The Barge, Runcorn – Code for Sustainable Homes Assessment.
Keepmoat Homes.
The report and the site assessments carried out by Ecus on behalf of the client in accordance with the agreed terms of contract and/or written agreement form the agreed Services. The Services were performed by Ecus with the skill and care ordinarily exercised by a reasonable Environmental Consultant at the time the Services were performed. Further, and in particular, the Services were performed by Ecus taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between Ecus and the client.

Other than that expressly contained in the paragraph above, Ecus provides no other representation or warranty whether express or implied, in relation to the services.

This report is produced exclusively for the purposes of the client. Ecus is not aware of any interest of or reliance by any party other than the client in or on the services. Unless expressly provided in writing, Ecus does not authorise, consent or condone any party other than the client relying upon the services provided. Any reliance on the services or any part of the services by any party other than the client is made wholly at that party’s own and sole risk and Ecus disclaims any liability to such parties.

This report is based on site conditions, regulatory or other legal provisions, technology or economic conditions at the time of the Service provision. These conditions can change with time and reliance on the findings of the Services under changing conditions should be reviewed.

Ecus accepts no responsibility for the accuracy of third party data used in this report.
Please read the following before completing the report:

- This report template is to be used by Suitably Qualified Ecologist's providing reports which address Ecology 1, 2, 3 and 4 issues. It as a mandatory requirement that this document is completed in a Code for Sustainable Homes submission of evidence (CSH 2007 p 187).

- The appointed, licensed Code assessor is to pass this document to the appointed ecologist who conducted/will conduct the ecology work.

- The appointed ecologist is to complete all sections of this report and return it completed with all relevant documentation in the Appendix to the assessor.

- An ecologist may have been appointed to carry out ecological site surveys and to produce an ecology report without being aware that a Code assessment has been, or is to be conducted. In this instance, the ecologist should fill in the relevant details required for the Code in this report template.

- The assessor is to use this report in conjunction with the latest version of the relevant Code Guidance and information provided by the developer/client, to carry out the assessment for the Ecology Category issues stated above.

- There are 6 sections (sections A - F) in this document.

- Section A1 requires contact details for the ecologist and developer/client; section A2 requires the development details.

- Section B1 determines whether the appointed ecologist is ‘suitably qualified’ (under the Code); and if not, section B2 determines whether the report has been verified by an ecologist who is ‘suitably qualified’.

- Section C determines whether the findings of the report have been based on data collected from site surveys conducted at appropriate times of the year to determine whether different species are evident.
  (Note: If ‘No’ is recorded for either Section B or C then the contents of the ecology report cannot be used to determine compliance with the Code requirements).

- Section D provides the assessor with the necessary information to base the assessment on for the various Ecology credits.

- Section E provides details of the documentation/information to be included within the appendix of this guidance.

- Section F requires the signature of the appointed ecologist who has completed this document.
Section A1: Contact Details

Ecologist’s Details
Company name: Ecus Limited
Company address: Brook Holt, 3 Blackburn Road, Sheffield, S61 2DW
Contact name: Helen Lloyd
Contact telephone number: 0114 2669292
Ecology Report Reference: 3436

Developer / Client Details
Company name: Keepmoat Homes
Company address: Windward Drive, Estuary Park, Speke, Liverpool, L24 8RF
Contact name: Mike Mercer
Contact telephone number: 0151 728 1250

Section A2: Development Details

BRE Reference Number:
Client Reference Number:
Development Name:
Development Address:
Section B1: Suitably Qualified Ecologist’s Qualifications

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) Physical Geography 2:2

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 ecological protection, enhancement and mitigation measures, e.g. ecological impact assessments.

Yes ☒ No ☐

If Yes, please provide details: Helen is an assistant ecologist at Ecus Ltd and has been continually employed as an ecologist since early 2007. Helen regularly undertakes site surveys/assessments in relation to construction and the built environment and undertakes ecological impact assessments as part of her daily works. She provides advice and recommendations for ecological protection, enhancement and mitigation as part of routine reporting.

Are you bound by a professional code of conduct and subject to peer review*?

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: (Associate member of the Institute of Ecology and Environmental Management (AIEEM).

*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.

Note: If the answer to any question in Section B1 is ‘No’ then the ecologist writing the report does not meet the requirements of a Suitably Qualified Ecologist under the Code. The ecology report therefore cannot be used in the Code assessment unless it is verified by a ‘Suitably Qualified Ecologist’. If this is the case, proceed to Section B2.

If the ecologist does meet the requirements of a Suitably Qualified Ecologist, proceed to Section C.

Section B2: Report Verification

If the appointed ecologist does not meet the requirements of a Suitably Qualified Ecologist, the report must be verified by an individual who does meet these requirements. Otherwise the ecology report cannot be used in the Code assessment.

1. The person who verifies the report must provide written confirmation that they meet the requirements of a Suitably Qualified Ecologist in accordance with Section B1 above.

2. Details on verifying an ecology report for a Code assessment:
The individual verifying the report must provide written confirmation that they comply with the definition of a Suitably Qualified Ecologist (as detailed above in Section B1).

