

# LIDL: LAND OFF OF PURBROOK WAY, HAVANT, HAMPSHIRE

## Dormouse and Bat Survey Report

ECO01347\_873  
Lidl: Purbrook Way, Havant:  
Hampshire  
C  
September 2021

## REPORT

### Quality Management

| Version | Status       | Authored by | Reviewed by | Approved by | Review date |
|---------|--------------|-------------|-------------|-------------|-------------|
| A       | For Planning | HK          | KS          | KS          | 09.2021     |
| B       | For Planning | HK          | KS          | KS          | 09.2021     |
| C       | For Planning | HK          | KS          | KS          | 09.2021     |

### Approval for issue

[Name]

[Signature]

[Date]

### File/Model Location

**Document location:** ECO00800 The Springs (Implementation)\5. Reports - Documents\Reports\Nov 2019 Application\Ecology Survey Report

**Model / Appendices location:**

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## EXECUTIVE SUMMARY

- RPS Ecology were commissioned by Lidl Great Britain Limited, to undertake a range of Phase 2 surveys, following on from a Preliminary Ecological Appraisal (PEA), in September 2020.
- This report provides the results of the dormouse and bat survey work undertaken and provides recommendations for both enhancement and mitigation.
- Despite them being known to occur within the wider local area, no evidence of dormice was identified during any of the surveys, and therefore, dormice are not considered to be a constraint to the development. Notwithstanding this, a precautionary approach to any habitat removal has been recommended.
- The site is situated within a Bechstein bat buffer zone, and so, following conversations and the consultee comments, further bat activity surveys were required to be undertaken on the site; including a mixture of transects and static monitoring. These surveys, generally, found the site to comprise low levels of bat activity, with very limited species diversity (common pipistrelle and soprano pipistrelles were most commonly recorded). No myotis species of any significant numbers were recorded on the site.
- Native structural scrub and fruit-bearing tree planting will be included within the scheme, to provide replacement feeding and nesting opportunities for a range of species, and also to try to encourage species, such as dormice, onto the site.

## Contents

|                                               |           |
|-----------------------------------------------|-----------|
| <b>EXECUTIVE SUMMARY .....</b>                | <b>1</b>  |
| <b>1 INTRODUCTION .....</b>                   | <b>3</b>  |
| 1.1 Background to the Study .....             | 3         |
| 1.2 Site Description .....                    | 3         |
| 1.3 Aims and Objectives.....                  | 3         |
| <b>2 METHODS.....</b>                         | <b>5</b>  |
| 2.1 Bat surveys .....                         | 5         |
| 2.2 Dormice surveys .....                     | 5         |
| <b>3 RESULTS.....</b>                         | <b>6</b>  |
| 3.1 Bat activity surveys .....                | 6         |
| 3.2 Automatic static monitoring survey .....  | 7         |
| 3.3 Dormice surveys .....                     | 9         |
| <b>4 EVALUATION .....</b>                     | <b>10</b> |
| 4.1 Bats .....                                | 10        |
| 4.2 Dormice .....                             | 10        |
| <b>5 CONCLUSIONS AND RECOMMENDATIONS.....</b> | <b>11</b> |
| 5.1 Bats .....                                | 11        |
| 5.2 Dormice .....                             | 11        |
| <b>REFERENCES .....</b>                       | <b>12</b> |
| <b>FIGURES .....</b>                          | <b>13</b> |
| <b>APPENDIX 1 – LANDSACPING PLAN .....</b>    | <b>14</b> |

# 1 INTRODUCTION

## 1.1 Background to the Study

- 1.1.1 RPS Ecology was commissioned by Lidl Great Britain Limited, to undertake Phase 2 Ecology surveys, at the proposed site of a new Lidl store, located off Purbrook Way, Havant, Hampshire.
- 1.1.2 The development proposals include the construction of a new Lidl retail store, along with areas of both hard and soft landscaping.
- 1.1.3 A Preliminary Ecological Appraisal (PEA) and background data search of the site was undertaken by RPS in September 2020 (RPS 2020). During this survey, the application boundary was considered to have potential to support breeding birds and dormice.
- 1.1.4 Following consultation with the LPA ecologist, it was also deemed necessary to undertake bat activity surveys, despite the lack of suitable habitat, to assess whether the site supported any Bechstein Bats, given that it is located within the buffer zone.
- 1.1.5 Therefore, it was recommended that further surveys be carried out to ascertain whether these species were a constraint to the proposed restoration of the site.
- 1.1.6 This report provides the results of the surveys undertaken in late 2020, and through into 2021.

## 1.2 Site Description

- 1.2.1 The site is located to the north-west of Havant (OS grid reference SU 6941 0778). The site is bordered by B&Q to the east, Purbrook Way to the south, and the B&Q access road to the north and west. Generally, the surrounding area is urban in character, although north of the site is Neville's Park Wood.
- 1.2.2 The site largely comprises dense scrub, with scattered trees around the site perimeter; limited areas of grass are present towards the north of the site.

## 1.3 Aims and Objectives

### Bat surveys

- 1.3.1 The objective of the study was to determine the current use of the site by bats, to inform the future development of the site. The study aimed to determine the potential impacts (if any) of the development by establishing:
  - the general level of bat activity on the site;
  - the range of species using the site; and
  - the best course of action to minimise the impacts of the development on the local bat population.
- 1.3.2 All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981, as amended. All bat species are also included on Schedule 2 of the Conservation of Species and Habitats Regulations 2019 (EU Exit Amendment). Taken together, these pieces of legislation make it an offence to:
  - intentionally or recklessly kill, injure or capture bats;
  - deliberately or recklessly disturb bats (whether in a roost or not); and
  - damage, destroy or obstruct access to bat roosts.
- 1.3.3 A roost is defined as 'any structure or place which [a bat] uses for shelter or protection'. As bats tend to reuse the same roosts, it is considered within legal opinion that a roost is protected whether or not bats are present at the time of survey.

- 1.3.4 Barbastelle bats *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros* are also listed as being species of principle importance to the conservation of biodiversity in England under Section 41 of the Natural Environment and Rural Communities Act 2006.
- 1.3.5 Barbastelle, Bechstein's, greater horseshoe and lesser horseshoe bats are also listed on Annex II of the Habitats Directive. As such a site may be designated a Special Area of Conservation (SAC) due to the presence of these species.

