Construction Environmental Management Plan - Biodiversity



Phase 1B Himley Village, Bicester

24th April 2024



	Report No:	Date	Revision	Author	Peer Review	Approved
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Section 1: Introduction

- 1.1. This Construction Environmental Management Plan Biodiversity (CEMPB) has been prepared by Tyler Grange Group Ltd. (TG) on behalf of Cala Homes in respect to the Land at Himley Village, Oxfordshire, OX26 1RT hereafter referred to as the 'site'. The site is centred on National Grid Reference SP 55436 23155.
- 1.2. An outline planning application for the phased development of up to 1,700 residential dwellings (Class C3), flexible commercial floorspace (Classes A1, A2, A3, A4, A5, B1, C1 and D1), social and community facilities (Class D1), land to accommodate one energy centre and land to accommodate one new primary school (up to 2FE) (Class D1) was submitted to Cherwell District Council (Application Ref: 14/02121/OUT) in 2014.
- 1.3. The outline application was accompanied by an Environmental Statement (ES) which was submitted in 2014. Chapter 7 of the ES provides details of the ecological surveys completed by Hyder Consulting in 2010 and 2011, along with an update Phase 1 Habitat survey undertaken in 2014 by Waterman. This survey work included a background data search with records obtained from the Thames Valley Environmental Records Centre (TVERC), a Phase 1 survey and hedgerow assessment, with specific surveys carried out for great crested newt (GCN) *Triturus cristatus*, badger *Meles meles*, reptiles, breeding and overwintering birds, invertebrates, bat activity and roosts, dormice *Muscardinus avellanarius*, water vole Arvicola amphibius and otter *Lutra lutra*.
- 1.4. Outline planning permission was granted for the site in January 2020 with a number of conditions attached, including Condition 30 which states:
- 1.5. 'No development shall take place on any phase, including any works of demolition until a Construction Method Statement for that phase has been submitted to, and approved in writing by the Local Planning Authority.
 - The statement shall provide for at a minimum:
 - The parking of vehicles of site operatives and visitors;
 - The routeing of HGVs to and from the site;
 - A restriction on construction and delivery traffic during the peak traffic periods
 - Loading and unloading of plant and materials;
 - Storage of plant and materials used in constructing the development;
 - The erection and maintenance of security hoarding including decorative displays and facilities for public viewing, where appropriate;
 - Wheel washing facilities/road sweeping;
 - Measures to control the emission of dust and dirt during construction;
 - A scheme for recycling/disposing of waste resulting from demolition and construction works;
 - Delivery, demolition and construction working hours;
 - The mitigation measures summarised at Table 5.5 and recommended at paragraphs 6.78, 7.62
 7.79, 8.130 8.133, 9.91, 10.112, 12.78 12.80, 13.66 and 14.55 and tables 8.19 and 10.13 of the submitted Environmental Statement (December 2014).



- 1.6. The approved Construction Method Statement shall be adhered to throughout the construction period for the development.'
- 1.7. A CEMP has since been produced and submitted by Hydrock Ltd (report ref: 27141-HYD-PH2-XX-RP-GE-1002-S2-P01) to discharge Condition 30, which should be read in conjunction with this report.
- 1.8. This CEMPB builds upon the protection measures detailed within the Hydrock report and provides further detail in respect to the protection of protected species and habitats of importance identified in the ES and Biodiversity Strategy (BS) report (report ref: **15525_R03d**) during Phase 1B of the development (see **Plan 15525/P09**).
- 1.9. This CEMPB is set out as follows:
 - Section 2 of this document provides site context, habitats present, and the protected species recorded and likely to be affected during the construction phase.
 - Section 3 of this document provides detail on the strategy to protect habitats and protected species on site during the construction phase of the development, expanding upon those outlined in the Biodiversity Strategy produced for the site, along with the details of tree and hedge protection measures and fencing, construction protection measures and site setup. These measures have been prepared in accordance with the British Standard 42020:2013 Biodiversity - Code of Practice for Planning and Development.



Section 2: Site Description and Protected Species

Site Context

2.1. The 'site' is defined by the application red-line boundary (see **Plan 15525/P10**). The site is located immediately to the west of Bicester in Oxfordshire, adjacent to the B4030, and is surrounded by arable land. The M40 is located to the west and Bicester is located to the east of the site.

Summary of Ecological Features

Designated Sites

- 2.2. No internationally designated sites are located within 10 km of the site.
- 2.3. Three statutory designated sites are present within 2 km of the site, which include Ardley Cutting and Quary Site of Special Scientific Interest (SSSI) c. 0.6 km north of the site, Bute Park Local Nature Reserve (LNR) c. 1.4 km east of the site, and Ardley Tackways SSSI c. 1.9 km northwest of the site.

Site Habitats

- 2.4. The majority of the Phase 1B site comprises modified grassland habitat, which is of negligible ecological importance. Other habitats within Phase 1B include buildings and hardstanding tracks, vegetated garden, a small orchard and a network of hedgerows and ditches (see **Plan 15525/P10**).
- 2.5. Habitats within the wider site area include arable fields, broadleaved parkland, deciduous plantation, scattered broadleaved trees, and three ponds.

Protected Species

2.6. The ES and BS reports identified the site as supporting, or capable of supporting the following protected species:

Amphibians

- 2.7. Population surveys for GCN recorded a 'medium population' within ponds P2 and P3 within the wider site in 2011, however the terrestrial habitat surrounding these ponds was considered to be largely unsuitable for GCN due to its intensive management.
- 2.8. Update population surveys for GCN undertaken by Tyler Grange in 2023 recorded both 'small' populations of GCN within pond P2 (peak count 2) and P3 (peak count 5). In addition, smooth newt *Lissotriton vulgaris* were also recorded within P3. No GCN or other newts were recorded in P1.



- 2.9. The update 2023 habitat surveys confirmed that the majority of habitats at the site, namely the arable and improved grassland fields, remained largely unsuitable for GCN and other amphibians owing to the regular and intensive management of these habitats.
- 2.10. All ditches within the site were recorded as dry during the population surveys undertaken in 2023. The site is therefore considered to be of **local ecological importance** for GCN.

