



New Century Place, East Street, Reading

Biodiversity Enhancement Scheme

Report VINCI Construction UK Ltd

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Job No	8352.1		
Version	Date	Checked by	Approved by
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V2.0	21/04/2020		
V3.0	05/05/2020		
V4.0	15/05/2020		

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1 Introduction

BACKGROUND

- 1.1 The Ecology Consultancy has been commissioned by VINCI Construction UK Ltd to produce a Biodiversity Enhancement Scheme for the site at New Century Place, East Street, Reading. This report has been prepared to discharge Planning Condition 4 – *Ecology* of Application No. 181849 which states the following:

“No development shall take place (excluding groundworks, piling, excavation and other preparatory works) until a scheme of biodiversity enhancements, to include bird and bat boxes, tiles or bricks on and around the new buildings and native and wildlife friendly landscaping, has been submitted to and approved in writing by the Local Planning Authority. The biodiversity enhancements shall be implemented in full prior to first occupation of building and retained in situ thereafter”.

Reason: To ensure that the ecological value of the site is enhanced post development in line with Paragraphs 170 and 175 of the NPPF and in accordance with Policy 36.

- 1.2 Policy 36 (Biodiversity and Geology) of Reading Borough Local Development Framework (2008) states that ‘*Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes*’.

SCOPE OF THE REPORT

- 1.3 This Biodiversity Enhancement Scheme details the measures to enhance biodiversity and ecology at the site to address Condition 4 - *Ecology* of Planning Application ref. 181849.
- 1.4 The Biodiversity Enhancement Scheme has been written based on the recommendations of a Preliminary Ecological Appraisal undertaken at the site in 2016 (ADAS, 2016). As such, the report provides detailed specification for bird boxes and invertebrate boxes, including the type, number, location and maintenance of models used within the scheme and details of wildlife friendly planting to be implemented within the landscaping.
- 1.5 A plan showing the location of bird box placement on the site is provided in Appendix 1.

SITE CONTEXT

- 1.6 The site covered approximately 0.1ha and was situated to the west of East Street, in a built-up area of Reading, surrounded by a mix of commercial and residential properties. Based on results from the Phase 1 Habitat survey carried out in 2016, the site consisted of hardstanding boarded with small areas of mostly introduced shrubs and scattered trees (ADAS, 2016).

DEVELOPMENT PROSALS

- 1.7 Development proposals for the site (GDL Architecture, 2018) involve the construction of a new part-4 part-5 storey building (plus basement) to provide 135 units of purpose-built student accommodation and associated facilities (Sui Generis), landscaping and access.

2 Enhancement Measures

LANDSCAPE PLANTING

Tree and shrub planting

- 2.1 The landscaping includes new trees, native and ornamental shrubs, and ground cover species. The planting schedule will include a variety of species that offer a source of nectar, pollen and berry sources throughout the seasons (Appendix 1, Figure 4).
- 2.2 Climbing vegetation will be added to the landscape design, within the planting bed to the north west of the site, to create a vertical habitat feature (Appendix 1, Figure 4). The climbers will be grown in front of the gabion baskets, therefore no trellis is required as the gabion cages will form a tight knit trellis structure. To maximise their ecological value, climbing vegetation will comprise native species and/or species of recognised wildlife value, including hops, which are the sole food plant for the button-snout moth, a Reading Biodiversity Action Plan (BAP) species as well as ivy.
- 2.3 Larger shrubs and trees will be underplanted with smaller shrubs and herbaceous perennials to create greater structure within the planting scheme and to provide a variety of cover for wildlife.
- 2.4 At least 10 species of flowering plants of known wildlife value are incorporated within the final planting schedule and comprise native species or species of known wildlife value, as listed by the RHS website (<https://www.rhs.org.uk/science/pdf/conservation-and-biodiversity/wildlife/rhs-perfect-for-pollinators-garden-plants.pdf>) (Appendix 1, Figure 3). This will provide new nesting and foraging opportunities for birds and pollinating insects.

Good horticultural practice

- 2.5 Good horticultural practice will be utilised during the establishment of the landscaping scheme and the following methods to minimise off-site ecological impacts will be employed:
 - The use of peat-free composts and soil conditioners to reduce the loss of important peat bogs.
 - The use of mulches to lock moisture into the soil as 'water-wise gardening' helps reduce consumption of water which is especially important during drought periods.

