



Wokingham Borough Council

SOUTH WOKINGHAM DISTRIBUTOR ROAD

Ecological Mitigation Strategy





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APPENDIX A

TOOL BOX TALK

1 INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1. Wokingham Borough Council (WBC) secured planning permission (planning ref. 192928) in 2021 to construct the South Wokingham Distributor Road (SWDR) between Easthampstead Road and Finchampstead Road (hereafter referred to as the 'Site'). The SWDR is to facilitate access for strategic housing allocations and to reduce the impact of increased traffic on local roads. The works associated with the Site are hereafter referred to as the 'Scheme'.
- 1.1.2. The Scheme forms part of the South Wokingham Strategic Development Location (SDL), which is defined as the following:

'....an urban extension of Wokingham town, Montague Park and south of the railway between the boundary with Bracknell Forest and Finchampstead Road. It will include new homes, new primary schools, local shopping and community facilities in two new neighbourhood centres, open spaces and roads including a South Wokingham Distributor Road.'
- 1.1.3. The Site encompasses a range of habitats including arable fields, grassland and scrub and is approximately 0.7ha in size (Figure 1).
- 1.1.4. WSP completed ecological surveys of the Site between 2017 and 2021 to support the planning application. In addition, ecological survey work for areas targeting the SDL and associated major phased development, were carried out by Ecosa Ltd and The Ecology Partnership between 2013 and 2022. Apart from great crested newt (GCN) *Triturus cristatus* survey results, this survey data has not been obtained. Due to the time elapsed since these surveys were undertaken, updated surveys were required for target species.
- 1.1.5. An Ecology Gap Analysis (WSP, 2024a) was undertaken for the Scheme in January 2024, consisting of a detailed, desk-based review of existing survey information, planning conditions and associated documents to determine detailed updated survey and pre-construction support requirements.
- 1.1.6. The Ecology Gap Analysis identified that further surveys were required. These surveys were undertaken between May and September 2024 for badger *Meles meles*, kingfisher *Alcedo atthis*, roosting bats, reptiles, otter *Lutra lutra*, water vole *Arvicola amphibius* and Himalayan balsam *Impatiens glandulifera*. These surveys were inclusive of the Site (Figure 1) and where necessary, the wider area (see species survey reports (WSP, 2024b-h)). As a result of these surveys, the Site and adjacent habitats have been found to support the following:
 - A 'low' population of grass snake *Natrix Helvetica* and 'good' population of slow worm *Anguis fragilis* by the railway to the east of the Site and near to Emm Brook to the west of the Site;
 - Thirty-five trees with suitability to support roosting bats which are currently expected to be lost/impacted by the Scheme;
 - Extensive areas of invasive non-native species (INNS), notably Himalayan balsam, along Emm Brook;
 - Suitable nesting habitat for birds;
 - Suitable habitat for badger sett creation, as well as commuting and foraging; and
 - Otter presence to the north-west of Emm Brook.

- 1.1.7. Consideration was given to the potential of tree features to support barn owl *Tyto alba*, and no suitable features or evidence of barn owl was identified.
- 1.1.8. In line with current designs, it is considered that specific further mitigation for protected and notable species comprising reptiles, bats, INNS, nesting birds, badger and otter will be required for the Scheme to be compliant with legislation and planning policy. GCN were a species initially identified as requiring further survey as part of the Ecology Gap Analysis (WSP, 2024a), but subsequent consultation with the WSCC Ecologist confirmed that updated surveys weren't necessary due to results from a previous survey effort (Ecosa, 2022). The results of this survey has informed mitigation measures for amphibians within this report. It should be noted that other ecological recommendations have been made to be incorporated into the Scheme more generally.

1.2 AIMS AND OBJECTIVES

- 1.2.1. WSP was commissioned by WBC to support with the implementation of an Ecological Mitigation Strategy (EMS). This document intends to cover the following:
- Provide an overview of the baseline ecological information for the Scheme and an appropriate surrounding area.
 - Provide a mitigation plan to be implemented during construction and operation, based on the recommendations of baseline ecological assessments as well as any protected or notable species directly impacted by the Scheme.
 - Provided additional mitigation and management plans for habitats and protected and notable species for the Scheme.
- 1.2.2. The EMS will enable compliance with relevant nature conservation legislation and planning policy and to avoid the killing/injury of notable and protected species.

1.3 LEGISLATION AND POLICY OVERVIEW

- 1.3.1. The EMS has been compiled with reference to the following relevant nature conservation legislation and planning policy, and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in England. The relevant legislation discussed within this report includes (detailed further within Appendix A):

National Legislation and Policy

- The Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations);
- The Wildlife and Countryside Act 1981 (as amended) (WCA);
- Countryside Rights of Way Act 2000;
- The Natural Environment and Rural Communities (NERC) Act 2006 (England);
- The Protection of Badgers Act 1992;
- The Hedgerow Regulations 1997;
- The Wild Mammals (Protection) Act 1996;
- UK Government's 25 Year Environment Plan (DEFRA, 2018);
- The UK Post-2010 Biodiversity Framework (2011-2020) (JNCC and DEFRA, 2012);
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services (DEFRA, 2011);



- UK Biodiversity Action Plan (UKBAP)¹; and
- The National Planning Policy Framework (NPPF) 2023.

Local Policy

- WBC (2010) Wokingham Borough Core Strategy Development Plan Document (Adopted – 29 January 2010).
- WBC (2014) Wokingham Borough Council Biodiversity Action Plan 2012-2024.

¹ The UK BAP has now been replaced by the UK Biodiversity Framework (2024), however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant.

2 ECOLOGICAL BACKGROUND

2.1 OVERVIEW

- 2.1.1. The Site comprises arable fields, grassland and scrub habitats which are considered suitable to support a number of notable and protected species. After a detailed gap analysis of baseline information and completion of specific updated ecological surveys, the following species/species groups are considered to utilise habitats within the Site to varying degrees;
- Reptiles;
 - Bats (foraging, commuting and roosting);
 - INNS;
 - Besting birds;
 - Badger;
 - Otter; and
 - Amphibians including GCN.
- 2.1.2. The Scheme will result in a loss of habitat within the Site. In the absence of mitigation, habitat loss and disturbance could have negative effects on notable and protected habitats and species.
- 2.1.3. Table 2-1 provides details of the ecological receptors located within the Site, wider Survey Area (as defined in Section 1.1.6) and surrounding habitats. Information included within Table 2-1 is derived from the following reports relating to the Site:
- PEA (WSP, 2018a);
 - Ecological Gap Analysis (2024a);
 - Reptile Survey Report (WSP, 2024b);
 - Preliminary Bat Roost Assessment (WSP, 2024c);
 - Himalayan Balsam Report (WSP, 2024d);
 - Badger Survey Report (WSP, 2024e);
 - Riparian Mammal Survey Report (WSP, 2024f);
 - Kingfisher Survey Report (WSP, 2024g); and
 - Bat Survey Report (WSP, 2024h).
- 2.1.4. Suitable habitat is present within the Site for aquatic invertebrates and fish, but potential impacts and mitigation measures for these ecological receptors are to be incorporated into a Construction and Environmental Management Plan (CEMP) and are set out separately within the Water Framework Directive assessment for the Scheme. As such, they are not included within this EMS.

