BRIEFING NOTE
BIRCHALL GARDEN SUBURB - ECOLOGICAL BASELINE

This note accompanies the completed baseline reports prepared on behalf of Tarmac Trading Ltd. These have been prepared in order to advise a full and detailed Ecological Impact Assessment for the proposed Birchall Garden Suburb Development which lies east of Welwyn Garden City.

Prior to the commencement of the programme of detailed surveys undertaken on behalf of Tarmac Trading Ltd no organised or formal gathering of ecological data had taken place within the Application Site. The data generated from these surveys and studies has been used to inform and guide the masterplanning process at the site and to ensure that the scheme design has been developed in a way that not only minimises potential impacts but also identifies opportunities for significant biodiversity gains.

Ecological Data Gathering at Birchall Garden Suburb

The following list of studies/reports have been provided.

- 2017 Ecological Data search/desktop study from Hertfordshire (HERC);
- Phase 1 Habitat and Flora Survey Report 2011-2014;
- Amphibian Survey 2014;
- Amphibian Survey 2017;
- Bird Survey 2014-2016;
- Dormouse Survey 2014;
- Bat Survey 2014, 2015 and 2016;
- Badger Survey 2017;
- Invertebrate Survey 2014;
- Reptile Survey 2014-2016;
- Reptile Survey 2017;
- Watervole Survey 2014-2015;
- Watervole Survey 2017.

A summary of the key findings is as follows:

2017 Ecological Data search/desktop study from Hertfordshire (HERC)

Data on protected sites and records of flora and fauna have been obtained principally from the Hertfordshire Environmental Records Centre for at least a 2km area of search around the site. This data was first obtained in 2014 and it was refreshed in 2016 and 2017 to ensure it is current for this Ecological Impact Assessment.

There are no statutory wildlife sites within the Application Site. Directly adjacent to the Application Site to the South west is The Commons Local Nature Reserve. A Local Nature Reserve (LNR) is a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act, 1949. LNRs can be declared by local authorities rather than by the national conservation body (Natural England). Though they are designated through a statutory process they do not need to meet the

criteria of a SSSI for their nature conservation value and their primary reason for designation is for their value to the public as a resource for amenity use, education or research.

There are two Local Wildlife Sites within the Application Site and three adjacent to it. The scheme has been carefully designed to avoid impacts upon these sites. There are some areas of semi-natural Ancient Woodland within the Application Site and these too have been protected through careful scheme design.

The species records received in the HERC data, that have often been provided by local specialist groups such as the badger group, has been reviewed as part of those other specialist studies set out below.

Phase 1 Habitat and Flora Survey

Undertaken by Philip Parker Associates in May and June 2011 and then updated through visits in March, June, August and October 2014. The site has then been visited by SLR ecologists in Spring 2017 to ground truth and check that the site has not changed significantly since the original survey was prepared. In summary the work comprised a habitat recording and mapping exercise following standard Phase 1 habitat survey methods. Additional to this, botanical species of note were recorded separately and hedgerows have been assessed separately against the Hedgerow Regulations 1997 criteria. In some instances some higher value habitats have been categorized into the National Vegetation Classification system community types.

In summary the site has two very contrasting halves, to the north of Birchall Lane the land is dominated by arable production whereas to the south there are large areas of restored grassland habitat on the former landfill. Also associated with the restored landfill are areas of tree planting and ponds. Off the landfill area in the south are lower lying areas of arable land. A number of blocks of broadleaved woodland exist in the centre and northern part of the site. Hedgerows are typically gappy but some mature trees are scattered within existing and along former hedgelines. There are several notable plant species at the site that have values from local through to county level.

Much of the habitat and species diversity in the southern part of the site is a result of the restoration of the landfill site and associated landscape features around it such as ponds, scrub and woodland.

The layout of the scheme has ensured that losses to key habitats/species have been minimised and reduced to the absolute minimum.

Amphibian Surveys

Surveys were undertaken by Philip Parker Associates in 2014 covered a total of 34 ponds that were identified from a desk-top study (inside and outside the Application Site). The Study Area covered identified ponds within 500m of the Application Site apart from those the other side of the A414 which is considered a significant barrier to this species. A further update survey of ponds within the site following a method agreed with Hertfordshire Ecology was undertaken in the spring of 2017 by SLR.