- The use of pesticides (herbicides, insecticides, fungicides and slug pellets, etc.) will be minimised in order to avoid directly toxic and cumulative effects to animals via the food chain, particularly invertebrates and/or birds. Ideally, any pesticides used will be non-residual (non-residual pesticides are effective only during the time of treatment unlike residual pesticides which can persist up to several weeks).
- Once the vegetation has established on site, as far as possible, all thinning/ pruning works to shrubs and trees should be undertaken outside of the bird nesting season which runs from February/ March to August/ September (see Appendix 2 for details on legislation relating to nesting birds).
- The landscaping shall be maintained in accordance with the approved Landscape Management Plan and LE05 Management Plan in the BREEAM report (The Ecology Consultancy, 2020). It is the responsibility of Collegiate AC and the appointed landscape contractors to ensure the above, as well as the long-term management of the site.

BIRD BOXES

- 2.6 New opportunities for nesting birds will be provided in the form of sixteen nest boxes. Given the context of the site within an urban environment, and providing suitable foraging habitat, the house sparrow and swift were deemed to be the most appropriate target species.
- 2.7 House sparrows have suffered catastrophic decline in their numbers over recent years, and the loss of nest sites through redevelopment and refurbishment may be partly responsible. Nest boxes specifically designed for this species are available, which provide for the colonial nesting of two or more pairs (see example below). House sparrow is a Species of Principle Importance and Red List BoCC4 (Eaton *et al.*, 2015).
- 2.8 Swifts are a bird species that are commonly associated with urban areas. For many years they have depended on the voids in roof structures for nesting, but their populations are now in serious decline. This is partly because of problems they face in finding nest places in modern designed buildings e.g. roof tiles are replaced with modern equivalents or flat

roofs, and wooden soffits replaced with uPVC. Swifts are an Amber List Bird of Conservation Concern (BoCC4)¹ (Eaton *et al.*, 2015) species.

2.9 One Schwegler 1SP Sparrow Terrace suitable for house sparrows and fifteen WoodStone® Build-in Swift Nest Boxes will be installed on the new building. Both house sparrows and swifts are social birds that prefer to nest in colonies, therefore boxes that provide nesting opportunities for more than one pair or a number of boxes within close proximity of one another are recommended. Furthermore, both models are made from woodcrete, and as such, are longer lasting compared to wooden boxes and insulates occupants from extremes of temperature and condensation.

2.10 Table 1 outlines the number and type of bird boxes recommended for installation, including details on the dimensions of the boxes and occupant species.

Table 1: Bird Box Details

Example	Number	Type	Dimension H x W x D (cm)	Occupants
 ©Schwegler 2010	1	Schwegler 1SP Sparrow Terrace	16 x 10.5 x 15	House sparrow
	15	WoodStone® Build-in Swift Nest Box	33.5 x 18.5 x 16	Swifts

¹ Birds of Conservation Concern status is prioritised into high concern (Red), medium concern (Amber) and low concern (Green) (Eaton *et al.*, 2015). Red-list species are those that are globally threatened according to the IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery. Amber-list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations. Green-list species are those that fulfil none of the criteria.

Installation and maintenance

- 2.11 The 1SP sparrow terrace box will be secured using galvanised nails/screws, at a height of 2-4m above ground level and will be accessible for maintenance. The box is to be installed on the gabions along the western elevation of the new building amongst the climbers to be planted and close to the new tree and shrub landscape planting, away from any doors or windows (GDL, 2020) (Appendix 1, Figure 1 & 4).
- 2.12 The WoodStone® Build-in Swift Nest Boxes are to be embedded within the external walls underneath the eaves or as close to as possible on the western elevation of the new building (GDL, 2020) (Appendix 1, Figure 1 & 2). This elevation allows the highest uninterrupted drop from the boxes and has the least amount of disturbance both for the birds and property residents. Swift boxes need to be installed at least 5 metres (m) above ground level and have unobstructed airspace in front of the box entrance to allow for uninterrupted ingress/egress.
- 2.13 The boxes are placed to avoid being above windows or where they are easily overlooked/disturbed, in close proximity to mechanical outlet extractors or in locations likely to be subject to increased light levels.
- 2.14 Any building works in the vicinity of the bird boxes will be timed to avoid breeding periods (March to August inclusive). Fixing/ attachments of the sparrow bird box will be checked for safety and effectiveness on an annual basis (autumn-winter). The access/egress points on all bird boxes must not be obscured by vegetation or any other obstruction.
- 2.15 Artificial lighting will not directly illuminate the bird boxes to be installed and there is no external lighting in the locations where the swift boxes are to be located.