Badgers

- 2.11. No badger setts were identified on the site during surveys completed in 2010 or 2014 to inform the ES. Whilst mammal runs and mammal snuffle marks were noted, no definitive badger signs were identified within the site, however setts were recorded within the wider area outside of the site.
- 2.12. The 2023 walkover survey recorded a total of four setts within the wider site boundary, comprising one likely active sett, three likely inactive setts, as well as three mammal holes that could be used by badger.
- 2.13. Tyler Grange undertook and update inspection for badgers of the Phase 1B site in April 2024. During this survey, no additional badger setts within the 1B area or within 30m of the development or hedgerows were identified, and the three mammal holes that could be used by badger showed no signs of recent activity from a badger or any other mammals (see **Plan 15525/P12**). All other setts previously identified within the wider site are greater than 100 m from the Phase 1B site.
- 2.14. As a result, badgers are considered absent from the Phase 1B area and any of the habitats within at least 30 m of where Phase 1B works are proposed.
- 2.15. Badger is not a species of conservation concern and its legal status is primarily to protect them from persecution. As such, any badger population utilising the site is considered to be of **site ecological importance**.

Bats

Bat activity

- 2.16. Bat activity and static surveys undertaken (May to July 2010) recorded seven species/species groups of bats using the site for commuting and foraging. These species included common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long eared *Plecotus auritus*, noctule *Nyctalus noctula*, leisler's bat *Nyctalus leisleri*, serotine *Eptesicus serotinus* and *Myotis spp*.
- 2.17. Activity levels recorded during each of the surveys in 2010 were relatively low with most activity concentrated around the hedgerows and ponds throughout the wider site.
- 2.18. It was considered that the site is part of a wider foraging resource, and given the assemblage recorded, they are not considered to be part of a population of more than **local ecological importance.**

Roosting Bats



- 2.19. In addition to the activity and static surveys, dusk emergence and dawn re-entry surveys were undertaken for a number of trees and the buildings at Himley Farm, and a common pipistrelle roost was confirmed within the farmhouse in 2011 which is outside of all phases of development.
- 2.20. Two buildings, B1 and B2, are located within the Phase 1B boundary (see **Plan 15525/P10**) and are marked for demolition. Both buildings were considered to offer negligible suitability for roosting bats during the 2011 and 2014 surveys, however an update inspection of both buildings in February 2024 by Tyler Grange found evidence of roosting bats within B1.
- 2.21. Building B1 was considered to offer high potential for roosting bats and therefore requires emergence surveys to determine if the structure is being used by roosting bats and inform a licence application as necessary. Three emergence surveys of B1 are scheduled to commence from May 2024. Building B2 remains of negligible potential and no surveys are required.

Breeding Birds

- 2.22. Surveys for breeding birds were carried out in 2011. The species recorded include song thrush Turdus philomelos, dunnock Prunella modularis, house sparrow Passer domesticus, linnet Carduelis cannabina subsp. autochthonal cannabina, starling Sturnus vulgaris, common bullfinch Pyrrhula pyrrhula whitethroat Sylvia communis and marsh tit Poecile palustris.
- 2.23. In addition, wintering bird surveys were undertaken within the winter of 2011, and recorded flocks of yellowhammer *Emberiza citrinella*, redwing *Turdus iliacus* and fieldfare *Turdus pilaris*.
- 2.24. The bird assemblage recorded across the wider site includes some Birds of Conservation Concern and Cherwell BAP Important Species, however the habitats on site are considered to be of low importance for these species. The assemblage recorded is considered to be of at least local ecological importance.

Invertebrates

- 2.25. The 2011 surveys concluded that the majority of habitats on the site were considered unlikely to support more than a common invertebrate assemblages, however individuals of brown hairstreak *Thecla betulae* and white-letter hairstreak butterflies *Satyrium album* (UK BAP and Cherwell BAP species) were recorded within the hedgerows on site.
- 2.26. No further detailed surveys have been carried out for invertebrates and the site is considered to be of **site ecological importance**.

Reptiles

2.27. Reptile surveys undertaken in 2011 recorded low numbers of common lizard *Zootoca vivipara* within areas of suitable habitat within the site, comprising field margins and hedgerows. The data search also revealed historic records of grass snake *Natrix helvetica* within the site, although no individuals of this species were observed during the 2011 surveys.



2.28. No additional reptile surveys have been undertaken by Tyler Grange in 2023 as their presence is assumed within the suitable habitats and those in the wider area. Overall, the site is considered to be of **site ecological importance** for reptiles.

Western European Hedgehog

- 2.29. Hedgehog is a priority species known to be present within the area in 2011. The site habitats, namely the hedgerows and woodland, are considered to be suitable to support this species in low numbers. An assessment carried out in 2023 confirmed that there has been no change in the suitability of habitats on site to support this species.
- 2.30. If present, the population would not be of more than **site ecological importance**.

Relevant Legislation

- 2.31. Construction cannot be undertaken which compromises the survival or success of the fauna described above or which results in the spread of non-native invasive species.
- 2.32. Badgers and their setts are afforded protection under the Protection of Badgers Act 1992. Although badger setts have not been recorded at the site, in the unlikely event an active sett is established and has potential to be impacted by construction works is recorded then Tyler Grange or an appropriate specialist would be contacted, and a Natural England Badger Licence applied for and appropriate mitigation implemented.
- 2.33. All bats and their roosts are afforded protection under the Wildlife and Countryside Act (WCA) 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 (as amended) (the 'Habitats Regulations'). The demolition of building B1 will only take place once all emergence surveys have been completed and a licence from Natural England obtained, if necessary. In the unlikely event that any new bat roost are encountered during works at the site, all works will stop immediately. Tyler Grange or an appropriate specialist would be contacted, a Natural England licence applied for and appropriate mitigation implemented.
- 2.34. All British birds are legally protected from disturbance while actively nesting (generally acknowledged to occur between March and August inclusive). As such any removal of features with potential to support nesting birds, including hedgerows, trees and buildings will be timed to avoid the bird nesting season or preceded by checks for nesting birds by a trained ecologist immediately prior to any removal. Should any nesting birds be recorded within the site during works, no work will take place in that location until the young have left the nest.
- 2.35. Great crested newts are listed on Appendix II of the Bern Convention and on Annexes II and IV of the EU Natural Habitats Directive. In England and Wales the great crested newt is protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 and under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).
- 2.36. It is an offence, with certain exceptions, to:
 - Intentionally or deliberately capture, kill, or injure GCN;
 - Intentionally or recklessly damage, destroy, and disturb GCN in a place used for shelter or protection, or obstruct access to such areas;



- Damage or destroy a GCN breeding site or resting place;
- Possess a GCN, or any part of it, unless acquired lawfully; and
- Sell, barter, exchange, transport, or offer for sale GCN or parts of them.
- 2.37. The legislation covers all newt life stages, such that eggs, efts and adult newts are all equally protected. Actions that are prohibited can be made lawful by a licence issued by the appropriate Statutory Nature Conservation Organisation.
- 2.38. All reptiles are afforded protection under the WCA 1981 (as amended) although it is important to note that this legislation protects the species and not their habitat. As a result, the clearance of and suitable reptile habitat within the will be directional, allowing any reptiles that are present to disperse into suitable retained habitat.



