

Natural England, which will be informed by a Badger Mitigation Strategy, and will ensure that legal obligations are met.

- 4.19 Retained hedges, scrub and grassland will continue to provide viable dispersal corridors for badgers.

#### Birds

- 4.20 Development of the Site will result in the loss of large areas of arable habitat which may impact species such as corn bunting and skylark. Small areas of scrub and hedgerow which are suitable for nesting birds will also be lost. The loss of these habitats may also impact local farmland bird populations by reducing breeding and foraging habitats. Given the conservation importance of these species, in the absence of mitigation, it is expected that this loss of breeding habitat will result in significant negative effects.
- 4.21 Increased predation during the operational phase of the development may be likely due to a possible increase in the number of house cats in the area. The minor loss of arboreal nesting and foraging resources resulting from the proposed clearance of small sections of hedgerow and mature trees will be compensated by new habitat creation.
- 4.22 Whilst like-for-like farmland opportunities cannot be replicated on-Site, the provision of a diverse alternative foraging resource adjacent to retained arable land to the south is anticipated to reduce the effect of on-Site habitat loss for a small number of corn bunting and skylark, by providing opportunities for local individuals of these species.
- 4.23 The removal of suitable nesting habitat including arable land, as well as future management within retained areas of suitable nesting habitat will ideally be undertaken outside of the main bird nesting season, taken to run from mid-March to August inclusive. This will prevent destruction and disturbance to nests of both early nesting species, and those which continue to breed into August, including song thrush. These timeframes will also be applicable to clearance of habitat within proposed construction zones. Where this is not possible a nesting bird check by a suitably qualified ecologist of the areas due to be cleared should be conducted in order to identify any active nests and to identify any exclusion zones, prior to works taking place. Exclusion zones will remain in place until the birds have fledged.
- 4.24 The above measures will ensure compliance with the Wildlife and Countryside Act 1981 (as amended), which affords all wild birds' nests protection from destruction whilst in use; with those species listed on Schedule 1 also being afforded protection from disturbance.

#### Reptiles

- 4.25 A reptile trapping and translocation exercise has been undertaken on-Site between August-October 2021 in Phase 1, May-September 2022 in

all three Phases and alongside Dankton Lane adjacent to Phase 2 in August – September 2023 to reduce the risk of killing/injury during the construction phase. Reptiles have been moved to the LWS in accordance with the Reptile Mitigation Strategy (CSA/2134/07).

- 4.26 The translocation consisted of a total of 114 trapping days for Phase 1 across 2021/22, and 75 days in Phases 2 across 2022/23. A total of 60 days of trapping were completed in 2022 for Phase 3. Although a minimum of 90 days were prescribed for Phase 3, the lower numbers caught and capture depletion trends meant that a total of 60 days was appropriate in sufficiently translocating the reptile population from this phase. Table 1 below provides a summary of reptiles captured and translocated across all three phases. A reptile translocation report has been provided to give full methods and results for this work (CSA/2134/09).

**Table 1.** Summary of results from the reptile translocation in 2021 and 2022 across all three phases.

| Phase        | Slow worm adult total | Slow worm sub-adult/juvenile total | Grass snake sub-adult/juvenile total |
|--------------|-----------------------|------------------------------------|--------------------------------------|
| 1 (2021)     | 354                   | 325                                | 4                                    |
| 1 (2022)     | 60                    | 33                                 | 3                                    |
| 2 (2022)     | 152                   | 257                                | 1                                    |
| 2 (2023)     | 4                     | 4                                  | 0                                    |
| 3 (2022)     | 135                   | 150                                | 10                                   |
| <b>Total</b> | 705                   | 769                                | 18                                   |

- 4.27 Capture efforts were augmented through phased habitat clearance during the translocation, through the use of hand-held tools including trimmers/brushcutters under close supervision and an Ecological Clerk of Works (ECoW). This aided encouragement of reptiles that were present to disperse where they could be captured and relocated to the receptor areas within the LWS.
- 4.28 Reptile exclusion fencing has been installed and should be protected from the construction zone using Heras fencing where appropriate; and checked on a regular basis during the construction period for any signs of damage which could reduce the effectiveness of the exclusion barrier. Once construction is complete, exclusion fencing may be removed (during the reptile active season) and final landscaping and path creation be completed.
- 4.29 A detailed mitigation strategy is provided in the Reptile Mitigation Strategy (CSA/2134/07/E), and reptile mitigation work completed is provided in the Reptile Translocation Report (CSA/2134/09). These reports can be provided if requested.
- 4.30 On-Site mitigation has been proposed for land to the north of West Street (Phase 2 of the development), with any reptiles to be relocated to the proposed community orchard area.

