HOLLY FARM
COPTHORNE

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Prepared by
ACD Environmental Ltd

for

ACD ENVIRONMENTAL

Ecology
Archaeology
Arboriculture
Landscape Architecture

orbit HOMES

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1.0 INTRODUCTION

1.1 Holly Farm and Hollywood Holiday Camp Site has outline planning permission for redevelopment. The outline planning permission (Ref: 14/04662/OUT) includes the demolition of all of the existing buildings and the construction of 45 dwellings with associated access road, car parking, landscaping and open space.

1.2 This report has been produced to satisfy condition 5 of the outline permission which states that:

'Prior to development or any preparatory work and to support the Reserved Matters application, a Construction Environmental Management Plan will be produced, submitted and approved in writing by the Local Planning Authority. The CEMP shall describe how the development construction will proceed to mitigate potential impacts on local ecology. The CEMP will pick up all recommended mitigation arising out of the recommendations made within the Extended Phase 1 Habitat Survey (Ref J005488) and Phase 2 Ecology Survey (Ref J005579) reports by Ecosulis Ltd, dated December 2014. The development shall only be implemented in accordance with the approved CEMP unless first agreed in writing with the Local Planning Authority'.

1.3 An extended Phase 1 survey of the site was carried out by Ecosulis in June 2014. The site supports areas of amenity grassland, buildings, scattered trees, broad-woodland, an orchard, and Kitts Brook. The woodland to the north of the site is designated as Ancient Woodland.

1.4 Phase 2 reptile, bat and otter surveys were carried out by Ecosulis in September and October 2014. No bats were seen emerging from any of the buildings during the bat surveys but moderate levels of foraging activity were recorded within the site. Although no evidence of otters was found during the otter survey it is highly likely that otters occasionally use the brook to commute through the site, and two kingfisher nest holes were recorded along the brook bank. The reptile surveys identified a small population of common lizards within the site and therefore a reptile trapping exercise will be required to move the lizards out of the construction site before site preparation and construction works can commence.

1.5 ACD Environmental carried out an updated site visit in November 2015 which confirmed that the habitats within the site were as described in the Ecosulis reports.

1.6 This CEMP will provide the following information;

- Mitigation measures required during site preparation and construction;
- Mitigation measures required during the operational phase; and
- Enhancement measures.

1.7 Implementing the measures outlined in this CEMP will ensure that there are no impacts upon protected species and that the development is conformity with relevant legislation and planning policy.

2.0 MITIGATION MEASURES DURING SITE PREPARATION/CONSTRUCTION

General Ecological Measures

2.1 The following measures will be implemented during the site preparation and construction phases of the development.

- Site induction and toolbox talks will be regularly undertaken to ensure that all workers are aware of the restrictions on site and of wildlife protection.
- No overnight construction works will take place and construction related lighting will be directed away from retained areas of habitat.
- Night time security lighting and non-essential lighting will be fitted with automatic cut-off switches to minimise disturbance to wildlife.
- Excavated pits/trenches/holes will be covered overnight or fitted with escape ramp to prevent wildlife from becoming trapped.
- All chemicals will be stored in well-sealed containers and stored well away from watercourses and boundary vegetation so that they cannot spill into the brook or be consumed or knocked over by wildlife.
- Tree and vegetation removal works will be carried out during the period October to February, inclusive (i.e. outside of the bird nesting season). Should it prove necessary to remove trees or vegetation during the bird nesting season, an ecologist will check the vegetation for the presence of active bird nests. If no active nests are found, clearance work will be completed within 48 hours of inspection. If any active nests are found, removal work will cease and an area of 5m radius around the nest will be cordoned off with hi-visibility tape and appropriate signage to prevent disturbance of nesting birds. Any noisy machinery, such as wood chippers, will be moved at least 10m away from the location of the nest. Work within the cordoned off area will only proceed once an experienced ecologist has confirmed that the young have fledged and the nest is no longer in use.
- All retained trees and areas of vegetation will be protected in accordance

with the Tree Protection Plan using tree protection fencing. The integrity of the tree protection fencing will be checked regularly throughout the development to ensure that there is no damage and it will remain in situ until the completion of the development.