### Dormice surveys

- 1.3.6 The aim of the surveys was to determine the presence / absence of hazel dormice *Muscardinus avellanarius* within areas of suitable habitat present on site.
- 1.3.7 Dormice are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981, as amended. Dormice are also included on Schedule 2 of the Conservation of Species and Habitats Regulations 2019 (EU Exit Amendment) as European protected species. They are also listed on Section 41 of the NERC Act 2006. Taken together, these pieces of legislation make it an offence to:
- intentionally kill, capture (take) or injure;
  - damage or destroy a breeding site or resting place;
  - deliberately disturb dormice or intentionally or recklessly disturb them in a place used for shelter or protection;
  - intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection;
  - possess a dormouse, or any part of it, unless acquired lawfully; and
  - keep, transport, sell or exchange an animal.

## 2 METHODS

### 2.1 Bat surveys

#### Bat activity surveys

- 2.1.1 Bat activity surveys were undertaken between May – September 2021. Two experienced bat surveyors, equipped with a Batlogger M each, slowly walked a transect route. The transect route followed included all of the habitat types encountered within the site boundary to ensure an accurate representation of the species using the site.
- 2.1.2 Along the transect route the number of bat passes was recorded, together with the species and time of detection.
- 2.1.3 All bat passes were recorded, and all bats were identified to species level, where possible, on site. Echolocation calls were subsequently analysed using computer software (BatSound) for confirmation of species. Where possible, additional notes on size, flight height, type of flight (such as commuting, foraging, fast or slow) and direction of flight were also recorded.

#### Automated ultrasound recordings along linear features

- 2.1.4 One automated ultrasound recorder (SM2BAT+) was placed at different locations within the site boundary during May – September 2021. The recorders were left *in situ* for at least five consecutive nights to record the bat activity at these locations.
- 2.1.5 The automated ultrasound recorder was programmed to begin recording ultrasound 10 minutes before sunset and terminate recording 30 minutes after sunrise. This period covered the peak time bats would be commuting to and from their roosts. If the linear features were used as an important flight line, then the number of bat passes recorded would be high at that corresponding time.

#### Constraints

- 2.1.6 In August, the SM2 automated detector failed to record, and so there is no data from that month. However, as data has been recorded from other months across the year, this is not considered to be a significant constraint.

### 2.2 Dormice surveys

- 2.2.1 Dormouse tubes were set out on site during September 2020. They were tied to suitable vegetation around the site following standard survey guidelines (English Nature 2006), to provide nesting opportunities for any dormice present (refer to Figure 2.1).
- 2.2.2 Surveys were then carried out once a month in suitable weather in September and October 2020, and then from March – August 2021 inclusive, the optimum time for dormice to be active. Following the table of probability of finding dormice in the Dormouse Conservation Handbook (Table 5 – English Nature 2006), this gives a score above 20, i.e., an acceptable level of survey.

#### Constraints

- 2.2.3 The surveys were carried out at an appropriate time of year, therefore, there were no constraints.

### 3 RESULTS

#### 3.1 Bat activity surveys

- 3.1.1 Bat activity can be strongly dependent on weather conditions. The survey was therefore only carried out in favourable conditions when bat activity was deemed to be likely (sunset temperature 10°C or above, no rain or strong wind). Table 3.1 below summarises the weather during the survey.
- 3.1.2 One transect route was devised, encompassing the site. Several spot-sampling locations were included, distributed evenly along the transect route. The surveyors stopped at each of these points for four minutes and recorded all bat activity.

**Table 3.1- Weather conditions during bat surveys at Purbrook Way, Havant**

| Survey date | Temperature (°C) | Sunset Time | Weather                                       |
|-------------|------------------|-------------|-----------------------------------------------|
| 27.05.2021  | 16               | 21:01       | 80% cloud cover, dry, wind: Beaufort Scale 0  |
| 17.06.2021  | 21               | 21:18       | 60% cloud cover, dry, wind: Beaufort Scale 2  |
| 21.07.2021  | 26               | 21:03       | 0% cloud cover, dry, wind: Beaufort Scale 2   |
| 22.08.2021  | 17               | 20:09       | 60% cloud cover, dry, wind: Beaufort Scale 2  |
| 05.09.2021  | 16               | 19:39       | 100% cloud cover, dry, wind: Beaufort Scale 0 |

#### Bat activity survey, 27<sup>th</sup> May 2021

- 3.1.3 The transect commenced at 21:01 and finished at 22:35.
- 3.1.4 The following species were recorded during the survey:
- 5 x common pipistrelle; and
  - 2 x soprano pipistrelle;
- 3.1.5 See Figure 3.1 for the transect route and locations of species recorded.

#### Bat activity survey, 17<sup>th</sup> June 2021

- 3.1.6 The transect commenced at 21:15 and finished at 22:45.
- 3.1.7 The following species were recorded during the survey:
- 5 x common pipistrelle;
  - 1 x soprano pipistrelle; and
  - 1 x myotis.
- 3.1.8 See Figure 3.2 for the transect route and locations of species recorded.

#### Bat activity survey, 21<sup>st</sup> July 2021

- 3.1.9 The transect commenced at 21:00 and finished at 22:38.
- 3.1.10 The following species were recorded during the survey:
- 6 x common pipistrelle; and

- 2 x soprano pipistrelle;

3.1.11 See Figure 3.3 for the transect route and locations of species recorded.

### Bat activity survey, 22nd August 2021

3.1.12 The transect commenced at 20:00 and finished at 21:30

3.1.13 The following species were recorded during the survey:

- 5 x common pipistrelle; and
- 2 x soprano pipistrelle;

3.1.14 See Figure 3.4 for the transect route and locations of species recorded.

### Bat activity survey, 5th September 2021

3.1.15 The transect commenced at 19:15 and finished at 21:45.

3.1.16 The following species were recorded during the survey:

- 2 x common pipistrelle.