Table 2-1 – Ecological Baseline of the Scheme

Ecological Receptor		Detail	Relevant Legislation and Policy
Protected and Notable Species	Reptiles	Due to suitable reptile habitat on Site, refugia search surveys were completed for the Scheme in 2018 by WSP, which identified 'low' populations of both grass snake and slow worm. This population estimate was based on single recordings of both species from a rough grassland field to the east of the intersection of Easthampstead Road and the railway. Surveys have been completed for the SDL areas by Ecosa Ltd with the most recent survey information dating from 2022 which identifies 'low' populations of slow worm and common lizard <i>Zootoca vivipara</i>. The majority of the recordings were along the railway line to the north of the surveyed area. Surveys undertaken by WSP in 2024 indicated a 'low' population of grass snake and a 'good' population of slow worm, with slow worm populations showing an increase from previous survey effort. The records were located to the east of the Site by the railway, and by Emm Brook to the west of the Site which is largely consistent with previous efforts.	Native, widespread reptile species (common or viviparous lizard, adder, grass snake and slow worm) are partially protected under Schedule 5 of WCA, under part of Section 9(1) and all of Section 9(5). As such, it is an offence to: ▪ 'Intentionally or recklessly kill or injure' an individual of these species; or ▪ 'Sell, offer or expose for sale, or [have in] possession or transport for the purpose of sale, any live or dead [individual] or any part of, or anything derived from' an individual of these species'. All species of reptile are also listed as Species of Principal Importance (SPI) for the Conservation of Biodiversity in England in accordance with Section 41 of the NERC Act 2006. Under Section 40 of the NERC Act (2006), public bodies, including local planning authorities, have a duty to have regard for SPI when carrying out their functions, including determining planning applications.
	Bats (Foraging and Commuting)	Habitats within, and adjacent to, the Site including field margins, hedgerows woodland and treelines, can support foraging and commuting bats. Previous reporting (WSP, 2019) identified that bat activity at the Site was largely concentrated to the east of the Site in well-vegetated areas with few anthropogenic influences.	All species of bats recorded within the UK are protected from killing, injury and disturbance and their roosts are protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the WCA with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to

Ecological Receptor	Detail	Relevant Legislation and Policy
Bats (Roosting)	Bat activity transects, Preliminary Bat Roost Assessments (PBRA) of buildings and trees and subsequent emergence, re-entry surveys of buildings and trees with roosting suitability (presence of potential roosting features (PRFs)) were completed for the Scheme between 2017-2020 by WSP. Through these assessments a confirmed, summer transitional common pipistrelle <i>Pipistrellus pipistrellus</i> roost of a single bat was recorded at tree T42 and a summer transitional roost for common pipistrelle was recorded at 76b Finchampstead road. WSP undertook a suite of updated bat surveys in 2024. These surveys identified 35 trees with PRFs suitable for bats within the Scheme footprint (Figure 3d-h). Following additional survey, the final suitability of surveyed trees (WSP, 2024h) comprise: ■ Sixteen trees with features suitable for multiple bats (PRF-M); ■ Fifteen trees with features suitable for individual bats (PRF-I); and ■ Four trees downgraded to a bat roosting suitability of 'none'. All 35 trees are expected to be lost to facilitate the Scheme (WSP, 2024h).	these. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes. Certain species of bats, including noctule bat <i>Nyctalus noctula</i>, brown long-eared bat <i>Plecotus auritus</i> and soprano pipistrelle bat <i>Pipistrellus pygmaeus</i> are also listed as SPI for the conservation of biodiversity in England in accordance with Section 41 of the NERC 2006. Section 40 obliges public bodies (including local planning authorities) to have regard for the conservation of biodiversity (including SPI) when discharging their duties (including determining planning applications).

Ecological Receptor	Detail	Relevant Legislation and Policy
Otter and water vole	Otter and water vole surveys were undertaken in May 2024. The surveys did not identify any signs of water vole but identified otter spraint at the north-west section of Emm Brook. It is likely otter use the area for foraging and commuting.	Otter are protected from killing, injury and disturbance and their places of rest or shelter (occupied habitat) protected from damage or destruction under the Conservation of Habitats and Species Regulations 2017 (as amended). The species is also protected under the WCA with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes. Otter are also a SPI for the conservation of biodiversity in England under Section 41 of the NERC Act 2006. Under Section 40 of the NERC Act 2006, public bodies, including local planning

Ecological Receptor	Detail	Relevant Legislation and Policy
		authorities, have a duty to have regard for SPI when carrying out their functions, including determining planning applications.
Birds	Trees, scrub and grassland within or bordering the Site provide suitable nesting habitat for a range of bird species. A kingfisher survey was undertaken by WSP in 2024 but concluded that foraging and commuting kingfisher are likely, but it is unlikely they are nesting within the Site. Other birds, such as kestrel, were confirmed to be nesting within the Site. Due to the overall suitability of the Site, it was not considered that additional surveys for birds were required to assess the baseline for this receptor and to inform recommendations within this EMS.	The Habitat Regulations 2017 Part 1 Regulation 10(2) & (3) state that local authorities <i>‘must take such steps in the exercise of their functions as they consider appropriate to contribute to...the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK including by means of the upkeep, management and creation of such habitat...’</i>. The legislation continues to state that economic and recreation requirements must be taken into consideration in considering which measures are appropriate. Under the WCA, all wild birds are protected from killing and injury, and their nests and eggs protected from taking, damage and destruction whilst in use. Additional protection is extended to species listed under Schedule 1 of the Act, meaning it is also an offence to disturb these species at or near the nest, or whilst they have dependent young. Kingfisher is a Schedule 1 species. Some bird species are also listed as SPI in accordance with Section 41 of the NERC Act 2006. Public bodies have an obligation under Section 40 to have regard for these species when carrying out their functions.

Ecological Receptor	Detail	Relevant Legislation and Policy
Amphibians (including GCN)	GCN surveys were undertaken in 2022 by Ecosa with a total of 24 ponds considered for additional survey. Three ponds were not able to be accessed and eleven ponds were considered unsuitable for GCN. The remaining 10 ponds were subject to additional survey, of which GCN were found to be likely absent from eight of the ponds, with the remaining two confirming GCN presence.	GCN are protected from killing, injury and disturbance and their places of rest or shelter (occupied habitat) are protected from damage or destruction under the Conservation of Habitats and Species Regulations 2017 (as amended). The species is also protected under the WCA with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licences by Natural England for certain purposes. Protection is also afforded under the Wildlife and Countryside Act 1981 (as amended) with respect to disturbance of animals when using places of shelter, and obstruction of access to places of shelter. The GCN is also listed as a SPI for the Conservation of Biodiversity in England in accordance with Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 (1) of the NERC Act 2006 (which was amended within the Environment Act 2021) asks public bodies (including local planning authorities) to “consider <i>what action the authority can properly take, consistently with the proper exercise of its functions, to further the general biodiversity objective</i>”.

3 ECOLOGICAL MITIGATION

3.1 OVERVIEW

- 3.1.1. Ecological mitigation measures are required to avoid and reduce potential effects that could occur during the operation and construction phases of the Scheme. This is notable for reptiles and roosting bats which have been confirmed as present within the Site.
- 3.1.2. Further measures are also outlined to ensure the protection of retained habitats, protection of notable species and avoidance of habitat degradation during the construction phase.
- 3.1.3. Section 3.2 describes the general construction mitigation measures which should be adhered to for the Scheme. Detailed, species-specific mitigation measures are provided in Section 3.3.
- 3.1.4. All site operatives will be briefed via a tool box Talk (TBT) presented by an Ecological Clerk of Works (ECoW) (Appendix A). Site operatives should then sign the site register to confirm receipt. This TBT will identify the ecological constraints relevant to the location (as described in this EMS), outlining the procedures and environmental measures to be followed to avoid breaches of legislation and/or adverse impacts on these ecological features that could occur within or near to the working area.

3.2 CONSTRUCTION MITIGATION MEASURES

- 3.2.1. The following general measures are recommended during the construction phase of the Scheme to ensure the avoidance of killing/injury of notable and protected species as well as the protection of retained habitats.
- 3.2.2. General environmental protection measures must be implemented during the construction phase of the Scheme and included within any future CEMP. Such measures include best environmental practice guidance outlined in the Government's 'Pollution prevention for businesses' (DEFRA, 2016) and those outlined by the Construction Industry Research and Information Association guidance (CIRIA, 2023). The following minimum standards must be adhered to prevent negative ecological effects beyond the Site boundary:
 - Measures must be taken to prevent dust and other emissions from construction affecting the retained habitats and land beyond the Scheme.
 - Chemicals and fuels must be stored in secure containers located away from watercourses or water bodies. Spill kits must be available.
 - Implementation of a construction-phase drainage strategy to intercept, capture and attenuate surface water runoff.
 - Excavations must be covered or securely fenced (with no potential access points beneath fencing) when the construction site is closed (e.g. overnight) to prevent entrapment of animals, specifically badgers.
 - Retained trees and hedgerows must be protected in accordance with British Standard BS5837:2012 Trees in Relation to Construction, including the erection of robust protective fencing encompassing root protection areas.
 - Noise and vibration must be controlled and kept to the minimum necessary, [REDACTED]
 - Lighting used for construction must be kept to a minimum and switched-off when not in use.

- Lighting should be positioned so as not to spill on to adjacent land or retained vegetation within the Scheme.
- Night works should be avoided where possible to reduce lighting of sensitive habitats and disturbance to species.