2.2 In addition to the above mitigation measures the following ecological receptors have been identified as requiring specific protection measures during the site preparation and construction phases of the development;

- Reptiles
- Ancient Woodland
- Kitts Brook
- Bats

Reptiles

2.3 The site supports a small population of common lizards which will be retained on site.

2.4 Common reptiles are protected against intentional killing and injury under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

2.5 The purpose of this advice is to set out mitigation measures in areas where the risk of common reptiles being present and affected by development proposals is high.

2.6 The site owner/site manager will ensure that anyone undertaking construction works on the site (including sub-contractors) is made aware of the potential for the site to support common lizards, where to expect them, their protected status and the procedure (below) to follow to avoid harm. Where applicable, this advice will be given through site inductions, tool box talks or similar. A copy of this CEMP will be kept on site and available for inspection at all times.

2.7 Due to the tussocky and undulating structure of the grassland, a reptile trapping exercise is required to capture reptiles from specific construction areas, without

causing harm. The trapping exercise will be carried out during the active reptile season (i.e. April – early October) to move the reptiles out of the construction zone and into areas of retained habitat. With the exception of tree removal works (discussed in paragraph 2.14) no site preparation or construction work will commence in the reptile habitat (as shown on the reptile exclusion fencing plan) until the reptile trapping exercise has been completed.

2.8 Construction work, in which reptiles are likely to be threatened, and the law potentially breached, includes all of the following:

- Archaeological and geotechnical investigations;
- Clearing land;
- Installing site offices or digging foundations;
- Cutting vegetation to a low height;
- Laying pipelines or installing other services
- Driving machinery over sensitive ;areas
- Storing construction materials in sensitive areas; and
- Removing rubble, wood piles and other debris.

2.9 Reptile exclusion fencing will be installed around the reptile habitat (i.e. reptile trapping area) and along the woodland edge (i.e. receptor area) as indicated in the Reptile Exclusion Fencing Plan (Appendix 2). Artificial refugia will be placed into areas of reptile habitat at a density of 50 refugia/ha and then left for 2 weeks to bed down. Pitfall traps will also be installed at regular intervals. A minimum of 20 days trapping will be carried out, under suitable weather conditions, during April-early October. Any reptiles found will be captured by hand, placed into a vivarium and then released on the other side of the reptile exclusion fencing along the woodland edge. Trapping will cease once the 20 minimum days plus 5 clear days have been completed.

2.10 Predicted timings for the reptile trapping exercise are provided in Table 1 below.

Activity	Predicted Timings*
Installation of reptile exclusion fencing	mid-March to late March 2016
Installation of pitfall traps and deployment of reptile mats	mid-March to late March 2016 Allow two weeks between deployment of mats and commencement of trapping.
Carry out reptile trapping exercise	April 2016 – minimum 20 trapping days. Estimated completion of trapping late April – mid May 2016.
*Please note that the predicted timings are weather dependent.	

Table 1: Predicted timings* for the reptile trapping exercise

2.11 The reptile exclusion fencing around the reptile trapping area will be removed once the trapping exercise has been completed.

2.12 The reptile exclusion fencing along the woodland edge will remain intact until the development has been completed. The integrity of the fencing will be checked on a regular basis throughout the development to ensure that there is no damage to the fencing. Any damage will be repaired immediately. Vegetation on either side of the reptile fencing will be managed to prevent reptiles climbing back over the fencing into the site. The fencing will be removed once the development has been completed.

2.13 To protect hibernating reptiles, any tree removal works carried out during the period October-March, inclusive (i.e. during the reptile hibernation period), will involve cutting the tree down to no less than 50cm above ground level and leaving the roots in situ. The tree stumps and roots will be removed under the supervision of an ecologist during the active reptile season (i.e. between April – early October). This method of site clearance will also protect hibernating dormice in the unlikely event that they are present within the site. Tree removal works will not be carried out during the reptile trapping exercise.

2.14 Pedestrian and cycle access routes are proposed through some of the retained reptile areas. As the construction of these will require the removal of turf and digging within reptile habitat, the works will be supervised by an ecologist. Prior to digging/turf removal the area will be strimmed to enable reptiles to move into surrounding habitats. The construction of these access routes will only take place

during the active reptile season (i.e. April – early October) and under suitable weather conditions.