INVERTEBRATE HABITAT

- 2.16 An invertebrate box will be installed in the north-west of the site within the area of new landscape planting affixed to the gabions (Appendix 1, Figure 1 & 4), to provide habitat for invertebrates which in turn will provide a food resource for bats and birds. This will comprise a 'Schwegler Clay & Reed Insect Nesting Aid', which features a clay block with different sized holes drilled into it and stacks of reed cuttings, encased in a durable woodcrete shell with a wire mesh front. The clay reduces temperature fluctuations and increases air permeability. The various sized holes and materials will be able to support a wide range of invertebrate species.
- 2.17 Table 2 below outlines the number and type of insect boxes recommended for installation, including details on the dimensions of the boxes and occupant species.

Table 2: Invertebrate box details

Example	Number	Type	Dimension H x W x D (cm)	Occupants
 ©Schwegler 2010	1	Schwegler	29 x 22.5 x 20.5	Range of insects including solitary bees, lacewings and ladybirds.

POST CONSTRUCTION REVIEW

- 2.18 Once the bird boxes have been installed on site, a suitably qualified ecologist will undertake a check to ensure the bird boxes have been installed correctly as outlined in this report and will provide a closing out letter (with photos of the boxes / bricks) for submission to the Local Planning Authority.

References

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Appendix 1: Plans

Figure 1: Bird box placement plan

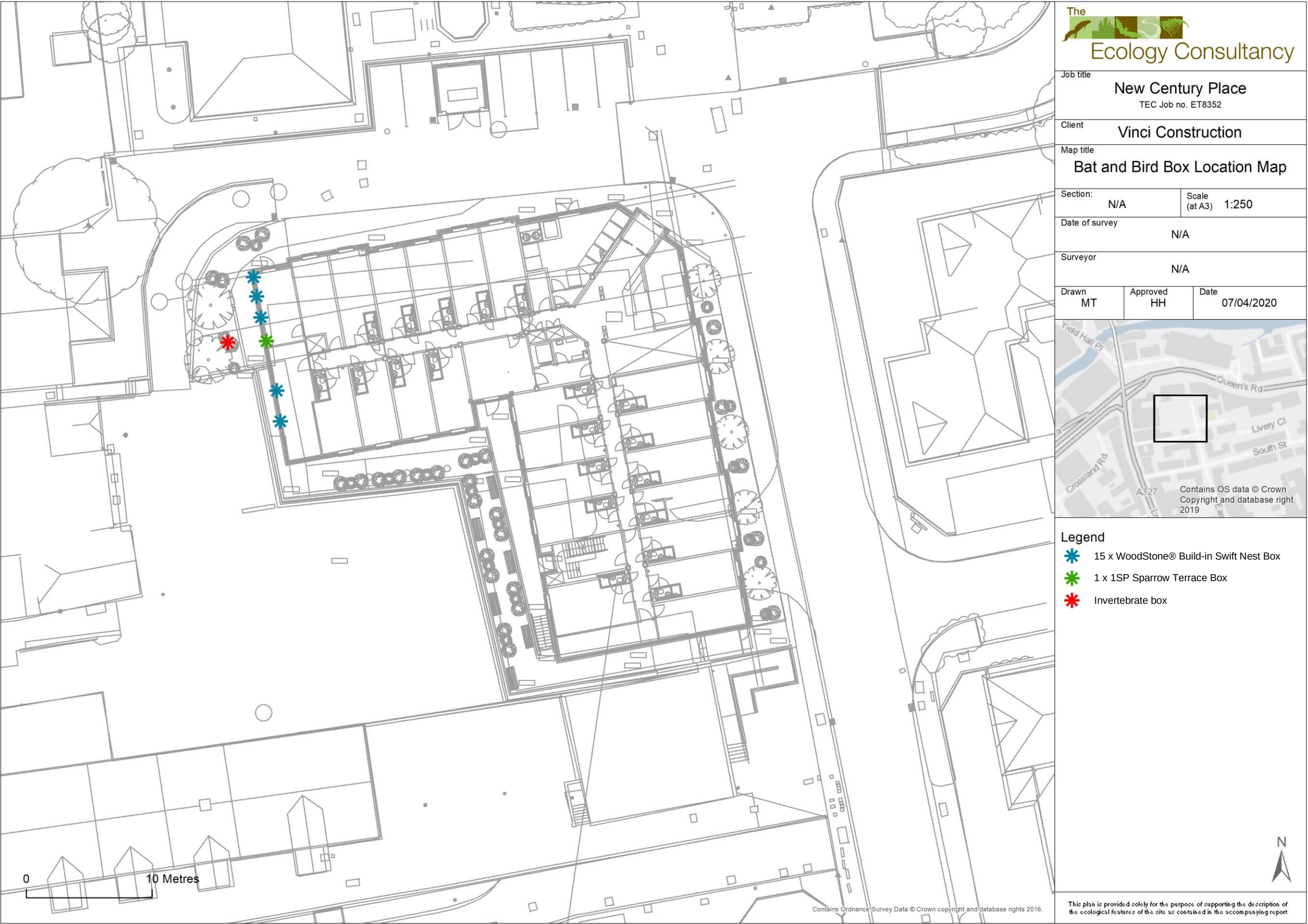