Section 3: Construction Environmental Management Plan - Biodiversity

Risk Assessment

3.1. To inform the preparation of this CEMPB, a risk assessment has been completed on all proposed construction type activities likely to impact potential receptors within the site and surrounding area, as detailed below.

Site Clearance

- 3.2. To facilitate the development, areas of the arable and improved grassland, buildings, orchard, vegetated garden and sections of hedgerow at the site are also to be cleared to facilitate the works and access. During these clearance operations there is potential for impacts to occur as a result of the following:
 - Removal of hedgerow and vegetation resulting in the killing, injury or disturbance of protected and priority species, such as nesting birds;
 - Demolition of building B1 resulting in the killing or injury of roosting bats;
 - Damage and destruction of retained habitats, including the hedgerows adjacent to GCN ponds, negatively impacting the importance of these habitats and the GCN;
 - Run-off resulting in damage to retained, adjacent or off-site habitats;
 - Dust deposition resulting in damage to retained habitats within and close to the site;
 - Noise resulting in disturbance of species within and adjacent to the site; and
 - Temporary lighting disturbing nocturnal species.

Site Set-up

- 3.3. Site offices, huts and temporary toilets, including their drainage, will be created at the site as will storage areas for stockpiles of materials. Site set-up could result in impacts occurring as a result of the following:
 - Damage to retained and sensitive habitats as a result of accidental damage, pollution from plant maintenance and storage plant, machinery, oils, fuels and chemical, including toilets;
 - Construction activities including loading/unloading of plant machinery, creation of haul roads could result in accidental damage of retained habitats; and
 - Disruption of mammal runs or paths.
- 3.4. In addition to these pathways negative impacts could also occur as a result of run-off, dust, noise and artificial lighting as detailed above.

Groundworks

3.5. Construction groundworks including creating foundations and excavations could result in impacts including:



- Damage to retained and sensitive habitats through accidental damage; and
- Impact to wildlife, such as badgers, reptiles or small mammals, should these become trapped in pits and trenches created during groundworks.
- 3.6. In addition to these pathways, groundworks impacts could occur as a result of killing or injury of wildlife, damage to retained habitats, run-off, dust, noise and artificial lighting as detailed above.

Material Storage and Removal From Site

3.7. The improper storage and disposal of materials during site clearance and construction could cause impacts to retained and adjacent habitats, as a result of run-off, dust and noise (as detailed above) which could result in direct impacts through damage or long-term impacts such as loss of function.

Construction

3.8. During construction there is potential for impacts to occur as a result of killing or injury of wildlife, damage to retained habitats, run-off, dust, noise and artificial lighting (as detailed above).

Environmental Incidents

- 3.9. While not part of any specific construction stage, environmental incidents have the potential to occur at any time during the works, such as from:
 - Vandalism resulting in impacts to retained habitats through direct damage or pollution events, should fuel or chemical containers be damaged. Vandalism is considered possible in the absence of suitable mitigation. To reduce the potential for vandalism to occur on site protective fencing will be installed around the site compound to prevent access outside the timings of construction activity.
 - Fires and burning wastes could result in impacts to retained and adjacent habitats should this occur close to retained habitats. The use of fires and burning to dispose of materials will be avoided wherever possible. When such fires cannot be avoided these would not occur in close proximity to any retained or sensitive habitat so as to prevent any impacts from occurring. Detailed fire control measures in accordance with current best practice guidance will be in place for the duration of the construction phase.

Identification of 'biodiversity protection zones'

- 3.10. Habitats which are to be retained and protected during construction, namely the retained trees, ponds and hedgerows are identified as the 'biodiversity protection zones'.
- 3.11. Protective fencing will be provided to exclude and protect these retained areas during construction, which will also ensure protection for off-site habitats located beyond these features, with fencing around retained habitats maintained until construction works in that area are completed. Protective fencing will be installed, monitored and maintained in



- accordance with BS5837:2012 Trees in relation to design, demolition, and construction (see **Plan 15525/P09**).
- 3.12. This fencing will be erected prior to any construction or groundworks beginning and be implemented in line with British Standards BS5837:2012. Once erected, fencing should remain in place and be maintained until works are complete.
- 3.13. This Biodiversity Protection Zone includes existing trees and hedgerows within and on the boundary of the site, as well as the off-site ponds and will prevent encroachment into these habitats during construction and will ensure their functionality is maintained.
- 3.14. Protective fencing and appropriate warning signs will be provided to ensure that no encroachment of these retained areas occurs for the duration of the construction.
- 3.15. Such fencing will also provide site security and prevent potential impacts to retained habitats, such as from vehicle movements and / storage of materials. It is anticipated that some additional boundary fencing for security may also be required.

Practical measures to avoid or reduce impacts during construction

3.16. Practical measures will be enacted to ensure that the retained biodiversity features are protected during construction.

Pre-construction Surveys

- 3.17. Prior to the commencement of construction, an update walkover survey will be completed. This survey would be undertaken by a suitably experienced ecologist / Ecological Clerk of Works (ECoW) (see below) to check the site and habitats for any potential constraints, including evidence for protected or notable species with could be impacted by construction activities.
- 3.18. As part of this survey, pre-commencement checks of habitats to be impacted for nesting birds would also completed if necessary (see below).

Site Clearance

- 3.19. Prior to the commencement of construction at the site an initial 'toolbox' talk will be completed with the site manager and contractors, to explain the sensitive features present at the site and the requirement of protection measures. This 'toolbox' talk will also provide detail on the working methods to be employed during all works affecting sensitive habitats. This toolbox talk will be delivered by an appointed Ecological Clerk of Works (ECoW), comprising a suitably experienced ecologist, who will also undertake a walkover of the site prior to works commencing to check for any potential constraints, including checks for badger setts.
- 3.20. Further to the above, specific supervision measures will also be implemented in respect of the following species:



Protection of Amphibians

- 3.21. Both ponds P2 and P3 are located outside of the Phase 1B site boundary (see **Plan 15525/P11**), however part of the development site is within 250 m of pond P2. Any works within 250 m of pond P2 will take place under licence (either granted by Natural England or via the district licencing scheme).
- 3.22. Neither pond found to contain GCN will be directly impacted by the works and both are to be retained, however precautionary protection measures, such as those detailed below in respect to run-off, dust deposition and noise will ensure that no impacts to these off-site ponds during any of the Phase 1B works.
- 3.23. Newt fencing will be installed at a distance of 250 m around pond P2 to ensure that the habitats within 250 m of pond P2 are not encroached or damaged during the construction works. The newt fencing allows for one-way movement of newts, allowing any newts within the habitats outside of 250 m to move into the fenced area but not move out while construction works are taking place (see **Plan 15525/P09**).
- 3.24. In addition, the clearance of any suitable GCN habitat outside of 250 m, namely the hedgerows, will take place under supervision of a suitably qualified ECoW and following a fingertip search, to ensure that no GCN are harmed during the clearance works.