Great crested newt were recorded from two ponds within the Application Site boundary, neither are impacted by the built development and significant areas of terrestrial habitat around them shall be retained. There are also ponds outside the Application Site, where great crested newts have been

recorded, again, the ponds and surrounding terrestrial habitats around them are safeguarded by the scheme design.

Bird Surveys

Philip Parker Associates undertook surveys between 2014 and 2016 to establish a baseline of breeding and wintering birds at the site. The technique chosen was broadly based on the Common Bird Census techniques in that the presence of all birds on site was recorded to the habitat reference. Four visits were undertaken between April 2014 and June 2014 by an experienced bird surveyor.

Further to this two wintering bird surveys were undertaken in December 2015 and again in January 2016. A review of the habitats at the site in 2017 confirmed that no significant changes had occurred since the bird surveys have been undertaken and the data is considered therefore to be representative of the current baseline.

During the surveys a total of 65 species were recorded during the breeding season, with 40 of these species considered to be breeding at the site. The assemblage of birds present is typical of the suite of habitats present and all species recorded are considered to be relatively widespread in the county by the Hertfordshire Bird Report. Typically the habitats supporting the greatest diversity of birds are the woodland, mature hedgerows and habitat mosaic areas. The most notable bird population recorded was that of was skylark which was recorded as having 37 breeding pairs located on the grasslands of the landfill (23 pairs) and some of the arable land (14 pairs).

The most notable breeding species in terms of protective status, were barn owl (in the Birchall Farm buildings complex) and red kite (in the Howellpark wood area). Though neither are rare birds in the county they are both listed on Schedule 1 of the Wildlife and Countryside Act 1981. The masterplan retains the breeding sites of both these species.

The winter survey recorded 29 species in total, again the most important areas for wintering birds appear to be the woodlands, mature hedgerows and mosaic habitats.

The layout of the scheme has ensured that losses to key habitats/species have been reduced to the absolute minimum.

Dormouse Survey

Through discussions with Hertfordshire Ecology a survey protocol was agreed and a survey was undertaken for hazel dormouse by Philip Parker Associates in 2014. The survey, following published best practice used 140 nest tubes in the most favourable habitats on site over a period of 6 months. The Study Area was confined to habitats within the Application Site.

The dormouse survey found no evidence to suggest the presence of this species within the Application Site.

Bat Survey

Between 2014 and 2016 a series of bat surveys using a variety of methods collected extensive data on the bat usage of the Application Site. The methods included daytime inspection of potential roosts

(buildings and trees), emergence surveys from potential roosts, site wide transect surveys and static detector surveys. Surveys sampling bat activity were all undertaken in the times of peak bat activity.

These surveys have confirmed the presence of roosting bats at Birchall Farm and confirm in one tree in the northern part of the site. Though extensive surveys in 2014 found no evidence of roosting, a number of other trees still have potential for bat roosts. The roosting sites are considered to be of Local value.

Transect surveys and static detectors were used along and around identified habitat features at the site. In 2014/2015, these related to features with the highest potential for commuting and feeding bats. In 2016, these related to features within the development site most likely to be impacted by the works. All features have supported foraging and commuting bats. A total of 9 species have been recorded, but by far the most numerous being common pipistrelle followed by soprano pipistrelle. Records of other species are widespread but limited in number and likely to relate to individuals or very small numbers. The key foraging areas were the hedgerows on or close to the site boundary and woodland areas. The foraging and commuting sites are typically considered to be of up to County value although where barbastelle has been recorded, the value could be of Regional value using the Wray et al evaluation system. However, given how far these species range (up to 20km in an evening) and the relatively low number of records (36 in total across all surveys in 2016) and the fact that the majority of the calls were recorded in the middle of the night, it seems unlikely that the proposed development site forms an important part of their home range. It is considered that the site contributes modestly to the wider resource of habitats used by these bats and it is this whole wider resource that is of regional significance.

The main roost at Birchall Farm shall not be impacted upon through the development. Potential tree roosts shall, where feasible, be protected and retained within the site green infrastructure. The masterplan has been also been focussed to safeguard and where possible improve key bat foraging and commuting areas and the scheme will adopt a sensitive lighting regime to reduce impacts upon bats.

Badger Survey

A survey for field signs and evidence of badgers was undertaken by Philip Parker Associates in March 2016. Due to the mobility of the species a further survey was undertaken by SLR consulting in April 2017. The Study Area was confined to habitats within the Application Site and up to 30m outside this where access was feasible. Due to the sensitivity of publishing the locations of badger setts the detailed report shall remain confidential with a limited distribution being agreed with the council.