3.1.17 See Figure 3.5 for the transect route and locations of species recorded.

## 3.2 Automatic static monitoring survey

3.2.1 The results of the automated bat surveys are reported in Tables 3.2 to 3.6 below.

**Table 3.2: Results of automated bat surveys at Purbrook Way, Havant.**

| Date       | Sunrise | Sunset | Total minutes recording | No. bat passes | Bat passes/hr |
|------------|---------|--------|-------------------------|----------------|---------------|
| 27.05.2021 | 05:01   | 21:01  | 600                     | 181            | 18.1          |
| 28.05.2021 | 04:59   | 21:02  | 470                     | 45             | 5.74          |
| 29.05.2021 | 04:58   | 21:04  | 380                     | 52             | 1.6           |
| 30.05.2021 | 04:57   | 21:05  | 470                     | 96             | 12.26         |
| 31.05.2021 | 04:56   | 21:06  | 580                     | 448            | 46.6          |
| 17.06.2021 | 04:51   | 21:18  | 535                     | 14             | 1.57          |
| 18.06.2021 | 04:51   | 21:19  | 370                     | 36             | 5.84          |
| 19.06.2021 | 04:51   | 21:19  | 390                     | 76             | 11.69         |
| 20.06.2021 | 04:51   | 21:19  | 420                     | 125            | 17.8          |
| 21.06.2021 | 04:51   | 21:20  | 510                     | 43             | 5.05          |
| 21.07.2021 | 05:15   | 21:03  | 429                     | <b>33</b>      | 4.61          |
| 22.07.2021 | 05:16   | 21:02  | 442                     | 86             | 11.68         |
| 23.07.2021 | 05:17   | 20:59  | 402                     | 43             | 6.4           |
| 24.07.2021 | 05:18   | 20:58  | 414                     | 66             | 9.5           |
| 25.07.2021 | 05:21   | 20:57  | 465                     | 161            | 21.4          |
| 22.08.2021 | N/A     | N/A    | N/A                     | N/A            | N/A           |
| 23.08.2021 | N/A     | N/A    | N/A                     | N/A            | N/A           |
| 24.08.2021 | N/A     | N/A    | N/A                     | N/A            | N/A           |
| 25.08.2021 | N/A     | N/A    | N/A                     | N/A            | N/A           |
| 26.08.2021 | N/A     | N/A    | N/A                     | N/A            | N/A           |
| 05.09.2021 | 06:27   | 19:41  | 353                     | 11             | 1.86          |
| 06.09.2021 | 06:28   | 19:39  | 270                     | 24             | 5.33          |

## REPORT

| Date       | Sunrise | Sunset | Total minutes recording | No. bat passes | Bat passes/hr |
|------------|---------|--------|-------------------------|----------------|---------------|
| 07.09.2021 | 06:30   | 19:38  | 256                     | 13             | 3.05          |
| 08.09.2021 | 06:31   | 19:37  | 298                     | 19             | 3.83          |
| 09.09.2021 | 06:32   | 19:35  | 301                     | 45             | 8.98          |

**Table 3.3: Species summaries for automated bat surveys in May 2021.**

| Date                 | <i>P.pip</i> | <i>P.pyg</i> | <i>P. na</i> | <i>Myotis</i> | <i>N.nyc</i> | <i>Nyc. sp</i> | <i>Noctule / Leisler / Serotine</i> | <i>P.aur</i> | <i>E.ser</i> | <i>N. Le</i> | Total      |
|----------------------|--------------|--------------|--------------|---------------|--------------|----------------|-------------------------------------|--------------|--------------|--------------|------------|
| 27.05.2021           | 25           | 153          | 0            | 0             | 3            | 0              | 0                                   | 0            | 0            | 0            | 181        |
| 28.05.2021           | 12           | 32           | 0            | 0             | 1            | 0              | 0                                   | 0            | 0            | 0            | 45         |
| 29.05.2021           | 8            | 43           | 0            | 0             | 1            | 0              | 0                                   | 0            | 0            | 0            | 52         |
| 30.05.2021           | 16           | 80           | 0            | 0             | 0            | 0              | 0                                   | 0            | 0            | 0            | 96         |
| 31.05.2021           | 185          | 263          | 0            | 0             | 0            | 0              | 0                                   | 0            | 0            | 0            | 448        |
| <b>Species total</b> | <b>246</b>   | <b>571</b>   | <b>0</b>     | <b>0</b>      | <b>5</b>     | <b>0</b>       | <b>0</b>                            | <b>0</b>     | <b>0</b>     | <b>0</b>     | <b>822</b> |

**Table 3.4: Species summaries for automated bat surveys in June 2021**

| Date                 | <i>P.pip</i> | <i>P.pyg</i> | <i>P. na</i> | <i>Myotis</i> | <i>N.nyc</i> | <i>Nyc. sp</i> | <i>Noctule / Leisler / Serotine</i> | <i>P.aur</i> | <i>E.ser</i> | <i>N. Le</i> | Total      |
|----------------------|--------------|--------------|--------------|---------------|--------------|----------------|-------------------------------------|--------------|--------------|--------------|------------|
| 17.06.2021           | 12           | 1            | 0            | 0             | 0            | 0              | 0                                   | 0            | 1            | 0            | 14         |
| 18.06.2021           | 21           | 15           | 0            | 0             | 0            | 0              | 0                                   | 0            | 0            | 0            | 36         |
| 19.06.2021           | 57           | 17           | 0            | 0             | 2            | 0              | 0                                   | 0            | 0            | 0            | 76         |
| 20.06.2021           | 77           | 46           | 0            | 0             | 0            | 0              | 2                                   | 0            | 0            | 0            | 125        |
| 21.06.2021           | 29           | 5            | 0            | 2             | 0            | 0              | 0                                   | 0            | 7            | 0            | 43         |
| <b>Species total</b> | <b>196</b>   | <b>164</b>   | <b>0</b>     | <b>2</b>      | <b>2</b>     | <b>0</b>       | <b>2</b>                            | <b>0</b>     | <b>8</b>     | <b>0</b>     | <b>370</b> |

**Table 3.5: Species summaries for automated bat surveys in July 2021**

| Date                 | <i>P.pip</i> | <i>P.pyg</i> | <i>P. na</i> | <i>Myotis</i> | <i>N.nyc</i> | <i>Nyc. sp</i> | <i>Noctule / Leisler / Serotine</i> | <i>P.aur</i> | <i>E.ser</i> | <i>N. Le</i> | Total      |
|----------------------|--------------|--------------|--------------|---------------|--------------|----------------|-------------------------------------|--------------|--------------|--------------|------------|
| 17.07.2021           | 9            | 10           | 0            | 0             | 0            | 0              | 0                                   | 0            | 14           | 0            | 33         |
| 18.07.2021           | 15           | 17           | 1            | 3             | 49           | 0              | 0                                   | 0            | 1            | 0            | 86         |
| 19.07.2021           | 15           | 16           | 0            | 0             | 11           | 0              | 0                                   | 0            | 1            | 0            | 43         |
| 20.07.2021           | 31           | 18           | 0            | 2             | 0            | 0              | 0                                   | 0            | 15           | 0            | 66         |
| 21.07.2021           | 48           | 21           | 0            | 0             | 84           | 0              | 0                                   | 0            | 8            | 0            | 161        |
| <b>Species total</b> | <b>118</b>   | <b>82</b>    | <b>1</b>     | <b>5</b>      | <b>144</b>   | <b>0</b>       | <b>0</b>                            | <b>0</b>     | <b>39</b>    | <b>0</b>     | <b>389</b> |