Protection of Badgers

- 3.25. Although no badger setts are located within the site, they could utilise the site on occasion and as such a Precautionary Method of Working (PMW) will be implemented to ensure that no impacts occur to badgers during any construction activities. As part of this PMW any trenches or deep pits within the site that are to be left open overnight will be covered or provided with a means of escape should a badger enter, such as a roughened plank of wood placed in the trench as a ramp to the surface. This will also avoid impacts to any other affected species.
- 3.26. Any trenches or pits will be inspected each morning to ensure no badgers or other animals have become trapped overnight. Should a badger become trapped in a trench it will likely attempt to dig itself into the side of the trench, forming a temporary sett. Should a trapped badger be encountered Tyler Grange or an appropriate expert will be contacted immediately for further advice.

Protection of Bats

- 3.27. Building B1 is to undergo surveys for roosting bats in May 2024. If bats are found to be roosting within the building, then the demolition will take place under a licence from Natural England. The Licence Application would set out the working method for works around the roost to ensure no bats are killed or injured during the demolition of the building and detail enhancement measures.
- 3.28. If no bats are found to be roosting within the building following the completion of all emergence surveys, then demolition can take place without the need for a licence from Natural England.



- 3.29. To ensure that the functionality of retained hedgerows is maintained for commuting and foraging bats, these will be fenced and protected from the construction zone to prevent encroachment and/or accidental damage (see above and **Plan 15525/P09**).
- 3.30. No night-time working is anticipated to be required, but where construction/security lighting is required, this will be designed to avoid shining towards any retained habitat such as hedgerows or trees in order to avoid impacts on nocturnal species including bats and badger. Further detail on lighting is provided below.

Protection of Birds

3.31. Should any removal of potential breeding bird habitat, including buildings, hedgerows, and improved grassland fields in respect to ground nesting birds, be proposed within the bird nesting season (generally accepted as March to August inclusive, though this is not defined in law and birds can nest outside of these times), a detailed search of the vegetation would need to be undertaken by an ECoW immediately prior to its removal, to check for signs of active nests. If any active nests are found a suitable exclusion zone, to be determined on site by an ECoW, will be provided until the chicks have fledged and the nest is no longer active. This buffer would be protected by fencing, installed under the supervision of an ECoW, with appropriate signage provided in order to ensure no accidental damage occurs.

Reptiles

- 3.32. Any clearance of suitable reptile habitat during Phase 1B will be undertaken under the supervision of an ecologist to ensure no reptiles are harmed, in line with legislation. Prior to any habitat being cleared, any habitat piles will be first checked for reptiles, or any other wildlife, and carefully removed by an ecologist as necessary.
- 3.33. All habitat clearance will be directional towards suitable retained or off-site habitats, allowing any reptiles that are present to disperse towards these areas.

Other Species

3.34. Regard will be had for any other protected or notable species that may be present within the site such as hedgehog. Prior to site clearance work, any obvious piles of leaves or brash will be cleared by hand and should any hedgehogs or reptiles be found, they will be carefully moved to other areas of suitable.

Protection of Retained Habitats

- 3.35. Habitats retained and protected during construction, including trees, hedgerows, trees and ponds will be protected via the installation and maintenance of protective fencing prior to construction works. Protective fencing will be installed, monitored and maintained in accordance with BS5837:2012 Trees in relation to design, demolition, and construction.
- 3.36. This fencing would be erected prior to any construction or groundworks beginning and be implemented in line with British Standards BS5837:2012. Once erected, fencing should remain in place and be maintained until works are complete (see **Plan 15525/P09**).



Run off:

- 3.37. To prevent run-off and pollution occurring, protection measures will be implemented during the site clearance and all subsequent stages, as set out below.
- 3.38. For the duration of construction works, gully bags will be used in gullies to collect any potential run-off or pollution before it reaches any watercourse.
- 3.39. Construction methodology will also be designed to comply with good practice guidelines (CIRIA, 2015) and will include the following measures as necessary:
 - Locating stockpiles away from watercourses and on level ground;
 - Using secondary containment such as bunds around storage tanks where necessary;
 - Ensuring deliveries are completed away from any watercourses/drains;
 - Ensure chemicals and hazardous substances are securely stored, labelled appropriately and regularly inspected; and
 - Provision of jet washer and water bowser to remove mud from vehicles as necessary.
- 3.40. A pollution/spillage plan will also be put in place prior to the start of works. This will include training for site management, 'toolbox talks' for operatives and provision of a spill kit.

Dust:

- 3.41. Dust arising during construction work is generally considered to only have a significant ecological impact within 20m, where heavy soiling of vegetation can occur (Holman *et al*, 2014). Impacts to any designated site are therefore not likely to be significant given the fact that the majority of works will be beyond 20m of any sensitive off-site receptor.
- 3.42. Dust does nonetheless have the potential to cause impacts to adjacent habitats and in order to avoid impacts, best engineering practice and dust suppression measures will be implemented as necessary. Full detail on dust suppression measures are detailed in the CEMPB and will include:
 - The provision of appropriate surfaces (i.e. tarmac) and enforcement of speed limits;
 - Damping down of surfaces.
 - High pressure hoses will deliver fine mist water sprays onto the working area and with a constant water supply provided to any crushing plant.
 - The movement of any crushed material will be kept to a minimum with stockpiles located away from site boundaries and maintained at heights less susceptible to the effects of wind.
 - During periods of dry weather, when dust is likely to cause a nuisance, specific work areas will be 'damped down'
 - Prior to disturbing any stockpile of soil or crushed material, consideration will be given to the introduction of water.
 - Stockpiles will be located out of the wind (or wind breaks provided) to minimise dust generation.
 - Dusty materials will be stored away from site boundaries, main site access roads and downwind of sensitive receptors.
 - Water suppression will be during cutting, grinding and drilling operations.