2.15 In the event that reptiles are found during unsupervised site preparation or construction work, work within the surrounding area will cease immediately and an ecologist will be contacted for advice. No work will commence within the area until the ecologist has advised that it is safe to do so.

Ancient Woodland

2.16 The Ancient Woodland will be retained and protected by a buffer with a minimum width of 15m. Tree protection fencing will be installed along the edge of the buffer in accordance with the Tree Protection Plan.

2.17 To prevent damage and minimise disturbance the woodland and the 15m buffer will be kept free from artificial lighting and there will be no access for workers or machinery. Appropriate signage will be erected to ensure that all workers are aware that access into the woodland is not permitted.

2.18 The only exception to the above will be during the construction of swales and pedestrian/cycle access routes. To enable the swales to be created within the woodland buffer the tree protection fencing will be temporarily moved to the woodland edge to provide access for workers and machinery. Once the swales have been completed the fencing will be moved back to its original position. During the construction of pedestrian/cycle access route, which is proposed within the south-eastern corner of the woodland, workers will be permitted to access the woodland but there will be no access to heavy machinery.

Kitts Brook

2.19 Kitts Brook will be retained and protected by a buffer with a minimum width of 8m.

2.20 To prevent physical damage to the brook and minimise disturbance to wildlife, including otters and kingfishers, the buffer will be kept free of artificial lighting and there will be no access for workers or machinery.

2.21 Chemicals will be stored away from the brook and appropriate measures will be taken to prevent contamination from waste water discharge.

2.22 Appropriate signage will be erected to ensure that all workers are aware that access into the brook area is not permitted.

Bats

2.23 All buildings will be demolished under the supervision of a licenced bat worker. Areas of the buildings which have bat roosting potential will be soft stripped (i.e. removed by hand). Bat boxes will be installed onto retained trees as indicated in Appendix 3 to provide alternative roosting habitat should any bats be encountered during demolition. The licenced bat worker will supervise the demolition until they are satisfied that all of the potential roosting features have been removed. In the unlikely event that bats are found during demolition, they will be captured by hand, placed into cloth bags and taken to the pre-installed bat boxes. If bats are found during unsupervised demolition, work will cease immediately and the licenced bat worker will be contacted for advice. Only a licenced bat worker is permitted to handle bats.

3.0 MITIGATION MEASURES DURING THE OPERATIONAL PHASE

3.1 The following ecological receptors have been identified as requiring specific protection measures during the operational phase of the development;

- Reptiles
- Ancient Woodland
- Kitts Brook
- Bats

Reptiles

3.2 In accordance with the Ecological Mitigation Plan (see Appendix 1), areas of grassland within and adjacent to retained habitats, including the woodland buffer, will be managed as rough grassland for the benefit of reptiles.

3.3 The grassland will be allowed to flower and set seed each year. It will be strimmed twice a year (i.e. spring and late autumn) to a height of no less than 20cm. Grass cuttings will be raked into a pile and then added to the log piles along the woodland edge.

Ancient Woodland

3.4 To minimise disturbance to the woodland and associated wildlife, the woodland and the 15m buffer will be retained free from artificial lighting and managed as woodland glade/rough grassland for the benefit of wildlife. Details of the grassland management is provided in the reptile section below. Post and rail fencing will be installed along the woodland edge to discourage access.

3.5 A pedestrian and cycle access route is proposed through the south-eastern corner of the woodland. To discourage access into the wider woodland habitat the post and rail fencing will be installed along the edge of the access route, and the landscape scheme will incorporate strategic planting of native trees and shrubs within the woodland.

3.6 The woodland will be subject to a Woodland Management Plan which will provide

measures to ensure that the woodland is protected and enhanced during the operational phase of the development. This will include the reinstatement of woodland habitat and woodland glades in areas previously cleared for camping. The woodland glade will be managed as reptile habitat (rough grassland/open glade). Selective tree thinning will be carried out to achieve 70% of the glade opened to sunlight with the remainder covered by dappled shade. Light conditions will be adequate to sustain a cover of herbaceous ground layer flora and marginal vegetation.