#### Invertebrates

- 4.31 New SuDS creation, native grassland seeding, and tree planting will provide new breeding and foraging opportunities for a wide range of invertebrate species to mitigate for any loss of habitat.
- 4.32 Key habitats that offer opportunities/resources for important invertebrate species, such as hedgerows and grassland are retained where possible.

## 5.0 ENHANCEMENT MEASURES

### Aims and Objectives

- 5.1 Enhancement measures for protected species and IEFs, relevant to the construction and operation phases of development, are set out herein to address the following aims and objectives:
- Undertake habitat creation which will be in line with national and local planning policy;
  - Provision of habitat enhancement features of benefit to fauna known to be present onsite / locally;
  - Provide long-term benefits for wildlife during the operational phases through suitable habitat provision and management;

### Enhancement Measures

#### Habitat Creation and Enhancement

- 5.2 Inclusion of plant species of known wildlife value within the landscaping scheme, including locally appropriate tree, shrub and grassland species (see Landscape Strategy Plan in appendix G). Specific recommendations in regards to protected and notable species are discussed below under the relevant headings.

#### Bats

- 5.3 At least 10 no. bat boxes will be incorporated into the fabric of new builds (Habibat tube or equivalent) and 10 no. bat boxes will be erected on retained trees and woodland (Schwegler 2FN or equivalent) across the entire development.
- Three of these will be incorporated into buildings within Phase 1 of the development.
  - Four will be incorporated into buildings within Phase 2 and an additional five bat boxes will be erected on mature trees within Phase 2.
  - Three will be incorporated into buildings within Phase 3 and an additional x5 bat boxes will be erected on mature trees within Phase 3.
- 5.4 The approximate locations of these boxes are shown on the Phase 1 Ecological Mitigation and Enhancement Plan (CSA/2134/145/C), the Phase 2 Ecological Mitigation and Enhancement Plan (CSA/2134/158) and the Phase 3 Ecological Mitigation and Enhancement Plan (CSA/2134/318) respectively.
- 5.5 Bat boxes will be placed at least 4m from the ground with at least one box per tree sited with the front facing SW to SE. Boxes will be placed

with different aspects, providing a choice of roost sites with different environmental conditions.

#### Badgers

- 5.6 New areas of native grassland planting and maintenance of existing grassland will provide new foraging opportunities for badger across areas of POS.

#### Birds

##### *General*

- 5.7 A total of at least 15 bird nesting boxes will be provided across all phases on new builds as follows:
- 5x generic bird boxes (Aviannex or equivalent)
  - 5x swift/sparrow bricks (S Brick or equivalent)
  - 5 x house martin / swallow cups (Schwegler or equivalent)
- 5.8 Of these 15 bird nesting boxes, Phases 1 and 2 of the development will each incorporate:
- 1 x generic bird box
  - 2 x swift/sparrow bricks
  - 2 x house martin / swallow cups
- 5.9 In addition, to provide some mitigation for the loss of potential nesting opportunities, a selection of bird boxes will be provided within retained woodland areas in Phase 2, with 8 x boxes being provided within retained woodland/trees. These boxes will include species-targeted nest boxes, including 2 x treecreeper boxes, 2 x stock dove/tawny owl boxes, 2 x starling boxes and 2 x robin/open boxes.
- 5.10 Indicative locations and specifications for box provision within Phases 1, 2 and 3 of the development are shown on the Phase 1 Ecological Mitigation and Enhancement Plan (CSA/2134/145/C) and Phase 2 Ecological Mitigation and Enhancement Plan (CSA/2134/158) and Phase 3 Ecological Mitigation and Enhancement Plan (CSA/2134/318), respectively. These boxes should be located in areas where natural nesting opportunities, such as crevices and holes, within retained or newly planted trees are scarce or absent, allowing wider dispersal and reducing territorial competition between and within species (Blakesley and Buckley, 2010).
- 5.11 New tree and hedgerow planting shall consist mainly of native species beneficial to birds, which will provide greater foraging, sheltering and nesting opportunities for birds utilising the Site. House martin cups are to be installed at a distance to sparrow bricks in order to minimise competition.