Table 3.6: Species summaries for automated bat surveys in September 2021

| Date                 | <i>P.pip</i> | <i>P.pyg</i> | <i>P. na</i> | <i>Myotis</i> | <i>N.nyc</i> | <i>Nyc. sp</i> | <i>Noctule /<br/>Leisler /<br/>Serotine</i> | <i>P.aur</i> | <i>E.ser</i> | <i>N. Le</i> | Total      |
|----------------------|--------------|--------------|--------------|---------------|--------------|----------------|---------------------------------------------|--------------|--------------|--------------|------------|
| 15.10.2019           | 0            | 11           | 0            | 0             | 0            | 0              | 0                                           | 0            | 0            | 0            | 11         |
| 16.10.2019           | 22           | 2            | 0            | 0             | 0            | 0              | 0                                           | 0            | 0            | 0            | 24         |
| 17.10.2019           | 13           | 0            | 0            | 0             | 0            | 0              | 0                                           | 0            | 0            | 0            | 13         |
| 18.10.2019           | 16           | 3            | 0            | 0             | 0            | 0              | 0                                           | 0            | 0            | 0            | 19         |
| 19.10.2019           | 41           | 4            | 0            | 0             | 0            | 0              | 0                                           | 0            | 0            | 0            | 45         |
| 20.10.2019           | 19           | 4            | 0            | 0             | 0            | 0              | 0                                           | 0            | 0            | 0            | 23         |
| <b>Species total</b> | <b>111</b>   | <b>24</b>    | <b>0</b>     | <b>0</b>      | <b>0</b>     | <b>0</b>       | <b>0</b>                                    | <b>0</b>     | <b>0</b>     | <b>0</b>     | <b>135</b> |

### 3.3 Dormice surveys

3.3.1 Surveys were only carried out in favourable conditions, when activity was deemed to be likely (dry, little to no wind). Table 3.7 below summarises the weather and results during each survey.

Table 3.7 – Dormice Survey results at Purbrook Way, Havant

| Date       | Species and Number | Temp. (°C) | Weather Conditions                           |
|------------|--------------------|------------|----------------------------------------------|
| 10.09.2020 | No dormice seen    | 23         | 10% cloud cover, dry, wind: Beaufort Scale 1 |
| 15.10.2020 | No dormice seen    | 13         | 15% cloud cover, dry, wind: Beaufort Scale 1 |
| 09.04.2021 | No dormice seen    | 13         | 30% cloud cover, dry, wind: Beaufort Scale 2 |
| 14.05.2021 | No dormice seen    | 16         | 80% cloud cover, dry, wind: Beaufort Scale 0 |
| 17.06.2021 | No dormice seen    | 21         | 60% cloud cover, dry, wind: Beaufort Scale 2 |
| 21.07.2021 | No dormice seen    | 26         | 0% cloud cover, dry, wind: Beaufort Scale 2  |
| 22.08.2021 | No dormice seen    | 26         | 60% cloud cover, dry, wind: Beaufort Scale 2 |

3.3.2 No dormice were observed during any of the survey visits in 2020 or 2021.

## 4 EVALUATION

### 4.1 Bats

- 4.1.1 Five species of bat were recorded around the site during the activity transects and static monitoring surveys; common pipistrelle, soprano pipistrelle, noctule, serotine and myotis. Bats were recorded all around the survey route, showing no localised areas of high activity.
- 4.1.2 No Annex II species of bat (Barbastelle, greater horseshoe or lesser horseshoe) were recorded during the surveys. However, a very small number of myotis species were recorded, which could be Bechstein, given that the site sits within the Bechstein sustenance zone.
- 4.1.3 However, the low numbers of these do not suggest a roost of any great significance is present on site, or within the immediate surrounds of the site. It also suggests the site does not provide regularly used foraging habitat for them.
- 4.1.4 Data collected to date suggests that the site is of site importance for foraging/commuting bats, such as common and soprano pipistrelles.
- 4.1.5 Recommendations have been made in Section 5, to ensure that the site landscaping proposals ensure there is suitable habitat for Bechstein, and other species of bat, post-development.

### 4.2 Dormice

- 4.2.1 No evidence of dormice has been found during the current surveys. Therefore, a licence from Natural England is not required in order to carry out any vegetation clearance. Notwithstanding this, as dormice are known to occur in the wider area and local landscape context, recommendations for sensitive habitat clearance and habitat enhancements are made in Section 5.

## 5 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Bats

- 5.1.1 A total of five species of bat were recorded by the static bat detectors during the surveys. These were:
- common pipistrelle;
  - soprano pipistrelle;
  - myotis species;
  - serotine; and
  - noctule.
- 5.1.2 The level of bat activity for each of the static detector locations was generally moderate (between 10 - 20 bat passes per hour), It should be kept in mind however that static detectors cannot distinguish between one individual bat going back and forth foraging constantly, or many different individual bats flying past.
- 5.1.3 Data collected to date suggests that the site is of site importance for foraging/commuting, particularly for pipistrelles which were frequently recorded.
- 5.1.4 In order to ensure that the site continues to provide suitable bat foraging habitat on completion of the development, trees should be retained or replaced, where possible; as this will also help to maintain connectivity in the context of the wider landscape.
- 5.1.5 In addition, a suitable landscaping scheme has been prepared, that incorporates areas of native scrub and shrub planting, which will provide habitat for invertebrates, which will in turn provide a food source for bats. The landscaping scheme for the site is provided in Appendix 1.
- 5.1.6 The lighting scheme for the site should ensure that the lux levels on any of the perimeter planting is of a sufficient level, which will ensure that the site can continue to be used, by bats, post-development.
- 5.1.7 The underpass which is present towards the south of the site (running underneath Purbrook Road), will be sealed off to the public, whilst still allowing bats to pass through. This will look to create a hibernation feature for bats.

### 5.2 Dormice

- 5.2.1 No evidence of dormice has been recorded during the 2020/2021 surveys. Therefore, no licence from Natural England is necessary prior to vegetation clearance and no mitigation is required for the loss of the sub-optimal habitat to be cleared.
- 5.2.2 However, as dormice are known to occur in the wider area, a sensitive habitat removal strategy should be employed. This would involve a suitably licenced ecologist searching the area prior to removal, carrying out a fingertip search of any suitable vegetation. The habitat should also be removed between May – October, outside of the dormouse hibernation period.
- 5.2.3 However, in order to enhance the site for dormice, post development, and encourage them to use the site in the future, planting associated with the development will include species of benefit to dormice.