3.3 SPECIES-SPECIFIC CONSTRUCTION MITIGATION

Reptiles, amphibians and other small mammals

- 3.3.1. The Site is currently considered to support a 'low' population of grass snake and a 'good' population of slow worm (WSP, 2024b). In the absence of mitigation measures, the Scheme has the potential to injure or kill reptiles, amphibians including GCN and other small mammals, or damage or destroy a resting place used by them.
- 3.3.2. Any vegetation clearance, including grasslands, hedgerows and scrub, and hibernacula refugia dismantling is to be undertaken during September/October, or in suitable temperature conditions in early November (after which point ecological advice must be sought), to prevent conflict with the breeding bird season. After the early November period, vegetation clearance in the identified areas (Figure 3a-c) must not be cleared to ground level, but clearance activities down to 150mm, can be accommodated under supervision. Clearance to ground level will then need to be completed from March onwards depending on temperature. Prior to construction activities and any vegetation clearance, a walkover of the Site will be undertaken by a suitably experienced ecologist and any potential existing refugia (e.g. log piles) which cannot be retained will be dismantled by hand and will be relocated to suitable areas of retained habitat outside of the Scheme footprint.
- 3.3.3. Reptiles will then be persuaded to migrate into suitable retained habitat through a two-stage, directional vegetation clearance (Figure 3a-c). Vegetation south of Emm Brook will be cleared outwards towards the southern extent of the suitable retained habitat to avoid reptile isolation. Vegetation clearance to the north of Emm Brook will be cleared outwards towards the railway line to the north. Vegetation will first be taken down to 150mm on one day and taken down to ground level on the following day. Works will be temporarily halted if individual animals are encountered to allow the animal to disperse from the work site, or to allow the supervising ecologist to capture and translocate the reptile. This activity will be supervised by an ecologist to minimise the risk of killing or injury to reptiles, who will hand search vegetation for reptiles prior to clearance each day. This precautionary working method will also provide suitable mitigation for amphibian species, hedgehogs and other small mammals potentially present within these same habitats used by reptiles.

Bats

- 3.3.4. Under current designs, it is understood that up to 35 trees identified with bat roosting suitability (classified as either PRF-I or PRF-M as set out in the further bat survey report (WSP, 2024h)) will require soft-felling, with all other trees being retained (Figure 3d-h). Mitigation measures are outlined for bats in relation to the current iteration of the proposed design.
- 3.3.5. Tree T42 is a confirmed bat roost, and whilst under current designs is not impacted directly by the Scheme, measures to ensure its protection during all phases of the Scheme are required. Specifically, T42 should be marked up by the site team and all operatives should be informed of its whereabouts before the commencement of any works. Specific care should be taken to ensure that robust fencing is provided around T42, with impacts of any new or temporary lighting avoided. In the

event that designs change to require removal of T42, a licence from Natural England must be sought before any felling of this tree, and updated surveys will be required.

- 3.3.6. All retained trees will be protected in accordance with British Standard BS5837:2012 Trees in Relation to Construction, including the erection of robust protective fencing encompassing root protection areas. To avoid disturbance to retained trees with suitability to support roosting bats, any future CEMP will include best practice construction measures, including those set out in Section 3.2. to minimise the effects of noise pollution, dust and air pollution and visual intrusion during construction.
- 3.3.7. Trees which have been identified as lost to facilitate the Scheme will required supervised soft-felling in line with the measures outlined below:
- Trees assessed as having features to support bat roosts will be soft-felled using sensitive techniques by suitably qualified arborists, following an at-height inspection of any PRFs to confirm the absence of roosting bats (and evidence of roosting bats) (Figure 3d-h). Contractors with basic bat awareness should be employed and guidance within British Standard BS8596:2015 Surveying for Bats in Trees and Woodland should be adhered to.
 - In addition, where it is not possible to thoroughly assess PRFs, sectional soft felling methods should be used to remove those features. This involves lowering the whole section of branch with the PRF to the ground, not cross-cutting or fracturing it. The PRF section should then be placed in a suitable location (e.g. within retained woodland) and should be left overnight with the PRF facing upwards, with free routes of dispersal for any bats to disperse naturally. As the PRFs identified are considered to provide low to negligible hibernation suitability for bats, felling works should be undertaken in the winter (November – March depending on weather conditions) where possible, following an updated at-height inspection.
 - In the event that the presence of a bat roost is identified during the pre-works at-height inspections, the requirement for works affecting the roost would be reconsidered to identify whether adverse effects can be avoided. Where possible, in this scenario proposals would be updated to enable retention and protection of the bat roost. In the event that retention is not possible, a licence would be sought from Natural England to permit works to proceed, and the licence application would be subject to a detailed method statement.
- 3.3.8. An appropriate lighting strategy will be created for the Site. In particular, the lighting strategy will require that new permanent lighting is the minimum required and will avoid light spill directly onto retained and newly created ecological features bordering the Site. Where new or permanent lighting is proposed, such a strategy should be designed in adherence to best practice guidance (BCT and ILP, 2023) and be reviewed by an ecologist prior to implementation. A strategy should include the following measures:
- Installation of lighting is avoided where possible along retained areas of vegetation (e.g. hedgerows and treelines), or newly planted landscaped areas. Where lighting cannot be avoided in these areas, light spill should be avoided on retained or newly planted trees using hoods, louvres or other luminaire design features.
 - Narrow spectrum light sources are to be used wherever possible to lower the range of bat species affected by lighting. Specifically, light sources should use warm, neutral colour temperatures below 2700 kelvin.
 - Light sources which emit ultraviolet light are used to avoid attracting night-flying insects (which in turn may attract bats to the light)

- 3.3.9. The provision of bat boxes to compensate for the loss of potential roosting features should be installed prior to the active bat period (April 2025 onwards) to ensure sufficient bat roosting resource is available throughout the active window.
- 3.3.10. In the unlikely event that any bats are unexpectedly encountered during the construction phase, felling works must cease, and further professional ecological advice be sought.

Birds

- 3.3.11. Clearance of suitable bird nesting habitat should be undertaken outside of the bird nesting season, i.e. clearance should proceed between September and February inclusive, wherever possible. Where clearance of habitat is not possible outside of the breeding bird season, all areas to be affected will be checked for evidence of nesting birds by an ecologist. The check will be undertaken a maximum of 24 hours prior to the vegetation removal taking place.
- 3.3.12. If any active bird nests are discovered, these will be cordoned off with a buffer of at least 5m (this may increase depending on species, proposed works and location) where no potentially disturbing works will take place. The buffer will remain in place, with regular monitoring completed, until the young have fledged and the nest vacated. Upon fledging, a second nesting bird check would then be undertaken to ensure the vegetation does not contain any further active nests prior to felling or removal works taking place.

Badger

- 3.3.13. [REDACTED] No conclusive evidence of badger presence was recorded during the walkover of the Site or the additional 30m buffer, however, the presence of suitable foraging habitat may mean they pass through the Site. As such, measures need to be put in place during the construction phase to minimise effects upon badger movement and foraging activity. These measures are:
- Depending on the time passed between the badger survey and the commencement of demolition and construction, it is recommended that a pre-works check of the area is conducted by a suitably qualified ecologist, to re-ascertain the presence or likely absence of badger in the location where construction is to take place. The typical validity of badger survey is from 12 to 18 months (CIEEM, 2019), and so an updated walkover must be completed if construction activities do not progress before May 2025;
 - Contractors will be briefed on the potential presence of badgers and their setts, and if any are found, the works in the area must be stopped and a suitably qualified ecologist contacted to discuss next steps;
 - Unavoidable vegetation removal within 30m of a sett (if found) will be completed sensitively using hand tools (to include chainsaws and brushcutters) rather than tracked machinery; and
 - Avoid leaving open trenches into which animals could fall. If this is not possible, a means of egress should be provided, such as a plank. It will be ensured that dangerous areas such as deep excavations are fenced to prevent badger access or covered overnight; whilst ensuring at least one safe crossing point of the construction footprint is available within 100m.
- 3.3.14. If a potential badger sett is identified at any point during works to facilitate the Scheme, a review of the Scheme design will be undertaken to determine whether direct loss or disturbance to the sett can be avoided. If impacts cannot be avoided, a licence from Natural England must be sought which will be subject to a detailed method statement and timing restrictions (July to November inclusive).