### *Ground nesting farmland species*

- 5.12 The proposed mitigation area in Phase 3 should be allowed to colonise with grassland and ruderal species with an over-sowing of tussock-forming grasses and wildflowers, if required. No ground-clearance or specific seed bed preparation (other than harvesting of any existing crop) is suggested as natural colonisation would allow farmland weed species and 'volunteer' crop plants of value to the target bird species, to grow in the short-term.
- 5.13 The area will subsequently be managed infrequently to promote rough tussocky grassland and dense native scrub will be planted along the boundary to reinforce the existing hedgerow. These habitats are intended to provide a foraging resource for farmland bird species present in the surrounding arable fields; corn bunting and skylark which will have been displaced from the Site, though the area may also be utilised by these species for nesting. The mitigation area could be excluded from public use to reduce disturbance, with information boards provided to highlight its importance.
- 5.14 More specific details on this proposed bird mitigation area will be submitted with a Phase 3 Reserved Matter application.

### Reptiles

- 5.15 Receptor habitats were established within the LWS prior to the translocation exercise commencing and are being managed to enhance their suitability. Management prescriptions are detailed within the Cokeham Brooks Local Wildlife Site Extension: Landscape and Ecology Management Plan (CSA/2134/08/G), submitted alongside the hybrid planning proposals.
- 5.16 The community orchard in Phase 2 will be managed and monitored for reptiles through the retention of longer grassland swards and appropriate planting in addition to the provision of log piles and hibernacula. Implementation of the Reptile Mitigation Strategy and associated long-term management could be secured through planning condition, with any funding to be secured through a S106 agreement / planning obligations as appropriate. Receptor areas are considered likely to increase habitat suitability and security in the long term.
- 5.17 The majority of existing hedgerow networks will be retained, with the exception of the treeline alongside Dankton Lane by Phase 2 which has been removed for road-widening purposes. Retained hedgerows will maintain connectivity to other areas of suitable reptile habitat within the wider landscape. Opportunities for reptile refuge and hibernation shall be created through the provision of log piles and hibernaculum.
- Phase 1 of the development will incorporate 1 x log pile and 1 x hibernaculum within areas of POS.

- Phase 2 will incorporate 2 x log piles and 2 x hibernaculum.
- Phase 3 will incorporate 1x log pile and 1x hibernaculum within areas of POS.

#### Invertebrates

5.18 New opportunities for invertebrates will be created through utilising any fallen deadwood along the hedgerows/tree lines to provide opportunities for saproxylic invertebrates. The SuDS scheme enhancements will provide opportunities for aquatic invertebrates. At least 15 no. insect boxes will be erected on mature trees and/or new builds. These will be a purpose-built, durable and long-lasting variety i.e. concrete bee bricks, Schwegler clay and reed insect nests.

- Phase 1 will involve the incorporation of three insect boxes into new builds and mature trees within the retained hedgerow at the Site's western boundary.
- Phase 2 will incorporate seven insect boxes into new builds and on mature trees
- Phase 3 will incorporate five insect boxes into new builds and on mature trees.

#### Other

5.19 Timber generated from tree clearance works at the Site will be used to make at least five log piles and three hibernacula for wildlife benefit across all phases of the development.

- Phase 1 of the development will incorporate one log pile and one hibernaculum within areas of POS, materials for these will need to be outsourced due to limited vegetation clearance as part of this stage of development proposals.
- Phase 2 of the development will incorporate two log piles and two hibernaculum within areas of POS. Materials for these will also need to be outsourced as the trees cleared along Dankton Lane were diseased and the timber needed to be removed from Site.
- Phase 3 of the development will incorporate one log pile and one hibernaculum with areas of POS. Materials for these will also need to be outsourced due to limited vegetation on the site.

5.20 Log piles and hibernacula will be situated within boundary vegetation where they will be least disturbed, they should be located on a slope with a southerly aspect to facilitate drainage and provide basking opportunities. New material can be added as required following any future management works. For specific enhancements for hedgehogs *Erinaceus europaeus*, dead leaves will be added to the log piles to provide additional nesting material.

5.21 Covers will be provided for open drains and gullies as well as provide access points in/out of any wildlife ponds/flood attenuation features.

This would also ensure any small mammals, such as hedgehogs, and amphibians do not get stuck.