The survey undertaken by SLR in April 2017 recorded a total of 8 active badger setts across the whole site. [redacted] dense vegetation cover). For the size of the site the level of occupation is considered to be low.

The proposed development has been designed in a way that retains all active setts.

Invertebrate Survey

An initial Scoping survey to undertake an appraisal of habitats was undertaken by an entomologist from Philip Parker Associates in March 2014. Following that an invertebrate survey focussing on the areas of habitat that offer the greatest potential for invertebrates of conservation significance was undertaken in June, August and September of 2014. Following an appraisal of habitats at the site in 2017 it was concluded that little had changed since the 2014 survey and no re-survey was necessary to evaluate the sites invertebrate fauna.

The survey has produced over 2500 records of invertebrates. Of these, there are a small number of Red Data Book, Nationally Scarce and UK BAP priority species and others of at least somewhat local distribution.

The most notable species recorded is that of Desmoulin's whorl snail (Vertigo moulinsiana) is Vu (vulnerable). It is also listed under Annex II of the Council Directive 92/43/EEC (Habitats Directive) which requires member states to designate and conserve core areas of habitat for such species. In the UK a total of seven such sites have been designated for this reason. Desmoulin's whorl snail can and often does however exist outside such sites and there is no other legal protection afforded to the animal.

When the invertebrate potential of habitats are assessed on the site the most important features noted are those associated with areas of ancient woodland or boundary features with mature trees. These are considered to be of up to county level value for invertebrates.

On this site the snail was found in habitats that are retained by the masterplan which also retains the majority of the key habitat assemblages and provides opportunities for enhancements.

Reptile Surveys

Guided by desk-top studies, comments received and local consultation events and an appraisal of the habitat resource within the site a reptile survey was undertaken by Philip Parker Associates in 2014 and 2016 in areas of habitat considered to offer the greatest potential to this group. A survey utilising artificial refuges was undertaken with at least seven visits being made to each area. The Study Area was confined to habitats within the Application Site. Further to this in the autumn of 2017 SLR undertook additional surveys in areas of habitat considered to provide potential for reptiles within the site. The results of the current survey combined with information from previous surveys indicate that the site supports a 'low – good' population of grass snake (with any 'good' population being at the lower end of the 'good' category range).

The core areas of habitat for the reptile population has been retained by the schemes masterplan.

Watervole Surveys

Undertaken by Philip Parker Associates in 2014 and 2015 field signs for water vole were searched for in those aquatic habitats that provide the greatest potential for this species. The Study Area was confined to habitats within the Application Site. Further to this in September 2017 SLR undertook an additional check of wetland habitats within the site for water vole, the timing of this coinciding with what is normally considered to be the peak time for water vole populations following breeding but before winter.

The water vole survey in 2017 identified a 'low' population of water voles within a single ditch on the eastern site boundary. Part of this ditch network projects into land within the application site. However, those ditches which project into the application site had no evidence of water vole activity and were notably lower quality for water vole due to more intensive agricultural management (i.e. cutting) and lower levels of standing water. It is considered highly likely that the water voles have colonised this ditch via a culvert under the A414 which connects to a 4.4 km ditch linking to the River Mimram. Due to the absence of latrines within this ditch it is considered possible that the ditch represents sub-optimal habitat for the species which is seasonally occupied by dispersing juvenile water voles (juvenile water voles will often not establish latrines to avoid detection by potentially territorial adults).

No evidence of water vole presence was found in any of the other water bodies or water courses surveyed, and as a result water voles are considered likely to be absent from these locations. The previous 2014 surveys completed by Phillip Parker Associates Ltd did not find any evidence of water voles in any of the water bodies / water courses within the site.

The Master plan allows for retention of the known water vole population and increases the overall habitat resource for this species.

Summary

This note provides an overview of the substantial amount of baseline study undertaken at this site. The work undertaken has been used to lead and advise the design of the Birchall Garden Suburb Masterplan to ensure impacts and minimised and that significant gains for biodiversity enhancement are realised though the delivery of this scheme.

The strategy for avoiding, reducing and mitigating impacts upon key ecological receptors at the site has been developed alongside the overall site green infrastructure plan. The planning application for the scheme will provide further detail on 'no net loss' biodiversity calculations using the DEFRA metric and details of how the habitats proposed would be delivered on the ground.