Figure 2: Elevation plan showing location of swift boxes

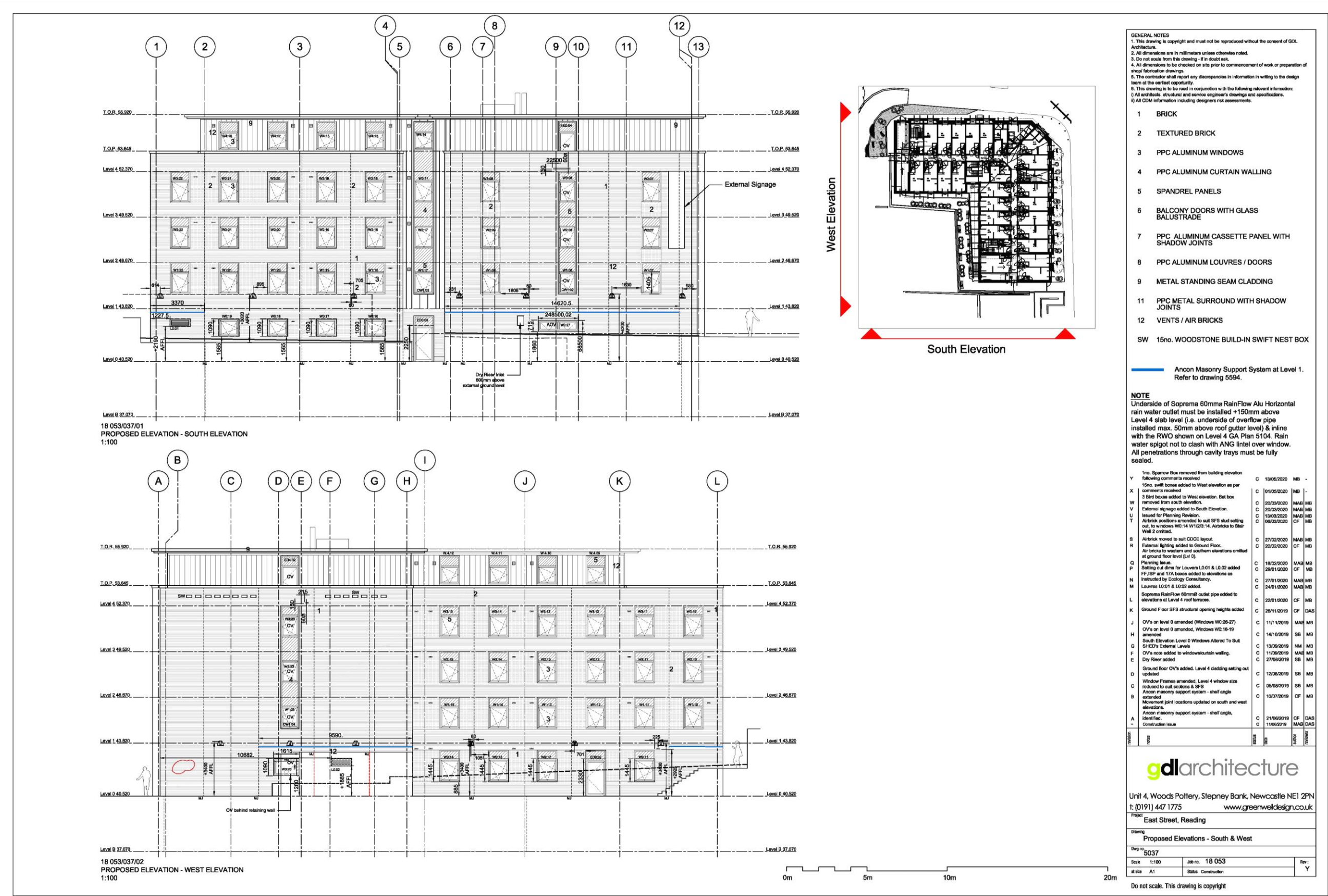
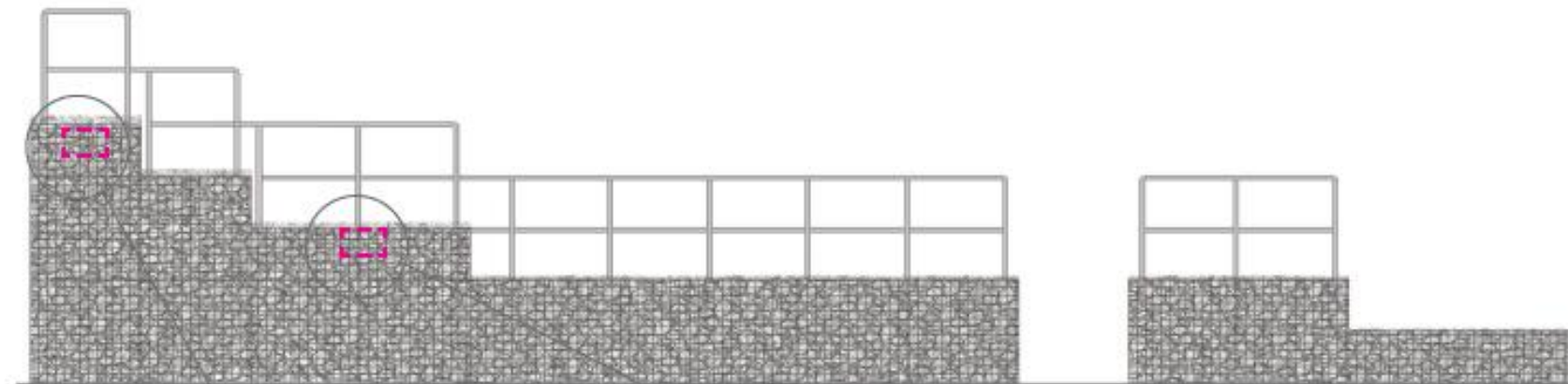
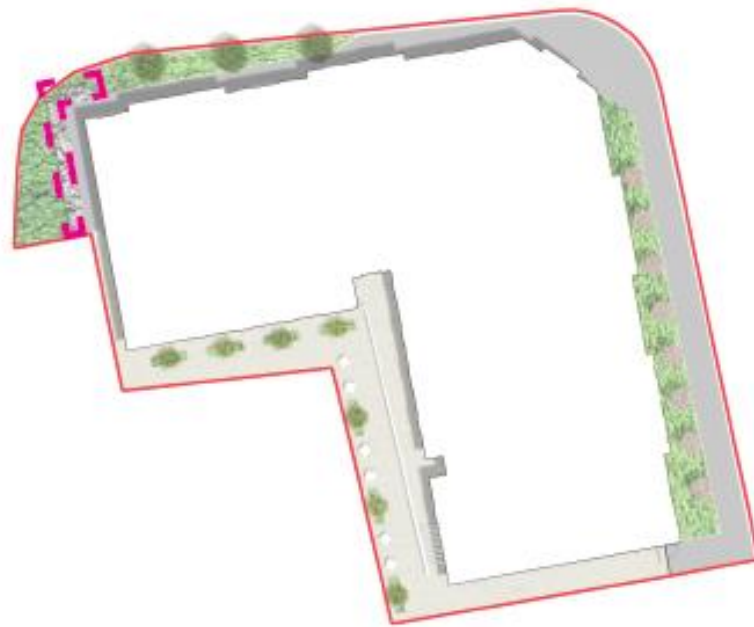


Figure 3: Plan showing location of sparrow and insect box

Birdbox & insect aid



Location of sparrow terrace on proposed gabion wall elevation

Birdbox

The sparrow terrace and insect nesting aid have been located in the proposed gabion wall. The wall is situated to the north of the existing site boundary retaining wall and 1.2m from the face of the proposed building's western facade.

Once the boxes have been installed, an ecologist will come and check that they have been installed correctly and will issue a closing out letter (with photos of the boxes / bricks) which is to be submitted to the LPA.