## 6.0 MANAGEMENT AND MONITORING

### Management

- 6.1 The main aims for habitat management of retained and newly created semi-natural habitats have been set out within this report, as appropriate. The main aims and objectives are as follows:
- to maintain the existing wildlife and nature conservation interest and provide replacement wildlife habitat for that lost within the development areas;
  - to create additional wildlife habitats and enhancements to biodiversity;
  - to maintain and reinforce the landscape and ecology structure of the site;
  - to manage, retain and provide the opportunities to improve areas of existing ecological interest.

#### Hedgerows and trees

- 6.2 Hedgerows and trees will be maintained and managed to maintain native woodland flora and habitat value for local wildlife. This will be achieved through the implementation of management actions (e.g. selective felling/coppice/systematic removal of non-native species such as sycamore *Acer pseudoplatanus*) to increase ground flora and hedgerow regeneration.

#### Grassland

- 6.3 New habitats will be created in order to improve biodiversity, through the provision of grassland habitats seeded with native species mixes in areas of POS, which will provide opportunities for a range of invertebrates, reptiles and birds. Grassland where possible should be managed for reptile populations i.e. low intervention cutting, on rotational cycle, to no lower than 150mm in later summer (August/September) and carefully raking away the arisings.
- 6.4 The proposed ground nesting farmland bird mitigation area should be allowed to colonise with grassland and ruderal species with an over-sowing of tussock-forming grasses and wildflowers, if required. No ground-clearance or specific seed bed preparation (other than harvesting of any existing crop) is suggested to allow natural colonisation and enabling farmland weed species and 'volunteer' crop plants of value to the target bird species, to grow in the short-term.
- 6.5 The area will subsequently be managed infrequently to promote rough tussocky grassland and dense native scrub. These habitats are intended

to provide a foraging resource for farmland bird species present in the surrounding arable fields, corn bunting and skylark which will have been displaced from the Site, though the area may also be utilised by these species for nesting. The mitigation area could be excluded from public use to reduce disturbance, with information boards provided to highlight its importance.

#### Cokeham Brooks LWS

- 6.6 Key management objectives for the LWS comprise the following:
- Management of grassland to provide habitats for native flora and fauna, in particular rare and threatened species (e.g. whorl grass), invertebrate species (soldier beetle *Crudosilis ruficollis*, cinnabar moth *Tyria jacobaeae*, soldierfly *Stratiomys potamida* and hoverfly *Cheilosia soror*) and farmland bird species (skylark)
  - Undertake specific habitat creation and management of grassland/scrub mosaic areas which shall form a reptile receptor site
  - Management of scrub and woodland for both their native flora and also as habitats for fauna
  - Management of wetland habitats including wet grassland for the native flora and fauna they support/provide resources for (e.g. bird species such as Cetti's warbler *Cettia cetti* and water-rail *Rallus aquaticus*, and harvest mouse *Micromys minutus* recorded within fen/reedbed habitats)
- 6.7 Full details of enhancement and management works in relation to the LWS can be found in the Landscape and Ecology Management Plan (CSA/2134/08/G).

### **Monitoring**

#### Badgers

- 6.8 Monitoring checks of the Site during construction will be made regularly by an ecologist to ensure that new setts are not created within areas to be impacted. A toolbox talk will be provided at the start of construction to alert workers to the various ecological constraints and what protection measures are in place. This will include details on identifying and protecting badger setts.

#### Reptiles

- 6.9 As per the Reptile Mitigation Strategy (CSA/2134/07/E), reptile populations within the receptor site in the LWS will be monitored in years 1 and 3 following completion of the translocation, to record the reptile populations present. Artificial refugia will be distributed to monitor the numbers of reptiles present. The findings will be used to inform any

management changes if required. It is hoped that local volunteers can be involved and trained to help with monitoring and contribute to long-term data collection.