3.43. Wet suppression to be used whilst carrying out demolition works to prevent dust in the atmosphere and control at the source.

Noise:

- 3.44. Specific measures will be undertaken following best practice (CIRIA, 2015) to mitigate the impact of noise as necessary and will include:
 - Fixed and semi-fixed ancillary plant such as generators, compressors and pumps liable to create noise and/or vibration whilst in operation will, as far as reasonably practicable, be located away from retained features;
 - Electrically powered plant that is quieter than diesel or petrol-driven plant will be used where possible;
 - Early connection to mains electricity for site electrics will be used to minimise time working from generators;
 - Careful selection of equipment, construction methods and programming will be used with only equipment, including road vehicles, conforming to relevant national or international standards, directives and recommendations on noise to be used;
 - Super-silenced plant will be used where possible or noise-control equipment such as acoustic covers, jackets, shrouds, hoods, and doors fitted, ensuring they are closed whenever in use;
 - All plant will be maintained regularly to comply with relevant national or international standards and as far as reasonably practicable, any plant, equipment or items fitted with noise control equipment found to be defective should not be operated until repaired;
 - Plant will be operated in the mode that minimises noise emissions where reasonably practicable;
 - Pneumatic percussive tools should be fitted with mufflers or silencers of the type recommended by the manufacturers;
 - Air lines will be maintained and checked regularly to prevent leaks;
 - Machines in intermittent use should be shut down when not in use or throttled down to a minimum;
 - All materials, particularly steelwork, will be handled in a manner that minimises noise e.g. material such as scaffolding will be placed rather than dropped;
 - Drop heights of materials from lorries and other plant will be kept to a minimum;
 - Haul routes will be designed to minimise the amount of reversing required; and
 - The use of barriers to absorb and/or deflect noise away from noise sensitive areas will be employed where required and reasonably practicable.

Lighting:

3.45. In order to prevent disturbance to nocturnal species, including bats and badger, no works will occur after dusk with working hours of the site to be 08:00–18:00 on weekdays, 08:00–12:30 on Saturdays, and no works on Sundays and Bank Holidays. Shorter hours will be undertaken during winter months, due to less daylight hours, with working hours still finishing prior to dusk where possible. No works outside these times is anticipated and no lighting will be required during construction.



3.46. Where construction/security lighting is required this be designed to avoid shining towards any retained habitat such as hedgerows, trees and dark corridors (see **Plan 15525/P09**) in order to avoid impacts on nocturnal species including bats and badger.

Site Set-up

Pollution:

- 3.47. Construction activities will be predominantly located away from the most sensitive habitats, namely the hedgerows, trees and off-site ponds. To ensure that no accidental impacts occur, these features will also be fenced and protected during works (see above).
- 3.48. To avoid impacts to retained habitats the site offices (including welfare facilities) and material storage areas, will be located away from the majority of retained habitats.
- 3.49. Where any material storage is required adjacent to a retained hedgerow or other habitat, protected fencing will be erected to ensure that no accidental damage to this retained feature occurs (see above and **Appendix 1**).
- 3.50. Building materials as well as oils, fuels and chemical toilets will not be stored adjacent to the hedgerows or access track. In addition, the areas used for the storage of these materials will be regularly inspected for leaks by the site manager and during any ECoW visits.
- 3.51. Areas used for plant maintenance which could result in damage or pollution to retained and sensitive habitats will also be located away from sensitive habitats.
- 3.52. Access for construction vehicles will be provided from the new access point to be created. New access roads will be laid directly into the site which will subsequently be used for all deliveries and vehicle access. Parking will also be provided at this location minimising impacts to the majority of the site.

Protection of habitats:

- 3.53. During the site set-up and subsequent stages of the works, retained habitats will be fenced to provide protection from accidental damage (see **Appendix 1**).
- 3.54. Any trees covered by TPOs within the site or adjacent will be protected from accidental damage by the use of bark protection.
- 3.55. The protective fencing within the site will be regularly inspected by the site manager in order to check the condition and positioning of this fencing.

Disruption of mammal runs or paths:

3.56. Whilst any fencing has the potential to result in the disruption of mammal runs or paths, the entire margins of the site will still be accessible and connectivity to off-site habitats will therefore be maintained.



Ground Works

Protection of retained habitats:

3.57. In order to protect retained habitats, appropriate fencing will be erected prior to any construction or groundworks beginning and will be implemented in line with British Standards BS5837:2012 (see above). Such fencing will ensure that the root protection areas of retained trees and hedgerows are appropriately buffered.

Protection of wildlife:

- 3.58. While no badger setts have been recorded within the site, there is potential for setts to be established prior to construction work commencing.
- 3.59. A Precautionary Method of Working (PMW) will be implemented to ensure that no impacts occur to badgers during any construction activities. Any trenches or deep pits within the site that are to be left open overnight will be covered or provided with a means of escape should a badger enter, such as a roughened plank of wood placed in the trench as a ramp to the surface. This will also avoid impacts to any other affected species.
- 3.60. Any trenches or pits will be inspected each morning to ensure no badgers or other animals have become trapped overnight. Should a badger become trapped in a trench it will likely attempt to dig itself into the side of the trench, forming a temporary sett. Should a trapped badger be encountered Tyler Grange or an appropriate expert will be contacted immediately for further advice.

Material storage and removal from site:

- 3.61. Site works will follow best practice with building materials as well as oils, fuels and chemical toilets not stored adjacent to the retained habitats, including hedgerows, trees and grassland.
- 3.62. Run-off protection measures (as detailed above) will also be implemented to ensure that no run-off of materials will occur.
- 3.63. Any spoil and soil to be removed from the site will be taken to landfill with any site rubbish to be taken to an appropriate recycling centre.

Topsoil storage

- 3.64. In order to protect and safeguard the soil resources during construction, such as from excessive compaction, appropriate handling measures will be implemented. Ground preparation works will follow best practice with soil to be temporarily stored within areas of open space so as to maintain soil viability.
- 3.65. The storage of topsoil or other 'soft' building materials on the site will also be given careful consideration as badgers will readily adopt such mounds as setts, which would then be afforded the same protection as established setts. Such mounds will be regularly inspected to check for use by badgers throughout the construction period.



- 3.66. Where possible, material stockpiling will be limited to the temporary storage of stripped soil retained for reinstatement and no covering is anticipated to be required.
- 3.67. All stored soil will be placed on permeable geotextile mats to minimise impact to the covered soil and maintain soil viability.
- 3.68. Surplus topsoil produced during construction will be immediately removed from the site or temporarily stored, if necessary, prior to removal.