## REFERENCES

- Anon. (2008). UK Biodiversity Action Plan.
- Anon. (1981). The Wildlife & Countryside Act. HMSO, London.
- Anon. (2006). The Natural Environment and Rural Communities Act. HMSO, London.
- Bibby, C.J., Burgess, N.D., Hill, D.A. & Mustoe, S.H. (2000). *Bird Census Techniques*: 2<sup>nd</sup> edition. Academic Press, London.
- Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F (2014). *Analytical and methodological development for improved surveillance of the Great Crested Newt. Defra Project WC1067*. Freshwater Habitats Trust:Oxford.
- Collins J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed.)*. London: The Bat Conservation Trust.
- Eaton, M., Aebischer, N., Brown, A., Hearn, R., Lock, L., Musgrove A., Noble D., Stroud, D. and Gregory, R. (2015). Birds of Conservation Concern 4. The population status of birds in the United Kingdom, Channel Islands and Isle of Man. *British Birds* **108**: 708-746
- EC (2009) Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version). EC, Brussels.
- Froglife (1999). *Froglife Advice Sheet 10. Reptile Survey: An Introduction to Planning, Conducting and interpreting surveys for snake and lizard conservation*. Froglife, Peterborough.
- Fuller, R.J. (1980). A Method for Assessing the Ornithological Interest of Sites for Conservation. *Biological Conservation* **17**, 229-239.
- Gilbert, G., Gibbons, D.W. and Evans, J. (1998). *Bird Monitoring Methods: A manual of techniques for key species*. RSPB/BTO/JNCC/WWT/ITE/The Seabird Group. RSPB/BTO, Sandy, Beds.
- Harris, S.J., Massimino, D., Newson, S.E., Eaton, M.A., Balmer, D.E., Noble, D.G., Musgrove, A.J., Gillings, S., Procter, D. & Pearce-Higgins, J.W. 2015. The Breeding Bird Survey 2014. BTO Research Report 673. BTO, Thetford.
- Holling, M. and the Rare Breeding Birds Panel (2012) Rare breeding birds in the United Kingdom in 2012. *British Birds* **107**, 504-560.
- Musgrove, A., Aebischer, N., Eaton, M., Hearn, R., Newson, S., Noble, D., Parsons, M., Risely, K, and Stroud, D. (2013) Population estimates of birds in Great Britain and the United Kingdom. *British Birds* **106**, 64-100.
- RPS (2016). *The Springs Golf Club, Wallingford: Preliminary Ecological Appraisal*. RPS un-published report.
- Russ J.M. & Montgomery W.I. (2002). *Habitat Associations of Bats in Northern Ireland: Implications for Conservation*. Biological Conservation 108, 49 – 58.

# FIGURES



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- Legend**
- Application boundary
  - Dormouse tube locations
  - Ruderal vegetation
  - Neutral grassland
  - Dense scrub
  - Broadleaved woodland

|                               |                            |                       |  |
|-------------------------------|----------------------------|-----------------------|--|
| Client                        | Lidl Great Britain Limited |                       |  |
| Project                       | ECO01347                   |                       |  |
| Title                         | Dormouse Tube Locations    |                       |  |
| Drawn By:<br>HK               | Reviewed By:<br>KS         |                       |  |
| Date<br>created:<br>July 2021 | Scale @ A3:<br>NTS         | Figure Number:<br>2.1 |  |





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#### Legend

-  Application boundary
-  Transect route
-  Static Recorder location
-  Ruderal vegetation
-  Neutral grassland
-  Dense scrub
-  Broadleaved woodland

Soprano  
pipistrelle

Start / Finish

Common pipistrelle

Common  
pipistrelle

Common pipistrelle

Soprano pipistrelle

Common pipistrelle

Common  
pipistrelle

Client Lidl Great Britain Limited

Project ECO01347

Title Bat Transect Survey  
- May 2021

Drawn By: HK Reviewed By: KS

Date created: July 2021 Scale @ A3: NTS Figure Number: 3.1



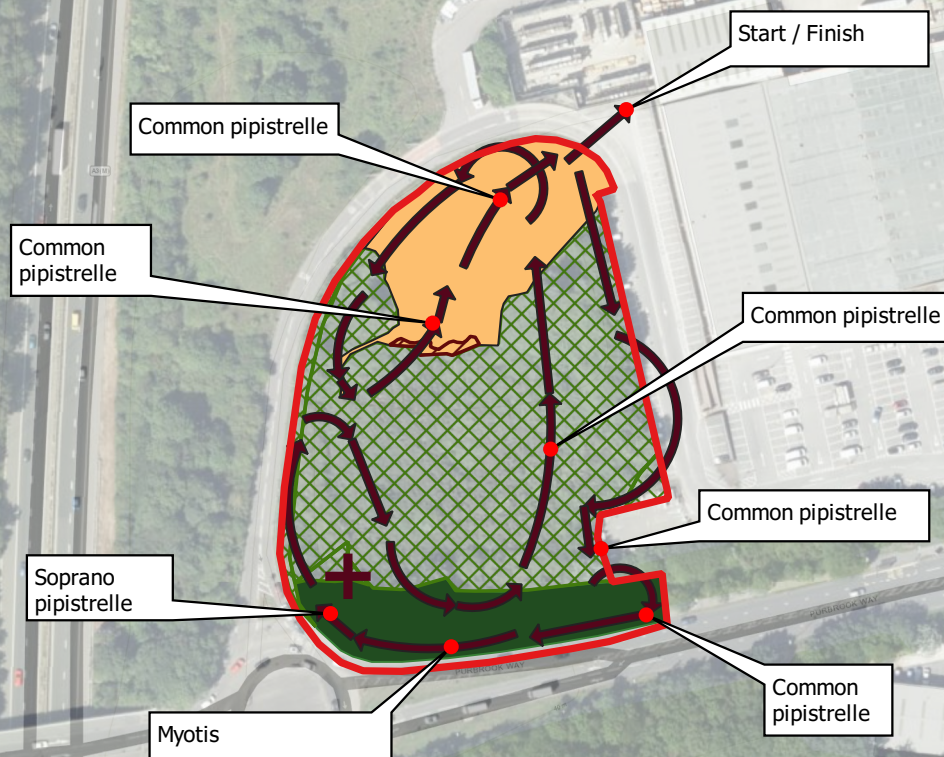
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#### Legend