Kitts Brook

3.7 To restrict pedestrian access to the brook, strategic planting of native trees and shrubs will be incorporated into the landscape scheme. These habitats will be managed in accordance with the prescriptions of the Landscape Management Plan.

3.8 The brook, the 8m brook buffer and the surrounding wooded habitats (as indicated in Appendix 1) will be retained as a dark, unlit corridor to minimise disturbance to wildlife, including otters, and appropriate measures will be taken to prevent contamination by waste water.

Bats

3.9 To minimise disturbance to bats, external lighting will be minimised throughout the development and dark, unlit corridors will be retained along existing vegetation in accordance with the Ecological Mitigation Plan (see Appendix 1).

3.10 Where lighting proves necessary a bat sensitive lighting scheme will be adopted. External lighting will consist of LED light sources or be fitted with directional accessories (i.e. hoods, cowls, louvres, shields) to minimise horizontal light spillage and direct light away from areas of vegetation or features with bat roosting potential. No artificial lighting will be fitted near to, or directed towards, bat boxes.

4.0 ENHANCEMENT MEASURES

4.1 The following measures will be implemented to mitigate for habitat losses and to enhance the ecological value of the site.

Bat boxes

4.2 To increase opportunities for roosting bats, four Schwegler 2FN[1] and three Schwegler 1FF[2] bat roost boxes will be installed onto retained trees as indicated in Appendix 3. These boxes will be installed between 3-6m above ground level and positioned so that they face in a south, south-east or south-westerly direction with a clear flight path to/from the entrance hole. These bat boxes will be installed prior to the soft demolition of the buildings.

4.3 Three Schwegler 1FR Bat Tubes[3] or three Habibat Bat Boxes[4] will be installed into new buildings as indicated in Appendix 3. These boxes will be installed 3-6m above ground level and positioned so that they have a clear flight path to/from the entrance hole.

4.4 Bat boxes require no maintenance other than repair/replacement if damaged. Bats are protected from disturbance under UK and EU legislation and therefore these bat boxes will only be inspected or removed/replaced by a licenced bat worker.

Bird boxes

4.5 Four Schwegler 1SP[5] sparrow terraces and four Schwegler No.17B[6] swift boxes will be installed into/onto new buildings as indicated in Appendix 3. These boxes should be installed as high as possible and positioned so that they face in a north to north-easterly direction with a clear flight path to/from the entrance hole.

4.6 Five Schwegler 1B[7] nest boxes will be installed onto retained trees as indicated in Appendix 3. These boxes will be installed 2-5m above ground level and positioned

[1] http://www.nhbs.com/title/158634/2fn-schwegler-bat-box
[2] http://www.nhbs.com/title/158636/1ff-schwegler-bat-box-with-built-in-wooden-rear-panel
[3] http://www.nhbs.com/title/view/161276
[4] http://www.nhbs.com/title/183578/habibat-bat-box-custom-brick-facing
[5] http://www.nhbs.com/title/174850/1sp-schwegler-sparrow-terrace
[6] http://www.nhbs.com/title/177982/no-17b-schwegler-swift-nest-box-single-cavity
[7] http://www.nhbs.com/title/158587/1b-schwegler-nest-box

so that they face in a north to north-easterly direction with a clear flight path to/from the entrance hole.

4.7 Integrated bird boxes require no maintenance. The other bird boxes will be cleaned out of old nest debris during the winter (i.e. October – February, inclusive) and will be repaired/replaced if damaged.

Reptile provision

4.8 Using timber from the on-site tree removal works, several log piles will be created along the edge of the woodland (see Appendix 3) to provide shelter and hibernation opportunities for reptiles, as well as other wildlife (i.e. invertebrates and small mammals). The logs will be cut to varying lengths and piled up to form log piles with a minimum width of 1m and 80-100cm high. Brash and grass cuttings can also be added to the log piles.