Otter

- 3.3.15. Otters have been confirmed to be present (likely commuting and foraging) within the north-west of the Emm Brook. As such, precautionary methods of working are required to avoid an offence under the Conservation of Habitats and Species Regulations 2017 (as amended) and the WCA.
- 3.3.16. The following measures will be incorporated during the construction phase, where crossing the watercourse is required:
- A precautionary pre-works check for otter prior to bridge construction works to further target mitigation.
 - Any water course crossing points (i.e. bridges or culverts) associated with the Scheme will be designed to limit otter vulnerability to road traffic by creating dry otter underpasses through retained bank widths or bolt-on ledges, and otter-proof fencing to allow otters a safe passage through the works area and direct them to a safe crossing point.
 - Industry standard pollution prevention measures as set out in Section 3.2 will be followed and incorporated into the CEMP.
 - One side of the watercourse being bridged will remain intact for as long as possible to provide safe access, and the area around the watercourse to be disturbed will be minimised by the provision of temporary barriers and safe working areas.
 - No night work should take place to avoid disturbance to otter when they are most active;
 - Open excavations will be kept to a minimum across the whole Site and covered overnight or fitted with a means of escape to prevent otters or other animals becoming trapped by means of ramped access / egress. These will be inspected every morning to ensure no animals have fallen in. Pipes stored on site will also be inspected.
 - Following the construction of any crossing points, the banks will be reinstated to the same height and profile and allowed to re-vegetate.
- 3.3.17. The following measures are to be incorporated during the operation phase:
- Mammal passages maintained through Emm Brook bridge embankments;
 - Otter-proof fencing of Emm Brook at bridge crossing to keep otters away from the road and direct them to a safe crossing point (i.e. mammal passages).
 - Landscaping plans to include tree and shrub planting to screen the watercourse from the Scheme to minimise disturbance during the operation phase.
 - A lighting strategy to be designed and implemented to ensure a dark corridor along the watercourse is maintained to enable otter to continue to use this habitat.
- 3.3.18. For sections within the Scheme where crossing the watercourse is not required (i.e. the west of the Scheme), otter proof fencing will be installed to limit access to the watercourse and a 10m buffer will be placed around the Emm Brook to minimise pollution risk and avoid disturbance of any otter that might be passing through.

Invasive Non-Native Species

- 3.3.19. INNS were identified within the Site, largely concentrated along the length of the Emm Brook. Specifically, Himalayan balsam was recorded along the length of Emm Brook, and up to 30m from the edge of the watercourse. This is inclusive of the section of Emm Brook running between the hatchery land to the west and Gray's Farm to the east (WSP, 2024d) (Figure 3i). A single patch of Japanese knotweed *Reynoutria japonica* was also recorded along Emm Brook, with a single specimen of giant hogweed *Heracleum mantegazzianum* recorded to the north of the Site.

- 3.3.20. Advice will be sought from a specialist contractor to devise an appropriate strategy in relation to the invasive species and soils present within the Site.

4 ECOLOGICAL MANAGEMENT

4.1 AVOIDANCE MEASURES

- 4.1.1. The current Scheme designs require loss and/or fragmentation of large areas of grassland, as well as felling of trees. Where habitat loss is unavoidable, compensation will be required in line with local and national policy as discussed below in the landscape strategy.

4.2 LANDSCAPE PLAN

- 4.2.1. A landscape plan has been proposed for the Scheme, as detailed in drawing WMHP-TG-SRWG1-DR-LS-3001, shown on Figure 2. The landscape plan proposes the creation of new habitat and notes areas of retained habitats within the Scheme.
- 4.2.2. The landscape plan will utilise a native and species-rich mix of plants for all habitat types, mirroring surrounding retained semi-natural habitats. Utilising native species, flowering species and berry bearing shrubs will benefit a range of wildlife, providing food sources throughout the year.
- 4.2.3. In line with local and national policy, the Scheme should will aim to achieve a net gain in biodiversity post-development.

4.3 LIGHTING STRATEGY

- 4.3.1. Artificial lighting may affect sensitive fauna within the Scheme, most notably bat species and otter. Lighting can affect bat roosts, bat and otter commuting routes and established and created dark corridors. The lighting strategy for the Scheme will therefore be developed to be sensitive to bats and otter including avoiding direct illumination of retained and newly created vegetated areas, and the Emm Brook. Details of a proposed lighting strategy relevant to bats is detailed in Section 3.3.8. A bat sensitive lighting strategy will also reduce the effect of lighting upon other light sensitive and nocturnal species, such as otter, badger, crepuscular birds and invertebrates.

4.4 ECOLOGICAL ENHANCEMENT

Bat Roosting

- 4.4.1. Under current plans the Scheme will result in the loss of numerous PRFs. To enhance the roosting resource provided within the Site and wider areas, and to enable future monitoring, new roosting opportunities in the form of bat boxes will be installed on mature trees in suitable locations, either within the Site itself, or within nearby land upon agreement with landowners.
- 4.4.2. Bat boxes will be installed on mature trees at approximately 4 metres above the ground and placed in a range of locations at slightly different heights and facing in slightly different directions to give a choice of roost site options (Mitchell-Jones, 2004). The direction of the boxes will be selected to avoid facing them into the prevailing weather and will be positioned facing in a southerly direction (i.e. south-west through south to south-east) where they will receive a good degree of sunlight. Bat boxes will be installed in positions where they are out of reach of people from the ground and high enough to deter cats and other predators. Bat boxes should not require regular maintenance. However, annual checks of the bat boxes by a licenced ecologist are recommended. The checks will assess the boxes condition and identify where remedial action maybe required.

4.4.3. Specific details on the number of bat boxes, the type and locations are yet to be confirmed. Examples of box types include:

- 2F Schwegler Bat Box – for general purpose;
- 1FF Schwegler Bat Box – for general purpose and maternity colonies; and
- 1FW Bat Hibernation Box – for hibernation.

Nesting Birds and Invertebrates

4.4.4. Recommendations for enhancement for nesting birds and invertebrates have been made within the EclA, however, specific details on type, design and location are yet to be confirmed.

5 CONCLUSION

- 5.1.1. This mitigation strategy provides a summary of the ecological baseline for the Scheme. As supported by ecological survey and desk study data, the habitats within the Site are considered suitable to support:
- Reptiles;
 - Bats (foraging, commuting and roosting);
 - INNS
 - Badgers;
 - Nesting birds; and
 - Otter
- 5.1.2. Ecological mitigation measures required to fulfil legislation and local/national planning policy include:
- Reptile-sensitive mitigation including a directional, two stage clearance of vegetation;
 - Pre-felling check by a suitably qualified ecologist and the soft-felling of trees with bat roosting suitability;
 - Advice from a specialist contractor in relation to INNS in order to create an appropriate strategy; and
 - Additional mitigation measures in relation to other protected and notable species.
- 5.1.3. In addition, general good practice construction measures have been proposed which will be pertinent throughout the Scheme.
- 5.1.4. A lighting strategy sensitive to ecological features such as bats has been detailed. Specific details of ecological enhancement measures such as installation of bat boxes, nest boxes or habitat creation for invertebrates are yet to be confirmed.