The individual verifying the report must confirm in writing they have read and reviewed the report and found it to:
- represent sound industry practice
- report and recommend correctly, truthfully, and objectively
- be appropriate given the local site conditions and scope of works proposed
- avoid invalid, biased, and exaggerated statements.

Written confirmation from the third party verifier on all the points detailed under 1 and 2 above (for Section B2) must be included in the Appendix to this report (see Section E).
Section C: Site Survey

Have the findings of the ecology report been based on data collected from a site survey(s)?

Yes ☒ No ☐

If yes, please provide details to confirm this (e.g. date(s) and scope of site survey(s))
The site was surveyed by Mark Witherall, an experienced Ecus Ltd ecologist, on 13th December 2011.

Note: If ‘No’ has been answered to Question 1 of Section C the ecology report cannot be used to determine compliance with the requirements of the relevant Code credits.

On what date did/will initial site preparation works commence? / /

Note: If the site survey was carried out after initial site preparation works commenced, the ecology report cannot be used to determine compliance with the requirements of the relevant Code credits.

Note to Suitably Qualified Ecologist and the Code assessor: 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.
Section D: Details from the Site Survey

Eco 1 Ecological Value of Site
Is the construction zone of low or insignificant ecological value?
The construction zone includes any land used for buildings, hard standing, landscaping, site access 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. It also includes any areas used for temporary site storage and buildings.

Yes ☑️ No ☒️

The site comprises tall ruderal vegetation, scattered scrub, grouped trees and an area of bare substrate/hard standing where a public house building previously stood. The Bridgewater Canal is adjacent to the north and connectivity with a large lake to the east is present. Species diversity is moderate, although the majority of habitats comprise common species of limited intrinsic botanical value. The semi-mature to mature trees on site qualify as features of ecological value under BRE criteria (with trunk diameters of greater than 100 mm).

Although the trees along the southern boundary edge are to be retained, those towards the centre of the site are to be removed and therefore it is considered that the credit for Eco 1 cannot be awarded.

If yes, is there any land outside the construction zone but inside the development site of ecological value?

Yes ☒️ No ☐️

Please give details:

The Bridgewater Canal lies adjacent to the site along the northern boundary.

If yes, is it possible for all areas / features of ecological value to remain undisturbed by the construction works?

Yes ☒️ No ☐️

An exclusion zone should be set up a minimum of 10 m from the edge of the canal to avoid compaction of canal side habitats. Any required storage of chemicals or materials should occur as far as possible from the canal side of the site.
Eco 2 Ecological Enhancement

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

[ ] Yes  [x] No

If yes, please provide a brief statement outlining all of your KEY recommendations*:

1. It is anticipated that the trees along the southern boundary of the site are to be retained. In accordance with British Standard: 5837: Trees in Relation to Construction, any trees to be retained should have a Root Protection Zone (RPZ) calculated and fenced off to prevent harm to, and failure of, the tree during and post construction.

2. Tree species diversity is comparatively low compared to the size of the site and currently has a high proportion of non-native species. Enhancement of any retained trees through inclusion of a variety of additional native tree species, where practicable, in the landscaping scheme would be considered a beneficial ecological enhancement. The species included should be native, appropriate to the local area and of UK provenance where possible. Appropriate tree species may include crab apple (Malus sylvestris), ash (Fraxinus excelsior), beech (Fagus sylvatica), rowan (Sorbus aucuparia), wild cherry (Prunus avium), bird cherry (Prunus padus) and field maple (Acer campestre).

   Please note, this list is not exhaustive.

3. Installation of a variety of woodcrete bird boxes on site is recommended to enhance the nesting opportunity for birds resident within the local area, particularly whilst new habitat establishes.

   Boxes should include general purpose bird boxes with a 32 mm entrance hole, suitable for a variety of common, garden type bird species. All boxes should be placed a minimum of 3.5 m from the ground and should offer a clear flight line to and from the box. North facing aspects should be avoided and true south facing aspects, which are likely to receive full sun, should also be avoided to prevent boxes overheating in the summer months.

   It is recommended that seven houses across the scheme have bird boxes installed and that a total of five boxes be erected on the trunks of retained mature trees within the site boundary.

4. There is suitable hedgehog foraging and nesting habitat on site, with connectivity links to and from the nearby woodland and wider area. It is recommended that a minimum of one hedgehog box is installed in a suitable location on site prior to commencement of site works to provide a receptor site should hedgehogs be found during site clearance and provide nesting opportunity during the winter months and post construction.

Please provide a brief statement outlining all of your ADDITIONAL recommendations*:

1. Species-rich, native hedgerows provide a valuable habitat and foraging resource for a variety of species, including invertebrates, small mammals, birds and bats. Consideration should be given to incorporating hedgerows as an alternative, or in addition to, fencing. The hedge should contain a mix of native species and should be planted in a double staggered row with a planting density of 5 hedgerow plants per linear metre. Species suitable for inclusion within the hedgerow may include hawthorn, blackthorn, hazel (Corylus avellana), holly (Ilex aquifolium), guelder rose (Viburnum opulus), field rose (Rosa arvense) and field maple (Acer campestre).