4.9 The log piles require no maintenance other than being periodically topped up with logs and brash.

Landscaping

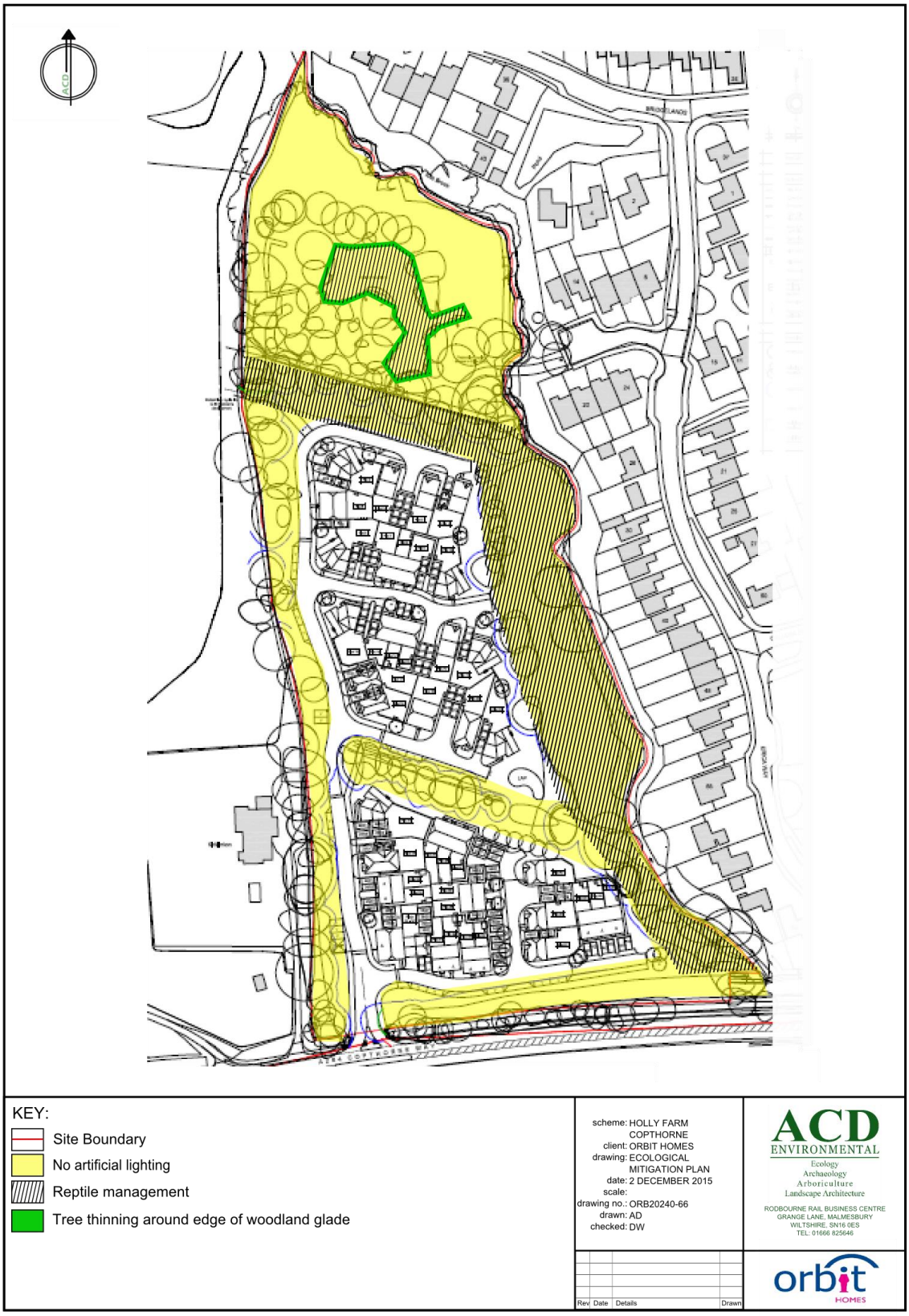
4.10 To enhance the site for invertebrates, birds, bats and small mammals, native planting will be incorporated into the landscape scheme.

4.11 Night scented plants and fruit/nut producing species will be incorporated into the planting scheme to enhance foraging opportunities for bats, birds, badgers, invertebrates and small mammals.