6 REFERENCES

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- WSP (2024a) South Wokingham Distributor Road – Ecological Gap Analysis.
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- WSP (2024d) South Wokingham Distributor Road – Himalayan Balsam Report.
- WSP (2024e) South Wokingham Distributor Road – Badger Survey Report.
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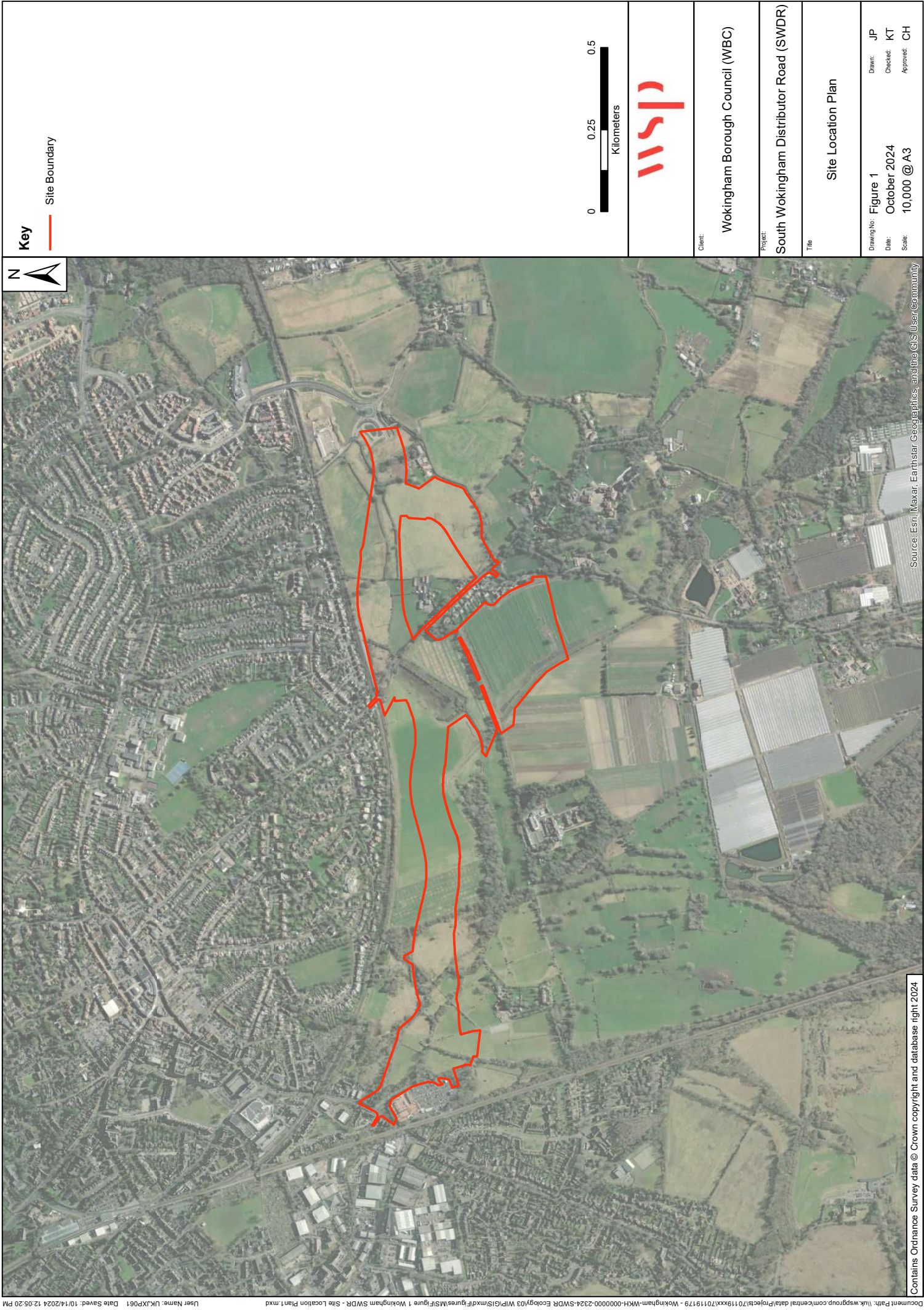
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7 FIGURES

Figure 1 – Site Location Plan

Figure 2 – Highways Soft Landscaping Plan - WMHP-TG-SRWG1-DR-LS-3001

Figure 3a-i – Ecological Mitigation Plan



DO NOT SCALE

SUITABLE FOR REVIEW AND COMMENT

Balfour Beatty

Wokingham Borough Council

Wokingham Road and Western Gateway Phase 1

Scale: 1:2500

15/03/2023

Wokingham Road and Western Gateway Phase 1

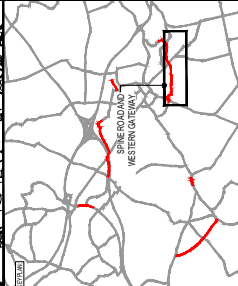
Significant Residual Hazards

Residual Hazard	Impact	Proposed Control Measure	Significance
STANDING WATER/POUNCE	CD	Install a low wall to prevent water from pooling and create a drainage channel.	CD
STANDING WATER/POUNCE	CD	Install a low wall to prevent water from pooling and create a drainage channel.	CD

1. TREE PIT CONSTRUCTION DETAILS REFER TO DRAWINGS
WHF-10-SWGS-DRL-S-3010 - 3011
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED
OTHERWISE.
3. ALL LEVELS ARE IN METRES AND UNLESS NOTED
OTHERWISE.
4. REFER TO THE 800 SERIES FOR LEVEL INFORMATION
5. FENCE DETAILS REFER TO DRAWINGS
WHF-10-SWGS-DRL-S-3001 - 3009
6. ROAD RESTRAINT SYSTEMS REFER TO DRAWINGS
WHF-10-SWGS-DRL-S-0401 - 0409 AND 0421
7. ALL NEW AND EXISTING SHRUB PLANTING, TREES AND
VEGETATION TO BE PRUNED AND MAINTAINED IN
PERPETUITY TO ALLOW FULL VISIBILITY OF ROAD SIGNAGE

SITE LOCATION PLAN
SCALE: 1:25000

SCALE



P#	Q#	REF	REASON	DATE	BY	DESCRIPTION	CHK	APP
P6	2600024	WM	RECEIVED DIRECT PLANNING COMMENTS					
P6	6060202	WM	REFERENCES					
P4	0100027	WM	FOURTH DRAFT ISSUE					
P4	2700023	WM	THIRD DRAFT ISSUE					
P2	1400020	WM	SECOND DRAFT ISSUE					
P01	1100020	WM	PRELIMINARY					

FOR REVIEW & COMMENT S3

DE SCHNER: 1 2 3 4 5 6 7 8 9 10 11 12

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CONTINUED:

Balfour Beatty



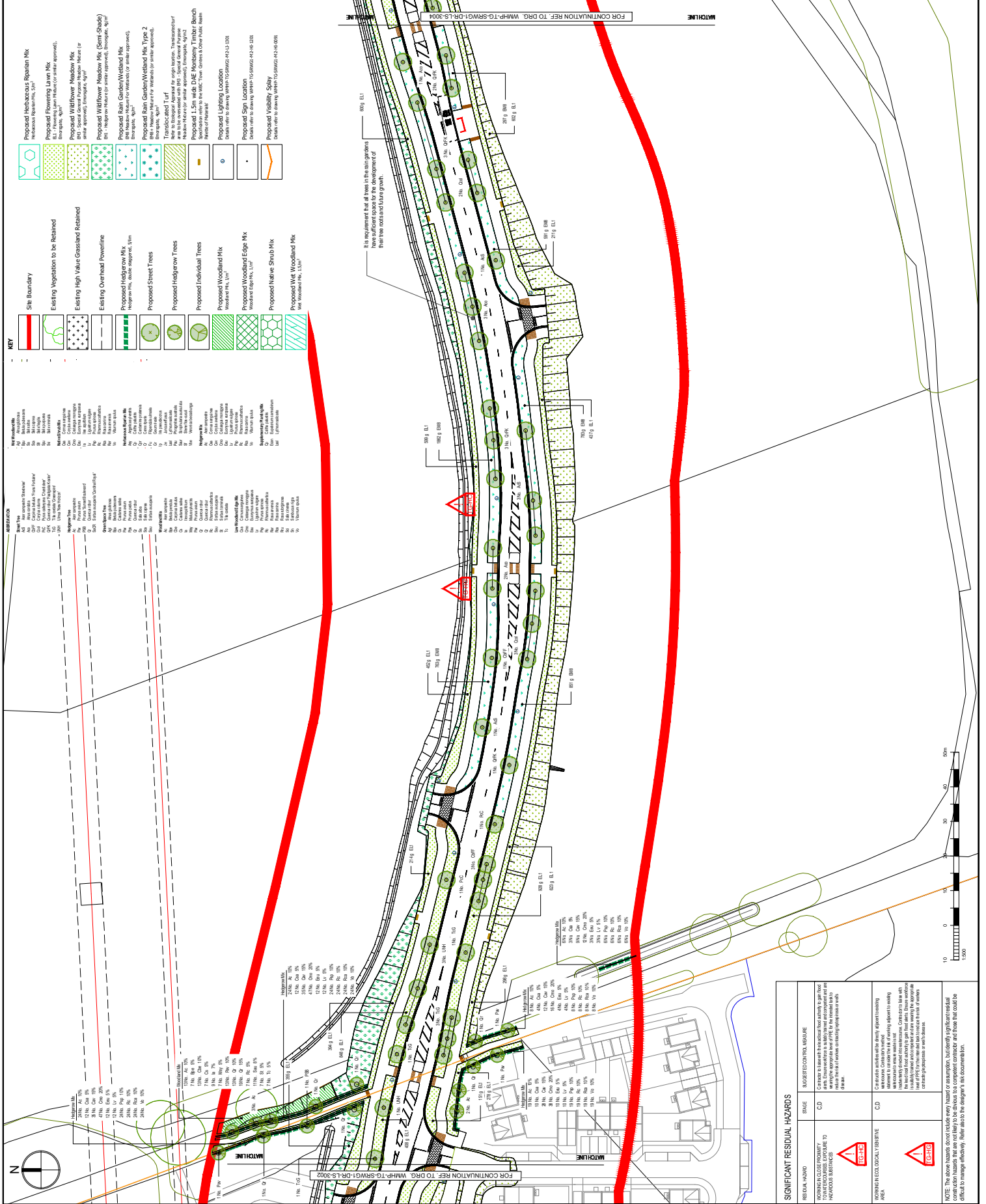
PROJECT: WOKINGHAM MAJOR HIGHWAYS PROGRAMME
SPINE ROAD AND WESTERN GATEWAY PHASE 1