Construction

3.69. The protective measures detailed above for other phases of the works would also be implemented through the construction phase and as such no additional protection measures would be necessary.

Environmental Incidents

- 3.70. Measures will be implemented within the site to prevent potential impacts from vandalism, with such measures to include the provision of protective fencing at the site compound.
- 3.71. In the event any issues with theft or vandalism occur addition security measures, such as the provision of CCTV will be implemented.
- 3.72. These security measures will ensure that materials within the site are protected, preventing potential for pollution to occur as a result of vandalism.

Fires and burning:

3.73. The use of fires and burning to dispose of materials will be avoided wherever possible. When such fires cannot be avoided these would not occur in close proximity to any retained or sensitive habitat so as to prevent any impacts from occurring.

Emergency / Contingency Measures:

- 3.74. A number of contingency and emergency measures will be implemented to prevent incidents occurring during the works period including:
 - As detailed above, a pollution/spillage plan will be agreed and in place prior to the start of works. This will include training for site management, 'toolbox' talks for operatives and provision of a spill kit.
 - The project manager will keep a daily check on the weather forecast, stopping works if conditions become unsafe and taking appropriate measures, for example:
 - a. Tying scaffold boards or unfixed roofing materials securely to the structure prior to expected high winds; and
 - b. Postponing sensitive works such as crane lifts in response to forecasted high winds.
 - Should any unforeseen delays occur, the project manager will analyse the reason for delay and put in place an appropriate action plan which may involve, for example, resequencing or additional resourcing.



Should any retained habitat or features be damaged, suitable mitigation measures
will be implemented. If damage is not considered to be significant the habitats will be
allowed to regenerate naturally although if required replacement planting will be
provisioned, with the scale of replacement to be determined by the ECoW.

Critical periods and locations

- 3.75. During the implementation of the CEMPB critical periods and locations where construction works will need to be controlled to avoid causing harm to biodiversity features, will comprise the following:
 - An ECoW visit will be completed prior to the commencement of construction to provide a toolbox talk and undertake a walkover of the site to check for any potential constraints:
 - During the bird nesting season (March to August inclusive) any removal or management of hedgerows, trees, scrub or any other vegetation with potential to support nesting birds, will require a detailed search, undertaken by an ECoW, immediately prior to its removal, to check for signs of active nests. Should any active nests be recorded suitable protection measures will be implemented as detailed above;
 - The demolition of building B1 will take place once all roosting bat emergence surveys have been completed, and once a licence from Natural England has been granted if necessary;
 - Any works within 250 m of pond P2 will only take place once a licence has been granted, and precautionary working methods will be implemented outside of 250 m when suitable GCN habitat is impacted.
- 3.76. All other protection measures outlined within this CEMPB will be implemented for the duration of construction where relevant. In particular, throughout the construction period, the site manager will be responsible for ensuring that the protective fencing of retained habitats remains in place and fit for purpose.
- 3.77. The maintenance of all such protection measures will be the responsibility of the site manager, however, an experienced ecologist acting as an ECoW will be available to attend the site at short notice if required throughout the construction period should any issues arise.

Responsible Persons and Lines Of Communication

- 3.78. During the construction period the following responsible persons and lines of communication have been identified in order to guide the implementation of this CEMPB.
- 3.79. Advice and monitoring, including with regard to legal consents, planning conditions and contractual arrangements, will be provided by Strongvox Ltd, the site manager and ECoW as appropriate.
- 3.80. The details of the site manager will be displayed on the site boundary with the site manager responsible for addressing any issues which are raised during construction.



- 3.81. The installation and maintenance of protective fencing will be undertaken by the site contactors under the supervision of a suitably qualified site agent, this site agent must be:
 - Present on site for the majority of the time;
 - Aware of the biodiversity constraints;
 - Having the authority to stop any work that is causing, or has the potential to cause harm to any tree, hedgerow, pond or other retained habitat;
 - Responsible for ensuring that all site operatives are aware of their responsibilities toward retained habitats and the consequences of any failure to observe those responsibilities; and
 - Make immediate contact with the local authority and/or a retained arboriculturalist in the event of any tree related problems occurring, whether actual or potential.
- 3.82. The site manager will make all contractors aware of the presence of retained ecological features and the measures implemented to protect these features. Prior to the start of works an ECoW will provide a 'toolbox' talk to detail the ecological features to be protected and the methods employed.
- 3.83. Subsequent to this initial 'toolbox' talk, where any subsequent supervision of works is required, such as for the removal of breeding bird habitat, bespoke 'toolbox' talks will be undertaken by an ECoW prior to these works commencing, along with an updated walkover of the site to check for the signs of any protected or notable species and to check the methods detailed in the CEMPB are being adhered to.
- 3.84. In the event of accidents or damaging incidents occurring during construction, the site manager will liaise with the ECoW and local authority as necessary, to agree solutions and contingency measures.

The Role and Responsibilities On Site of an ECoW

- 3.85. An ECoW will comprise a suitably experienced ecologist, appointed to supervise the implementation of the CEMPB.
- 3.86. The responsibilities of the ECoW will include attending the site prior to the start of construction to deliver an initial toolbox talk and to set out the ecological constraints and protection measures required. The ECoW will also attend site to supervise clearance if any habitat with potential to support dormouse, reptiles and nesting birds (as detailed above).
- 3.87. As long as the measures detailed in this CEMPB are implemented an ECoW is not anticipated to be required for the majority of site works.
- 3.88. Whilst no other supervision of works is anticipated to be required, the ECoW will be available to provide advice and undertake appropriate steps, including supervision of the grassland translocation as necessary, should any previously unidentified or unexpected protected or priority species be encountered during site works.
- 3.89. As required, and during any site visits, the ECoW will also undertake compliance checks of all mitigation measures implemented as part of this CEMPB, such as the effectiveness of protective fencing.



3.90. The ECoW will also keep a record of all site visits and report any potential issues to the site manager.

Compliance checking

3.91. Procedures will be put in place to allow third party compliance checks to be undertaken of the site throughout the construction period. Any request for a compliance check would be made to the site manager who would arrange for the required site visit to be completed as soon as reasonably practicable.