-  Application boundary
-  Transect route
-  Static recorder (June)
-  Ruderal vegetation
-  Neutral grassland
-  Dense scrub
-  Broadleaved woodland



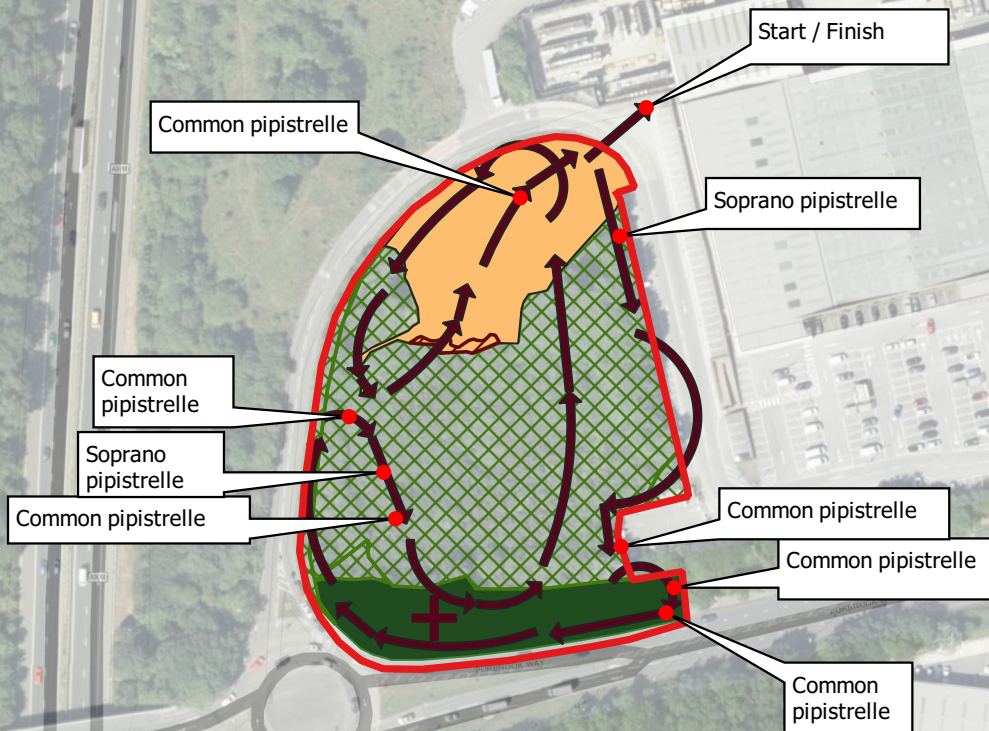
Client Lidl Great Britain Limited

Project ECO01347

Title Bat Transect Survey  
- June 2021

Drawn By: HK Reviewed By: KS

Date created: July 2021 Scale @ A3: NTS Figure Number: 3.2



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- Legend**
- Application boundary
  - Transect route
  - Static recorder (July)
  - Ruderal vegetation
  - Neutral grassland
  - Dense scrub
  - Broadleaved woodland

|                               |                                    |                       |  |
|-------------------------------|------------------------------------|-----------------------|--|
| Client                        | Lidl Great Britain Limited         |                       |  |
| Project                       | ECO01347                           |                       |  |
| Title                         | Bat Transect Survey<br>- July 2021 |                       |  |
| Drawn By:<br>HK               | Reviewed By:<br>KS                 |                       |  |
| Date<br>created:<br>July 2021 | Scale @ A3:<br>NTS                 | Figure Number:<br>3.3 |  |





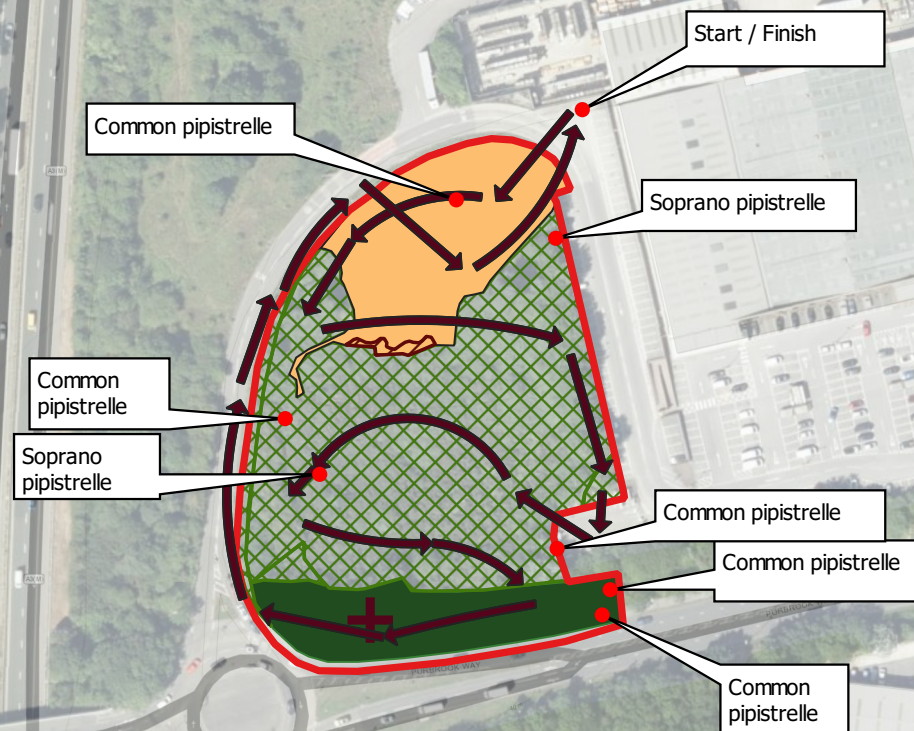
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## Legend

-  Application boundary
-  Transect route
-  Static recorder
-  Ruderal vegetation
-  Neutral grassland
-  Dense scrub
-  Broadleaved woodland





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#### Legend

-  Application boundary
-  Transect route
-  Static recorder (July)
-  Ruderal vegetation
-  Neutral grassland
-  Dense scrub
-  Broadleaved woodland