   As an alternative, lower maintenance option if necessary, a single native species hedgerow such as beech or holly can still provide an ecological enhancement.

2. Incorporating bat roosting provision within the fabric of new build housing provides discreet and
secure roosting opportunities for bats in the local area and is preferential to external bat boxes. Suggested models include specialist Ibstock bat bricks, Schwegler 1FR and 2FR bat tubes and ‘Ecosurv’ bat boxes (available through Ecus Ltd). These can provide a self-contained cavity for roosting bats to occupy but do not provide access into the cavity walls or roof voids. Bricks or tubes should be positioned at a minimum of 4 m from the ground, ideally on south west facing aspects, with unobstructed access and avoiding heavily lit areas. It is recommended that roosting provision should be incorporated within eight houses across the scheme. Final positioning should be determined by an ecologist.

* The client / developer will be required to adopt / implement all KEY recommendations and 30% of ADDITIONAL recommendations.
Eco 3 Protection of Ecological Features

Note: Eco 3 looks at protecting all existing features / areas of ecological value on the site and boundary area. 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 whole development site to be of poor ecological value then there will be no features of ecological value to protect. If the construction zone is of low ecological value but the wider site is not, give protection measures here. If there is an area(s) or feature(s) of low or insignificant ecological value you wish to advise be retained and enhanced / improved, e.g. a species-poor hedgerow to a species-rich hedgerow, then full details of this advice should be entered as a recommendation under Eco 2 Ecological Enhancement.

Are there any existing features/ areas of ecological value on the site or at the boundary of the site?

Yes ☒ No ☐

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

The mature trees on site add structural diversity and provide a nesting resource for birds and foraging resource for birds and bats within the surrounding area. It is recommended that the mature trees are retained where feasible. In accordance with British Standard: 5837: Trees in Relation to Construction, any trees to be retained should have a Root Protection Zone (RPZ) calculated and fenced off to prevent harm to, and failure of, the tree during and post construction.

Are any ecological features to be relocated on the site?

Yes ☐ No ☒

If yes, please provide a brief statement outlining the reasons for relocation and recommendations for protecting the ecological features:

…N/A
Eco 4 Change of Ecological Value of Site

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 censusing techniques and confirmed planting regimes)?

Yes ☒ No ☐

If yes, please provide the following information:

a. A brief description of the landscape and habitats surrounding the development site: See Eco1

b. The total site area (this will be the same both before and after development): 23067m²

c. Provide details of the site before development in the table below:

* 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.

Has your client / developer requested you to carry out the calculation for Eco 4 Change in Ecological Value of Site? The calculation must be carried out in line with the methodology provided in the most current version of the Code Guidance.

Yes ☒ No ☐

If yes, please complete the tables below:

<table>
<thead>
<tr>
<th>Existing Plot Types</th>
<th>Area of Plot (m²)</th>
<th>Number of Species</th>
<th>Species x Area of Plot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall ruderal vegetation/scrub/trees</td>
<td>17764</td>
<td>30</td>
<td>532920</td>
</tr>
<tr>
<td>Bare ground/Hard standing</td>
<td>5303</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(1) Total site area</td>
<td>23067</td>
<td>(2) Total</td>
<td>532920</td>
</tr>
<tr>
<td>Species Before Development</td>
<td></td>
<td></td>
<td>23.10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plot Types Post Development</th>
<th>Area of Plot (m²)</th>
<th>Number of Species</th>
<th>Species x Area of Plot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft landscape planting</td>
<td>11153</td>
<td>42</td>
<td>468426</td>
</tr>
<tr>
<td>Buildings/hardstanding</td>
<td>11914</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(1) Total site area</td>
<td>23067</td>
<td>(2) Total</td>
<td>468426</td>
</tr>
<tr>
<td>Species After Development</td>
<td></td>
<td></td>
<td>20.31</td>
</tr>
</tbody>
</table>

Species after development – Species before development 20.31 – 23.10 = -2.79

The above existing number of species (30) is based upon the site walkover visit undertaken by Ecus Ltd in December 2011. The above figure of 42 suitable native/wildlife attracting species post development is based upon the current proposed planting schedule (Ecus Ltd, March 2012).
A maximum of four credits are potentially available under Eco 4. The number of credits actually available is dependent upon the calculated change in ecological value, as indicated below:

-9 to -3 species = 1 credit
-3 to +3 = 2 credits
+3 to +9 = 3 credits
> +9 species = 4 credits.

A change in ecological value of -2.80, as shown above, can be awarded 2 credits under Eco 4.
Section E: Appendix

The required documentation to be included within the appendix of this guidance document will include: the ecology report; written confirmation from the verifier of the ecology report (where necessary); and any supplementary documentation, e.g. ecologist’s curriculum vitae; maps, plans, drawings, letters / emails of correspondence, etc. Please include these details along with the appropriate reference to each document in the table below:

Verification Letter
Survey Findings Plan
Section F: Signature of Validation

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

Name of ecologist Helen Lloyd

Signature of ecologist: Date 27th March 2012