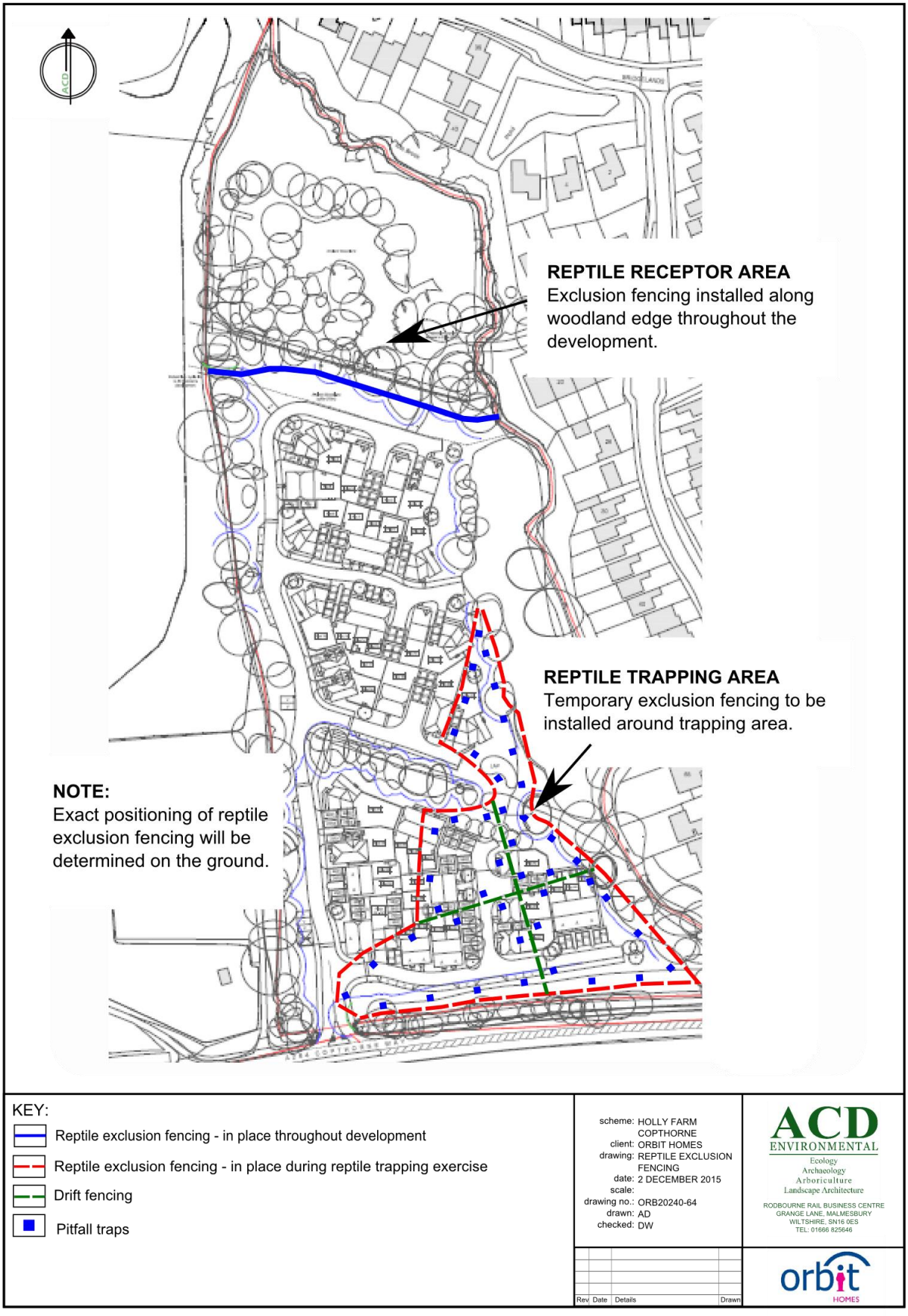
4.12 To mitigate for the loss of an orchard the landscape scheme will incorporate the planting of fruit trees.

4.13 Management of these habitats will be carried out in accordance with the prescriptions of the Landscape Management Plan.