Client Lidl Great Britain Limited

Project ECO01347

Title Bat Transect Survey  
- September 2021

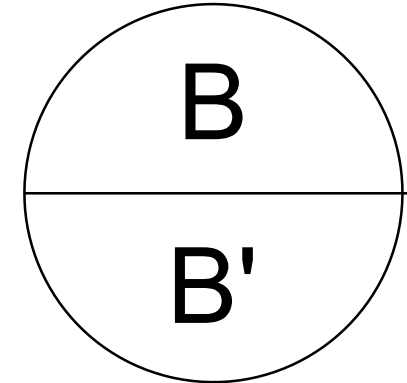
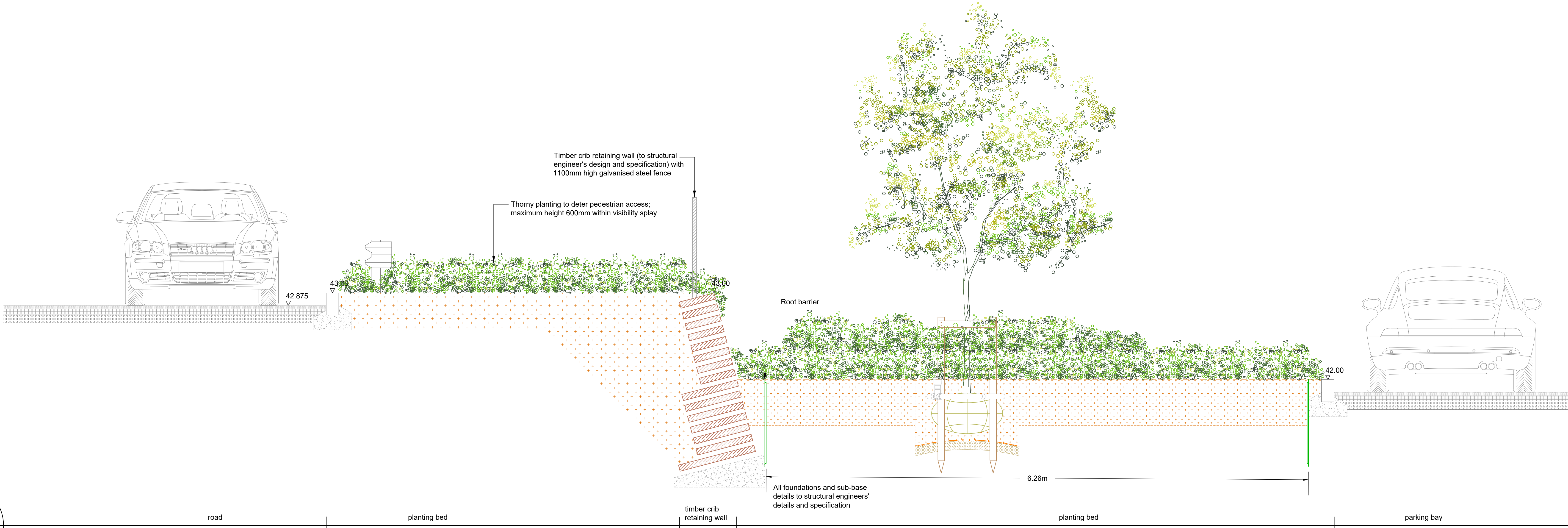
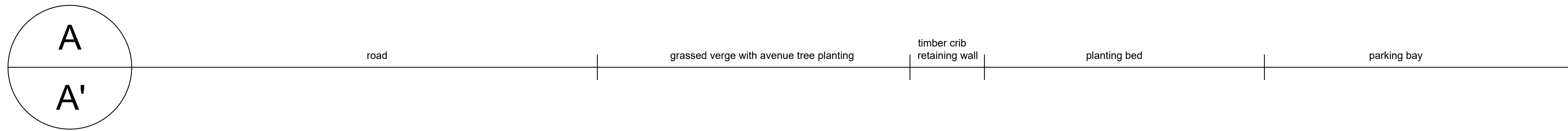
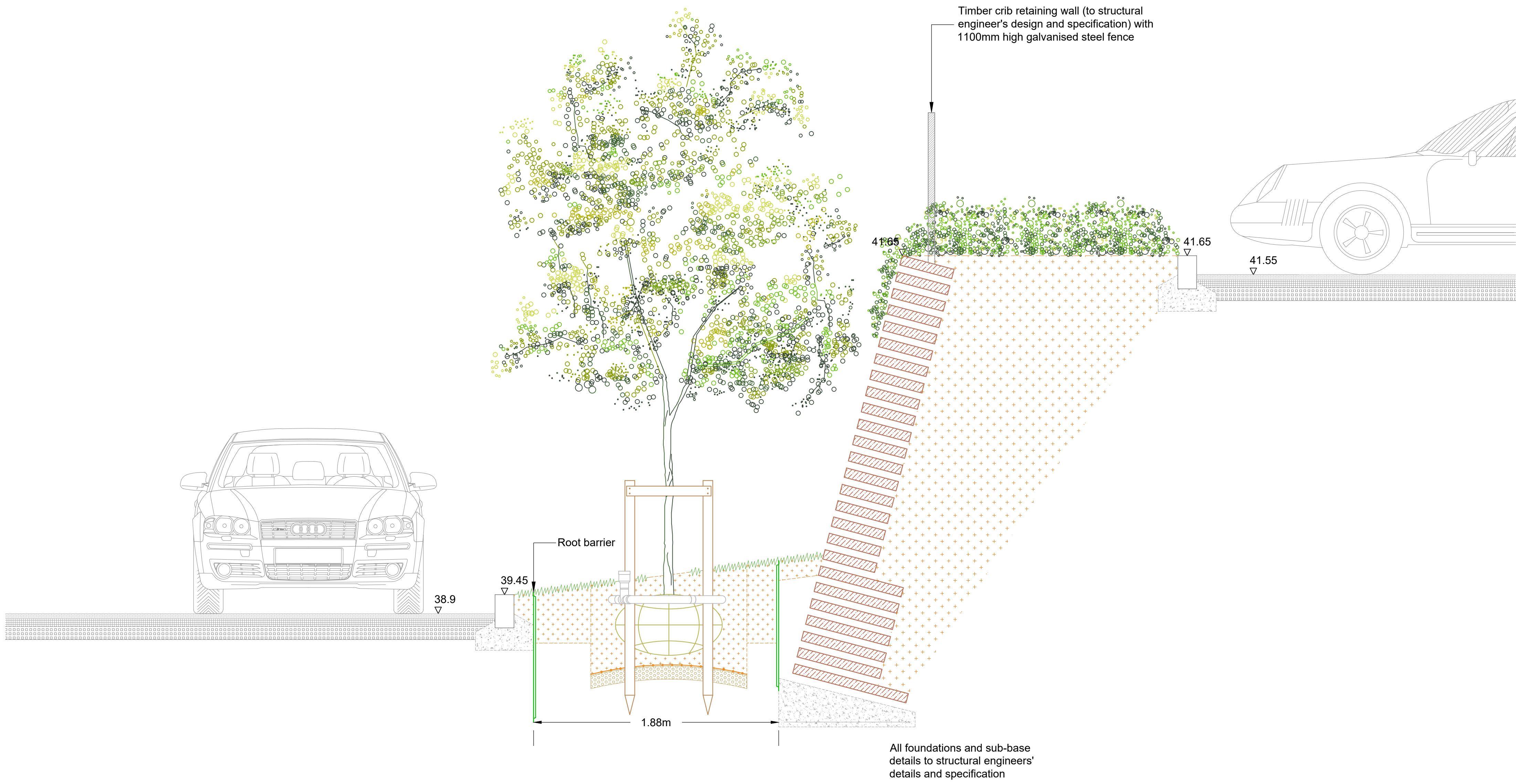
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Date created: September 2021  
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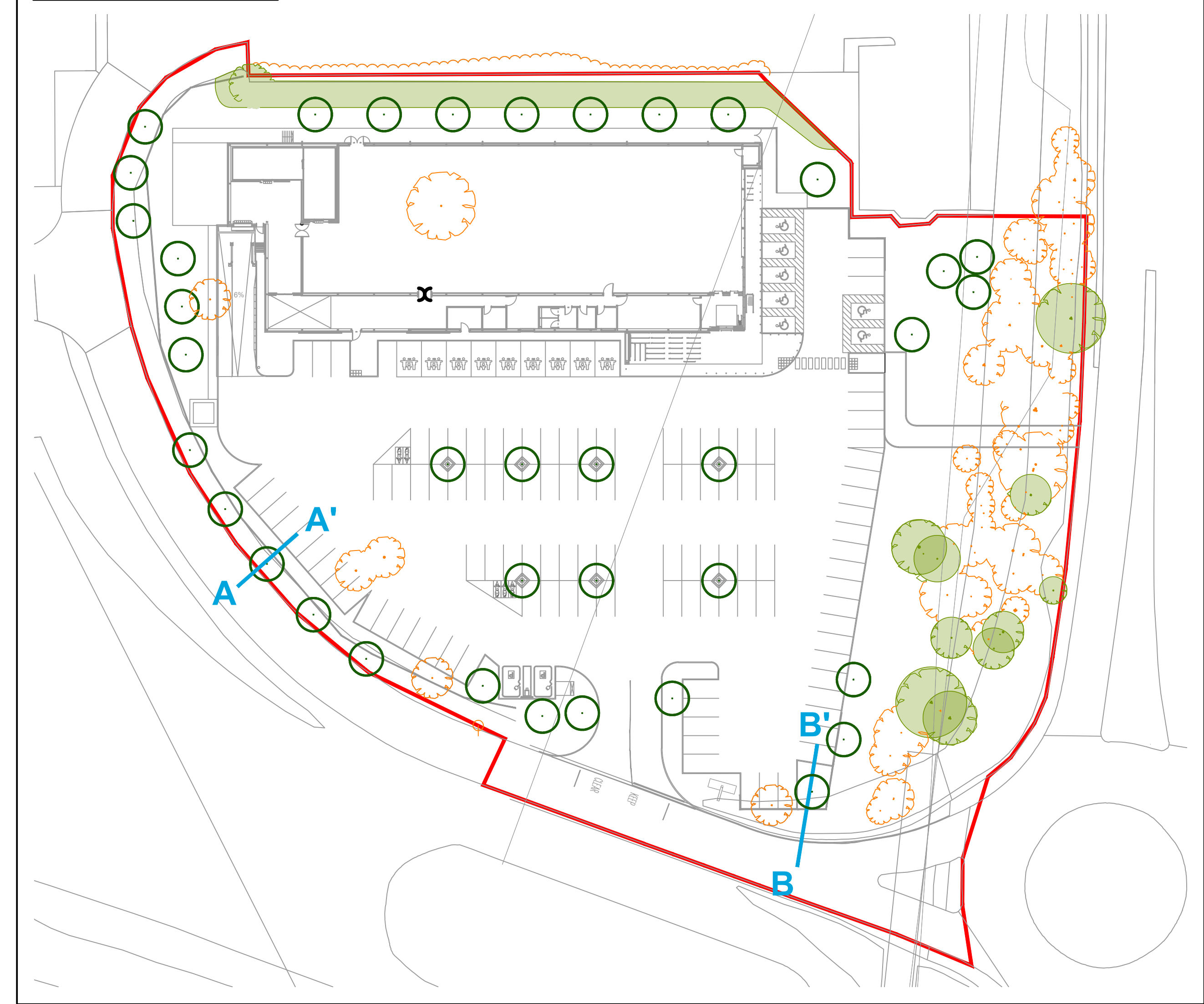