Schwegler 1SP Sparrow Terrace



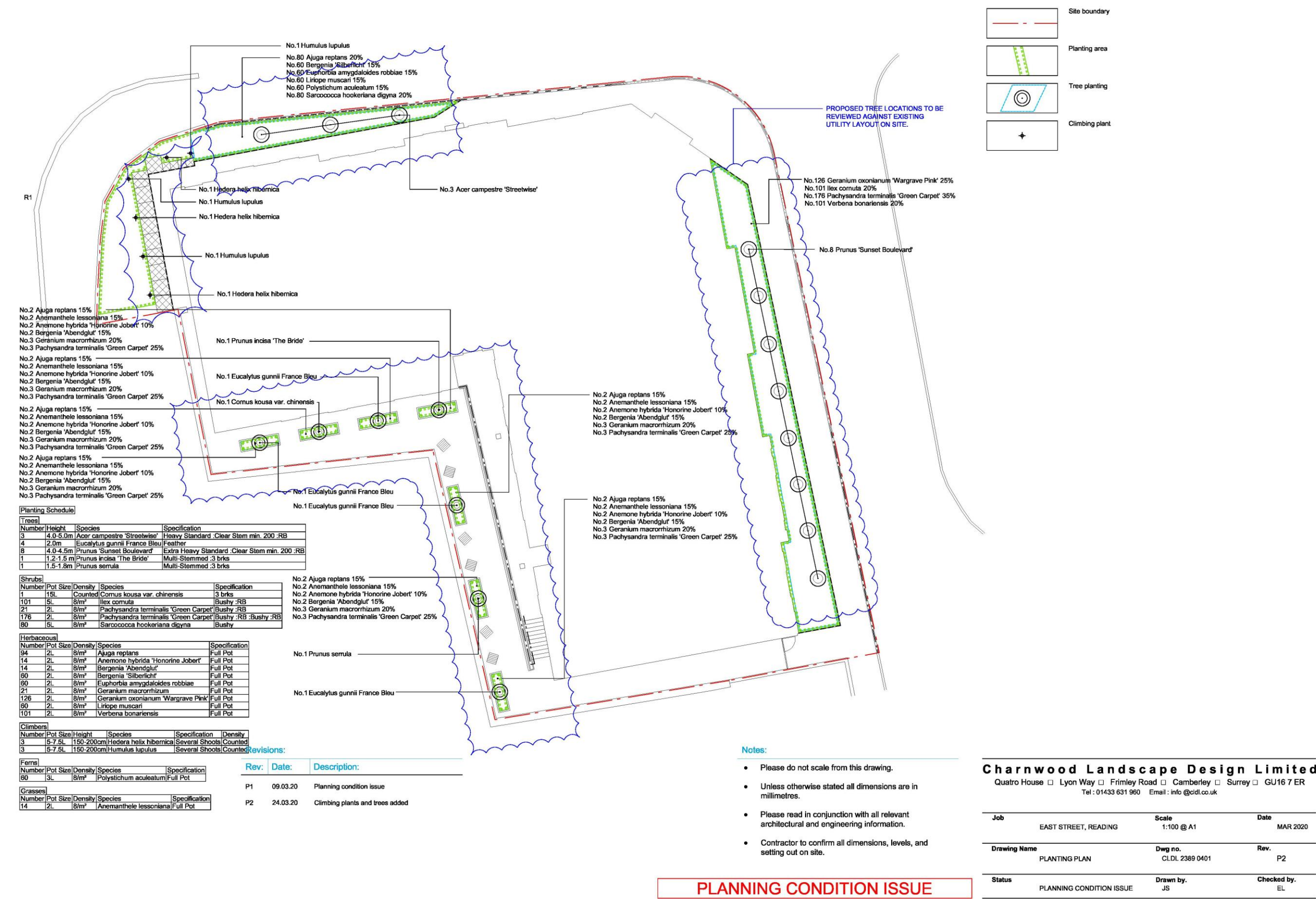
Schwegler Clay & Reed Insect Nesting Aid

East Street, Reading - Landscape Layout & Material Updates

CLDL 2389 (90) 1001 R05



Figure 4: Planting plan



Appendix 2: Legislation

BIRDS

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). Among other things, this makes it an offence to:

- Intentionally kill, injure or take any wild bird
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird

Certain species of bird, for example the barn owl, black redstart, hobby, bittern and kingfisher receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young
- Intentional or reckless disturbance of dependent young of such a bird

To avoid contravention of the Wildlife and Countryside Act 1981 (as amended), works will be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Those species of bird listed on Schedule 1 are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.



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