HIGHWAYS

SOFT LANDSCAPING PLANTING PLAN

SCALE @ 1: 1500	CHECKED JC	APPROVED JC	SHEET 3
PROJECT NO C118047	DESIGNED WM	DATE: 08/24/2011	
DRAWING NO			REV

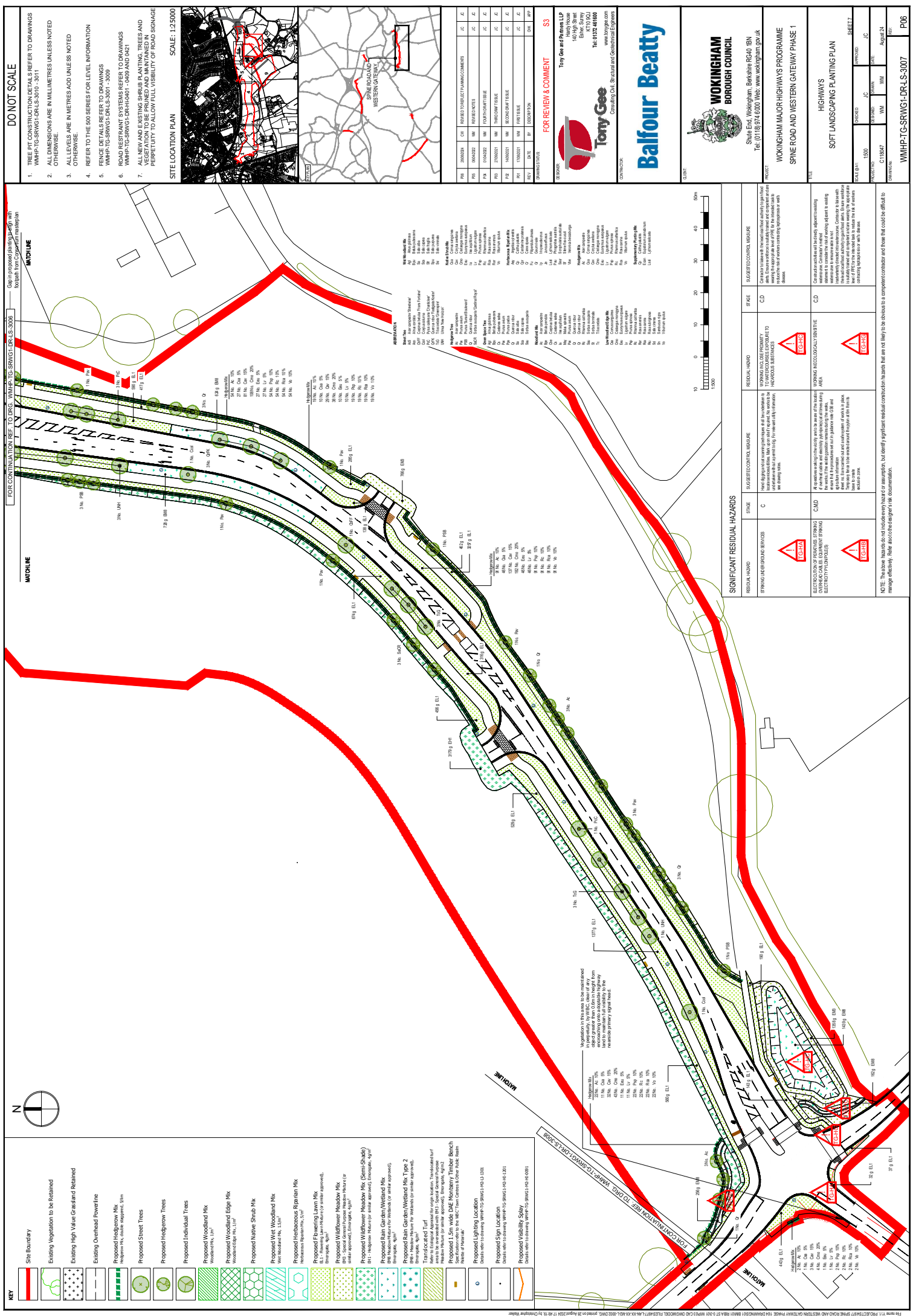
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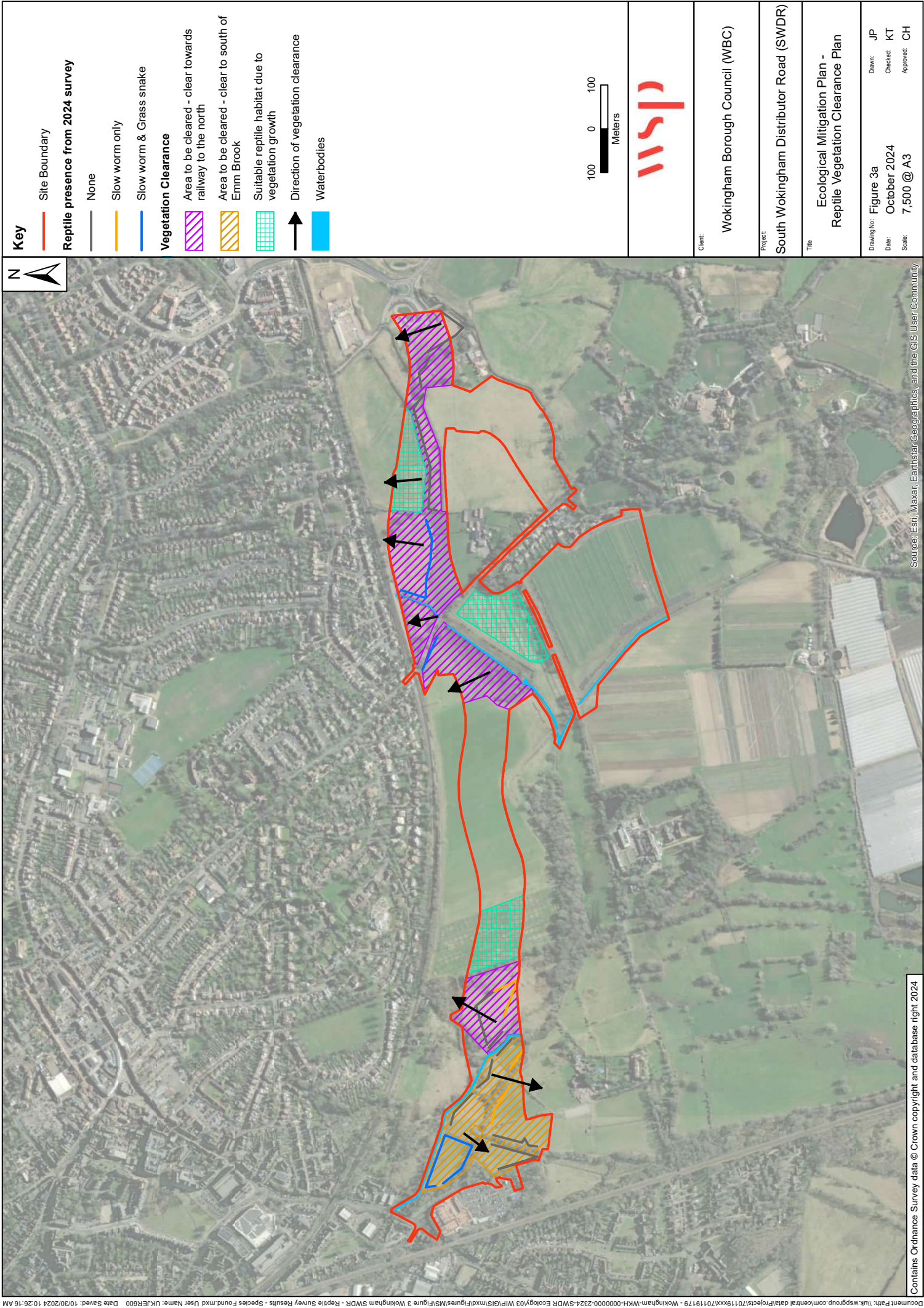
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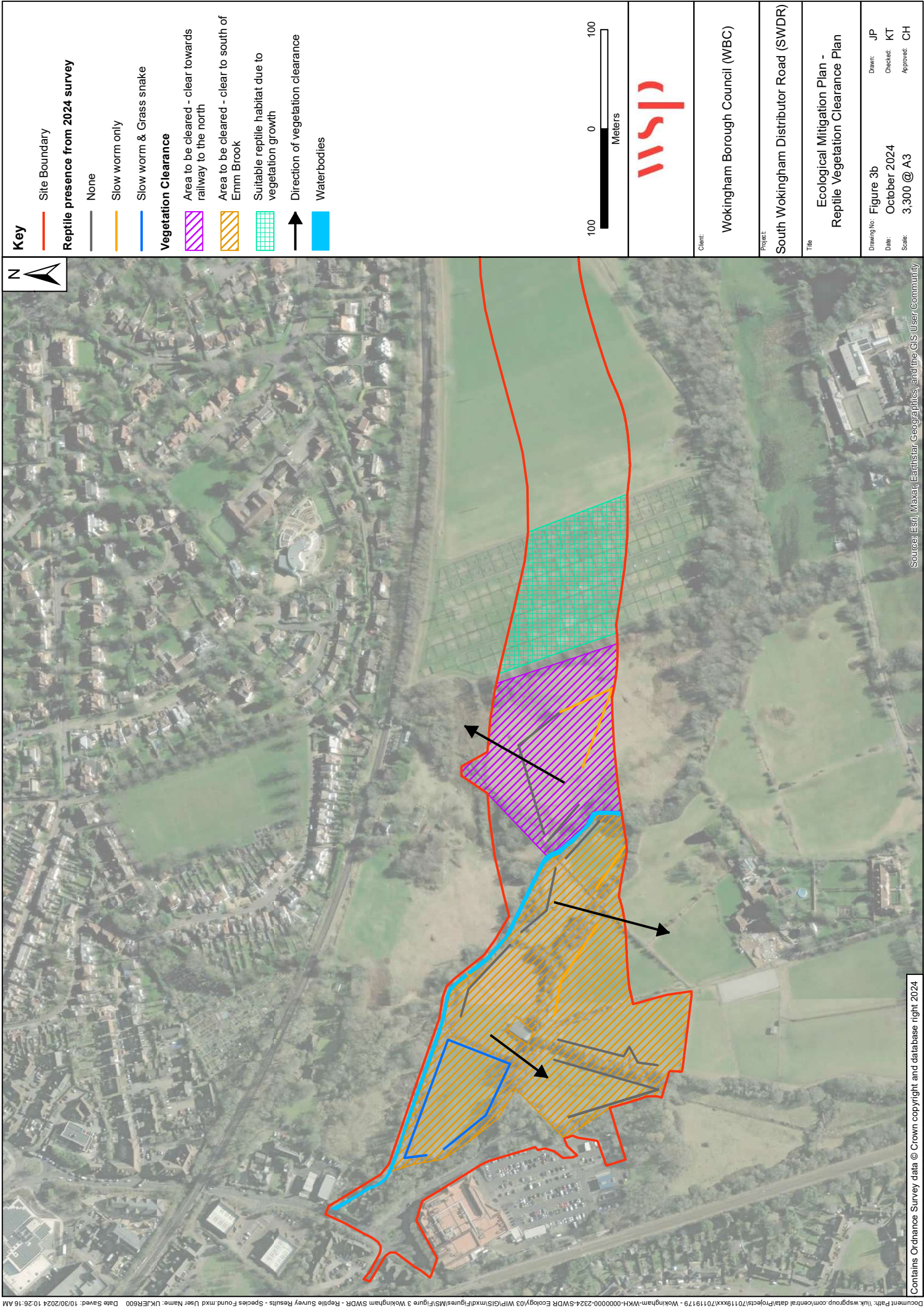
SIGNIFICANT RESIDUAL HAZARDS	
RESIDUAL HAZARD	RANGE
 CONTAMINATION OF PRIMARY TOWERS/ROCKERS DUE TO TOXIC/IRRITANT SUBSTANCES	C.D. Category 1 hazard for health (acute toxicity, skin irritation, eye irritation). Category 2 hazard for the environment (aquatic toxicity). The appropriate use of safety precautions and appropriate personal protective equipment is required to avoid any adverse effects on health and the environment.
 NOXIOUS ECOLOGICAL SENSITIVE AREA	C.D. Category 2 hazard for the environment (aquatic toxicity). Category 2 hazard for the environment (aquatic toxicity). The appropriate use of safety precautions and appropriate personal protective equipment is required to avoid any adverse effects on health and the environment.