## APPENDIX 1 – LANDSACPING PLAN

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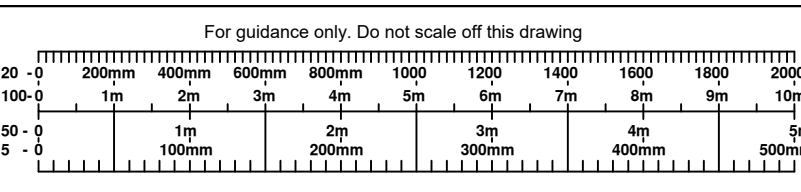


# SECTION LOCATION PLAN



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|     |                                                |     |     |          |
|-----|------------------------------------------------|-----|-----|----------|
| Rev | Description                                    | By  | Chk | Date     |
| P02 | Amendment to fencing detail and tree positions | JBT | DC  | 09.06.21 |
| PV1 | First issue                                    | JBT | DC  | 24.05.21 |

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Client **Lidl Great Britain Ltd.**

Project **Lidl Havant**

Title **Illustrative Typical Sections**

|                                                                         |                    |                          |
|-------------------------------------------------------------------------|--------------------|--------------------------|
| Status                                                                  | Scale              | Date Created             |
| Approval                                                                | 1:20 @ A0          | May 2021                 |
| Task Team Manager                                                       | Information Author | Task Information Manager |
| JBT                                                                     | JBT                | DC                       |
| Document Number                                                         |                    |                          |
| JSL3712-RPS-XX-EX-DR-L-905                                              |                    |                          |
| Project Code - Originator - Zone - Level - Type - Role - Drawing Number |                    |                          |
| RPS Project Number                                                      | Suitability        | Revision                 |
| JSL3712                                                                 | S03                | P02                      |

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