## 7.0 REFERENCES

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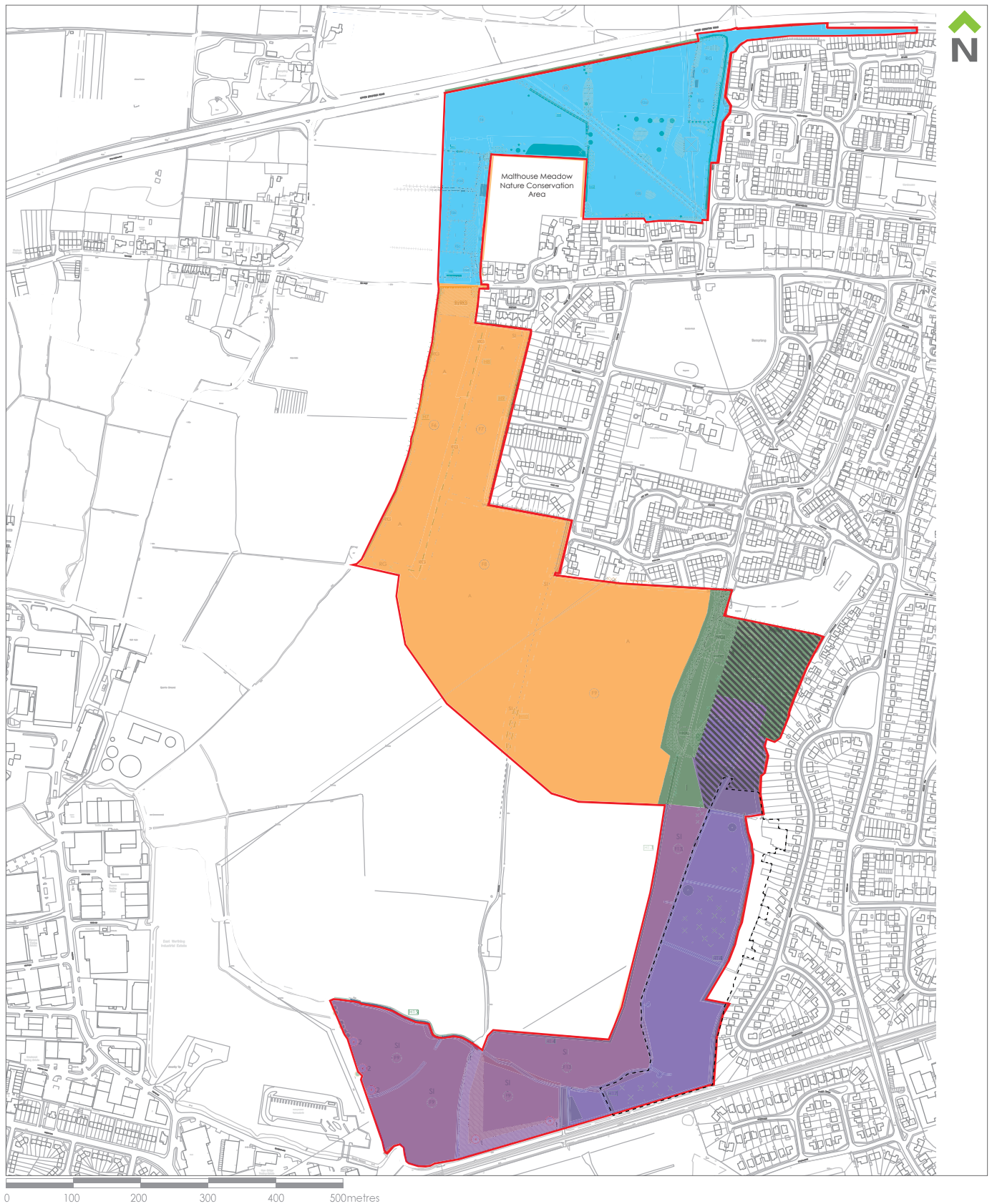
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## **Appendix A**

Site Compartments Plan (CSA/2134/132/C)



### Legend

Site Boundary

Compartment A: Land north of West street

Compartment B: Land south of West Street

Compartment C: Land to the east

Compartment D: Extended Cokeham Brooks LWS (Confirmed July 2019)

Former Lower Cokeham Brooks Reedbed and Ditches LWS

Originally Proposed LWS Extension Based on the Adur Local Plan, 2017

**CSA**  
environmental

Office 20, Citibase, 95 Ditchling Road,  
Brighton BN1 4ST

t 01273 573871  
e [brighton@csaenvironmental.co.uk](mailto:brighton@csaenvironmental.co.uk)  
w [csaenvironmental.co.uk](http://csaenvironmental.co.uk)

**Project** Land at West Sampling, West Sussex

**Drawing Title** Site Compartments Plan

**Client** Persimmon Homes (Thames Valley)

**Date** August 2021

**Scale @ A3** See Scale Bar

**Drawn** AS/AW

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