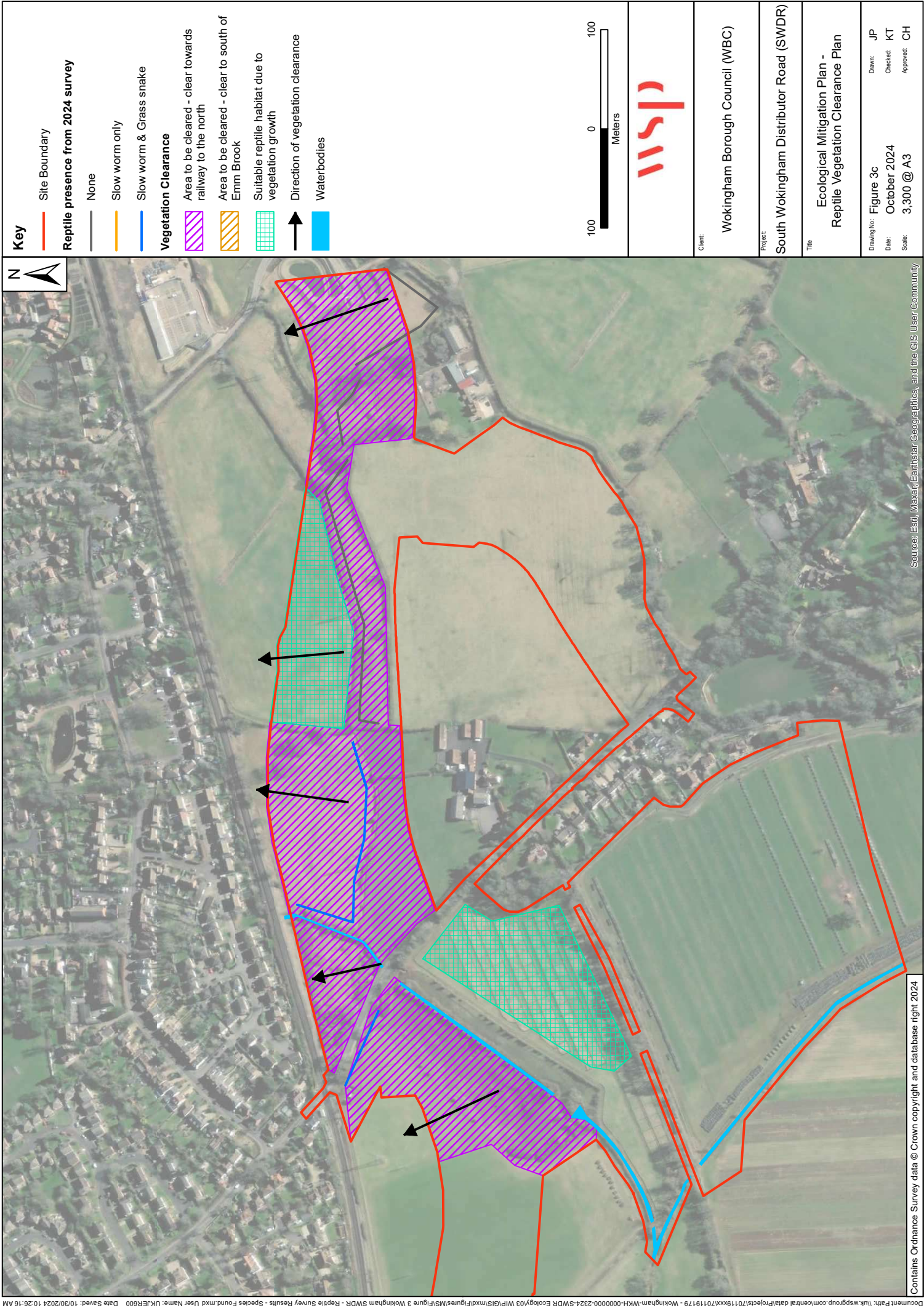
NOTE: The above hazards do not include every hazard or assumption, but only significant residual hazard. It is not meant to be exhaustive. To complement content and those that could be