Identifying and Rectifying Remedial Measures

- 3.92. As part of any compliance checks or ECoW site visits, should any potential issues of non-compliance with the CEMPB be identified, these will be immediately reported to the site manager and appropriate actions agreed.
- 3.93. In the event a significant issue occurs, such remedial measures shall be reported to the local authority, as required, with appropriate remedial measures to be discussed and agreed with all relevant parties. Further checks will then be completed within an appropriate time frame to confirm that remedial measures have been correctly implemented to the satisfaction of the local authority.



References:

British Standard (2012) BS 5837:2012 – Trees in relation to design, demolition, and construction. BSI Standards Publication.

Holman et al (2014). IAQM Guidance on the assessment of dust from demolition and construction, Institute of Air Quality Management, London.



Plans

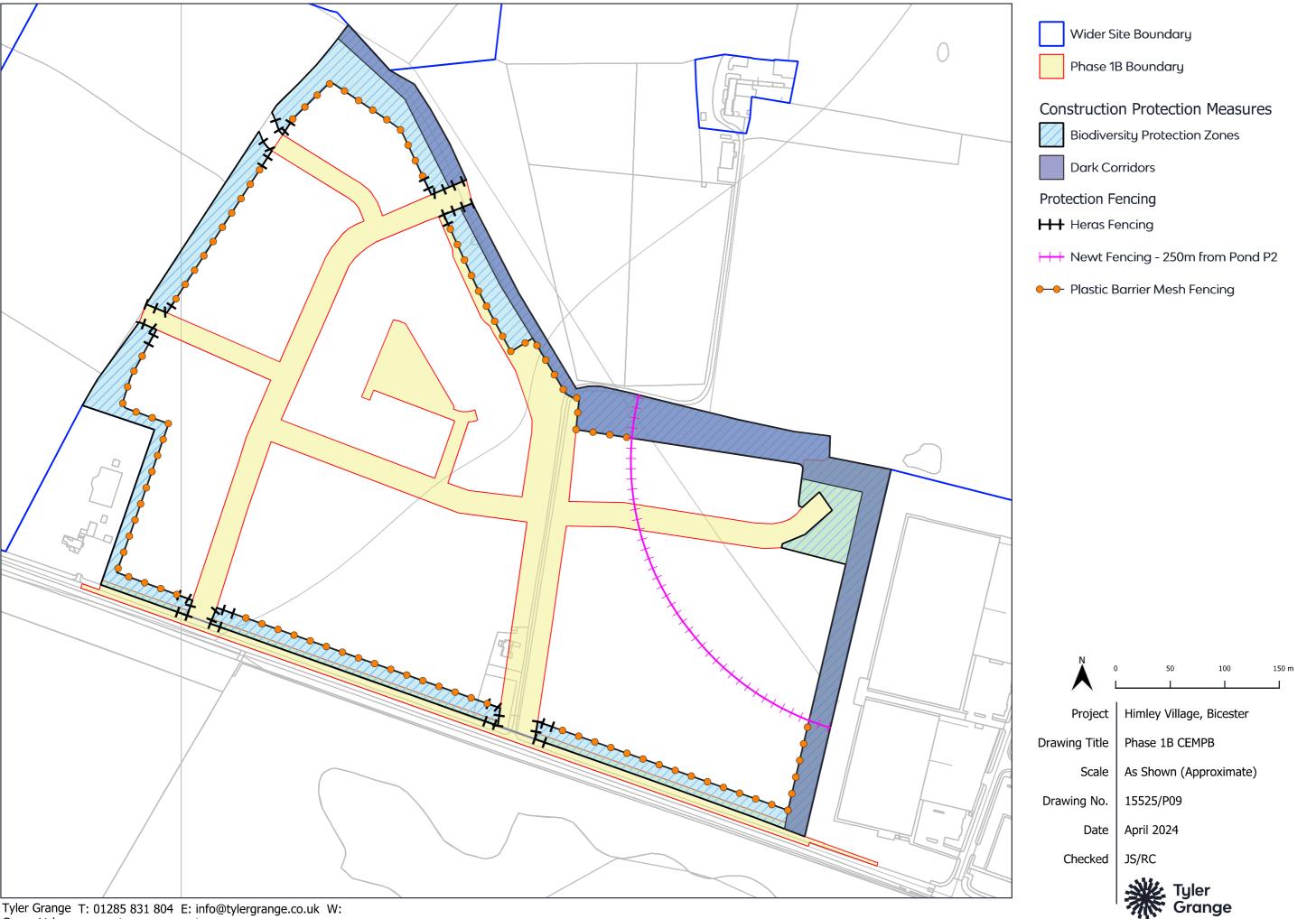
Plan 1: 15525/P09 Phase 1B CEMPB

Plan 2: 15525/P10 Phase 1B Habitat Features

Plan 3: 15525/P11 Phase 1B GCN Impacts

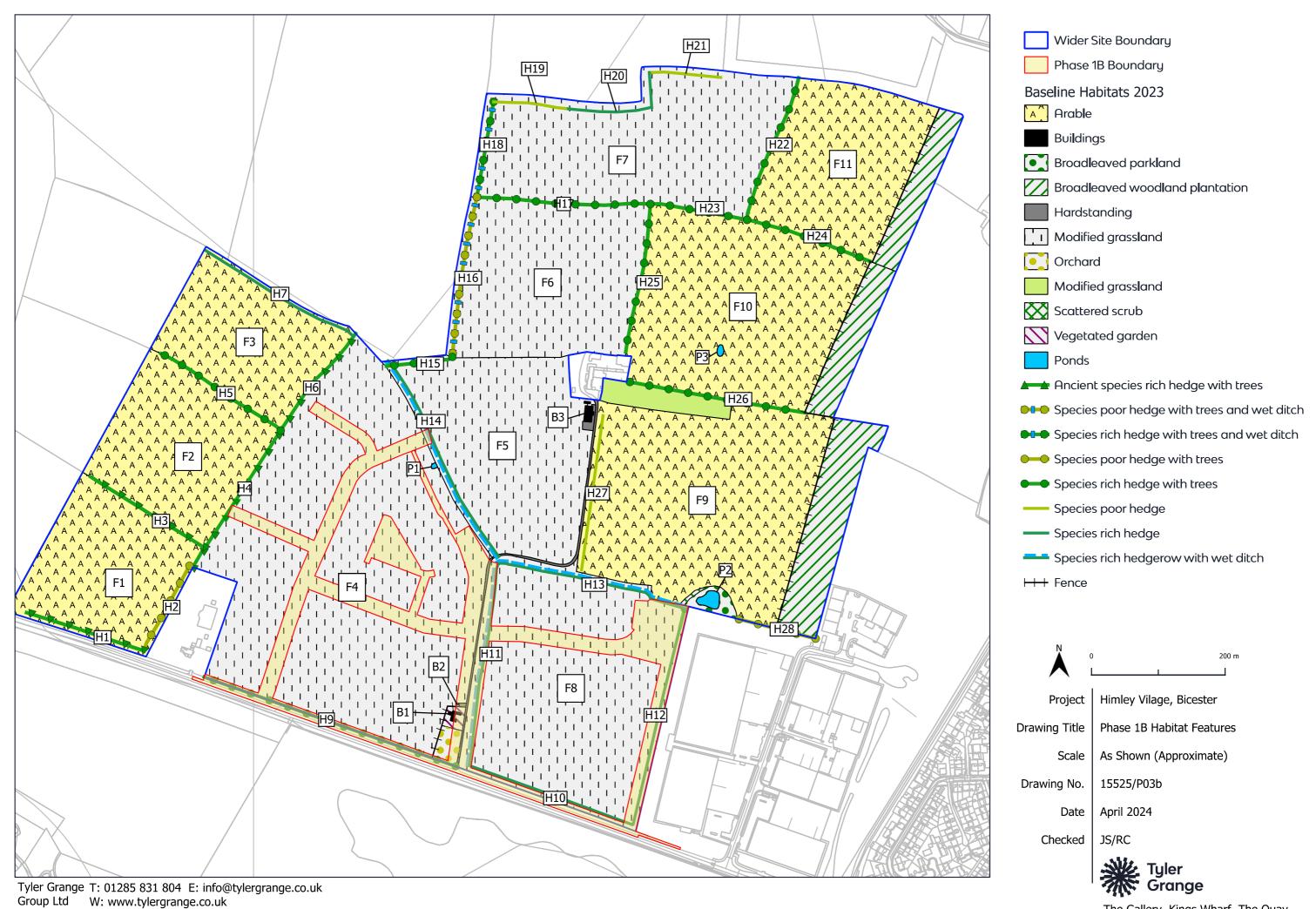
Plan 4: 15525/P12 Phase 1B Badger Impacts



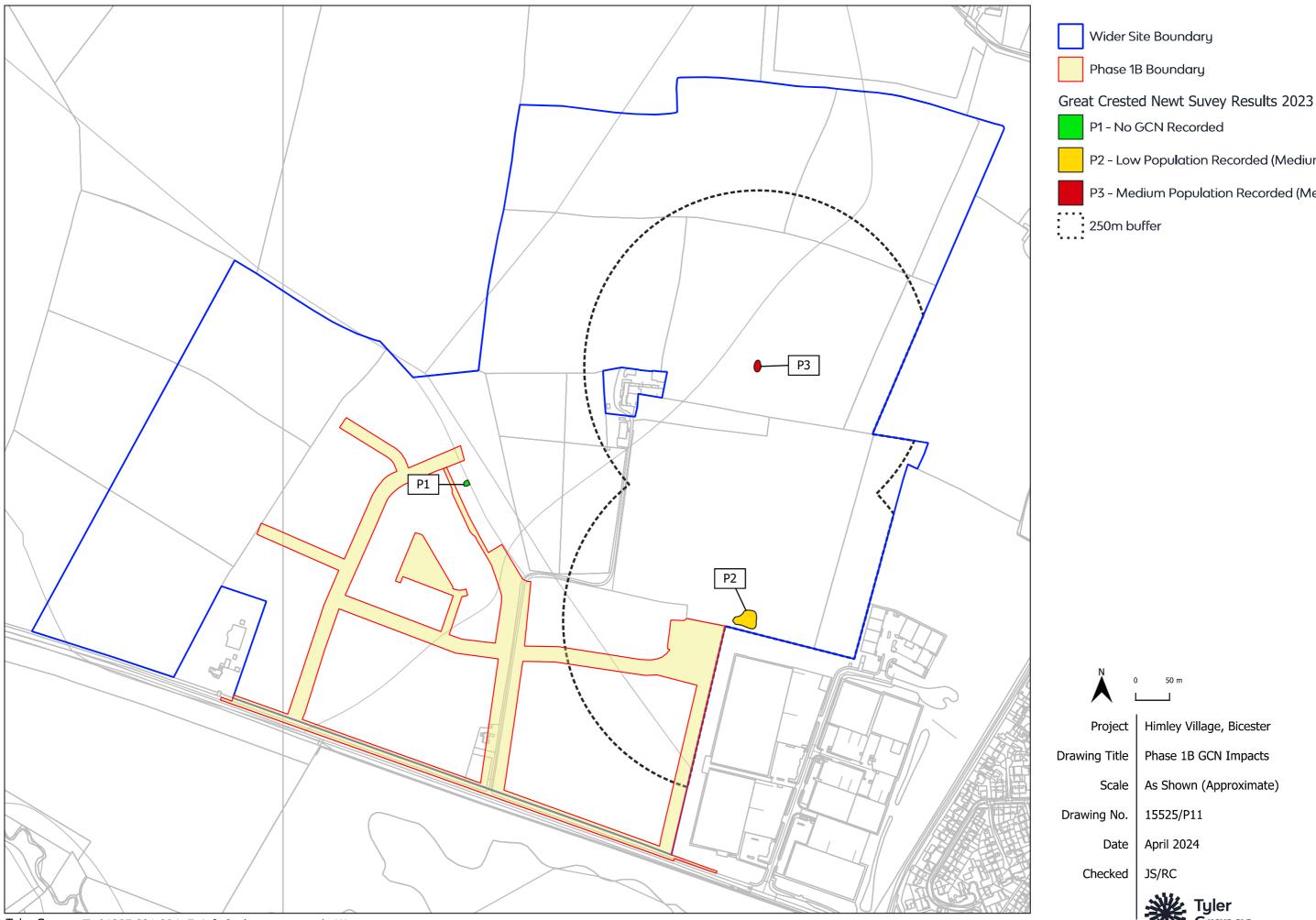


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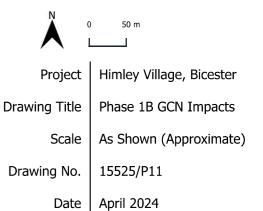
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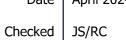


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Wider Site Boundary

Phase 1B Boundary

P1 - No GCN Recorded

P2 - Low Population Recorded (Medium in 2011)

P3 - Medium Population Recorded (Medium in 2011)



The Gallery, Kings Wharf, The Quay, Exeter, EX2 4AN

Appendix 1: Phase 1B Layout



