planting must be native or of known wildlife value (see appendix 3)
- To encourage structural diversity each garden should include a native tree, native hedge or pergola with trained native climbers
- Shelter for local fauna must be provided in the form of a bat or bird box (see appendix 3)
- Foraging opportunities must be available in the form of a fruit/berry producing plant or a bird table
- At least one planting bed should be incorporated within the garden design and this bed should range in width to encourage planting for structural diversity
- pesticide use such as weedkillers, insecticides, slug pellets and fungicides are to be kept to a minimum to prevent any cumulative effects within the animal food chain; and
- good horticultural practice should be implemented within the planting scheme e.g. use peat-free composts and mulches and application of non-residual pesticides.

A lawn accented by native plants, varying in species and height provides nectar and pollen for insects throughout the spring & summer and seeds for birds in autumn. Planting bright sensory species alongside hardstanding is visually appealing and attracts butterflies, bees and other insects. Since cavities in mature trees are becoming increasingly scarce the introduction of bird boxes encourages tits into gardens. A list of native plant species and species of known wildlife value can be found in appendix 3 of the report.



Key

- Asymmetrical Lawn
- Native Tree (avoid forest canopy species)
- Bird table
- Native hedge
- A broad structured planting bed
- Hardstanding
- Bulb Planting beneath tree or hedge canopies
- Trelis or perolga with native climbers
- Bird box, bat box or sparrow terrace
- Scented bedding plants & Cottage flowers richer in nectar than modern cultivars

Whilst we appreciate that the success of each individual garden will depend on its future management, introducing native plants & structure into new housing developments will benefit the local fauna and lesson the ecological impact clearance and construction activities.