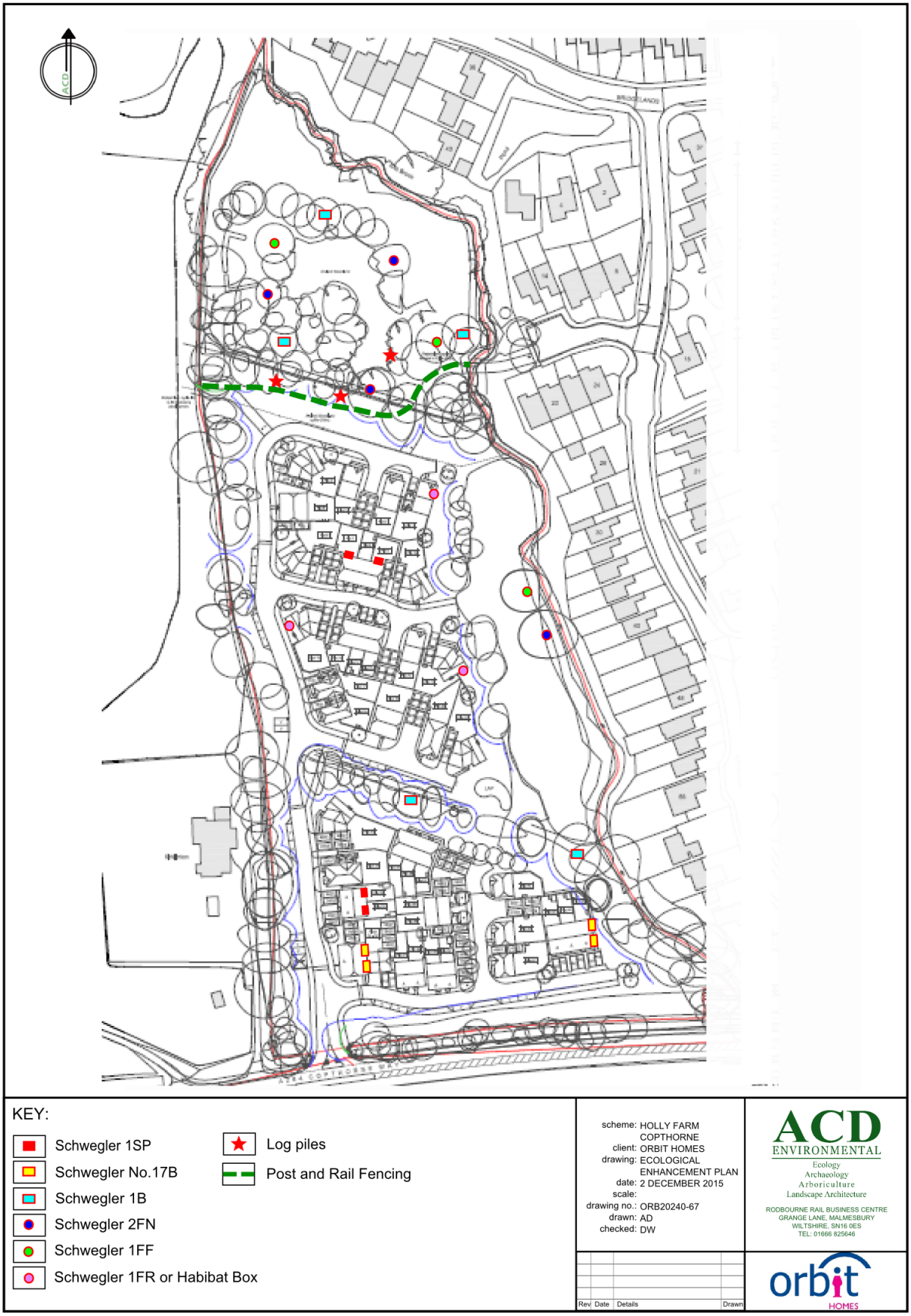
APPENDIX 1 ECOLOGICAL MITIGATION PLAN



APPENDIX 2 REPTILE EXCLUSION FENCING PLAN



APPENDIX 3 ECOLOGICAL ENHANCEMENT PLAN



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