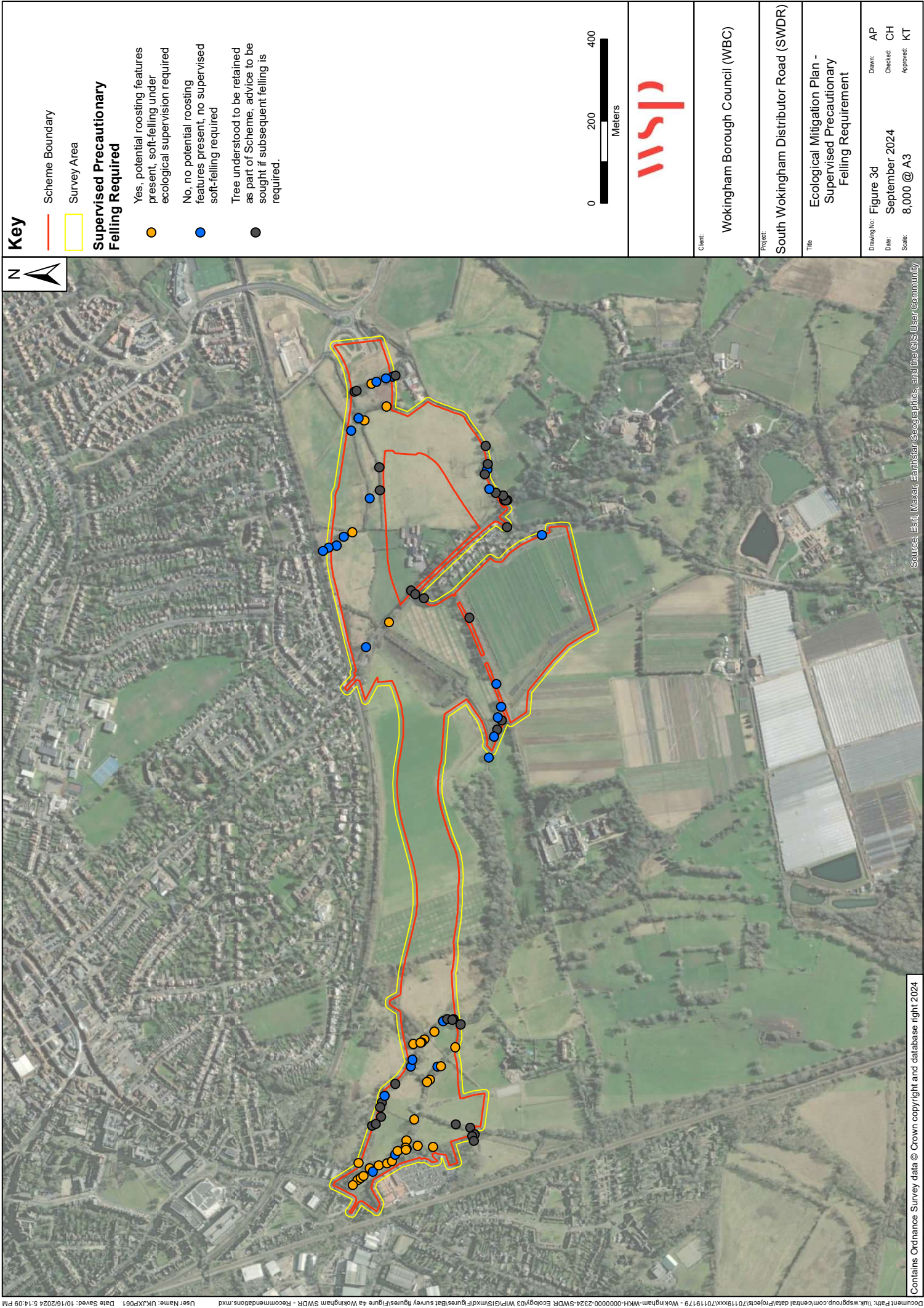
NOTE: The above hazards do not include every hazard or assumption, but identify significant residual construction hazards that are not likely to be obvious to a competent contractor and those that could be difficult to manage effectively. Relying solely on the designer's risk does not mean that

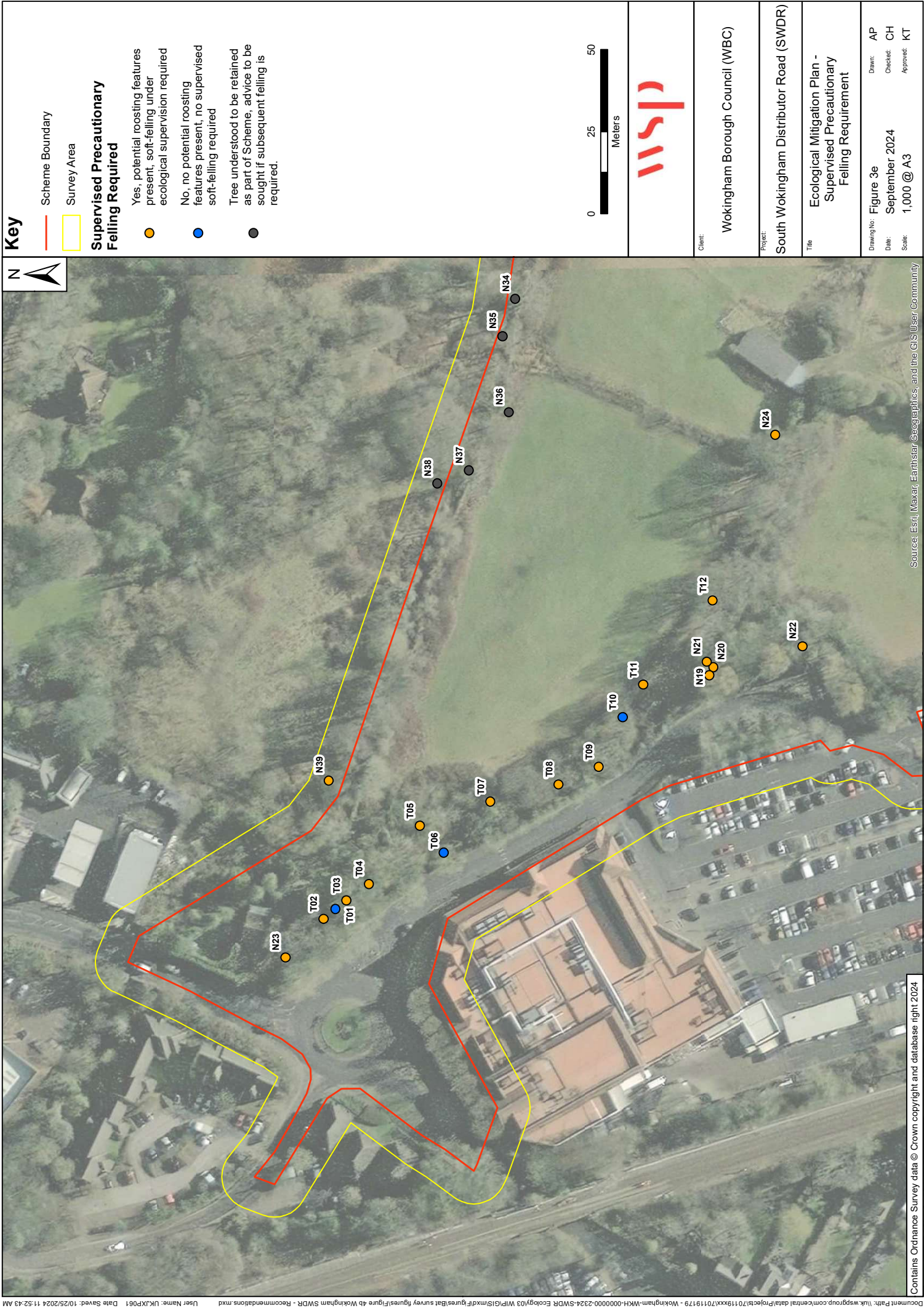










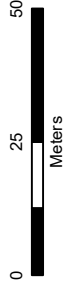


Key

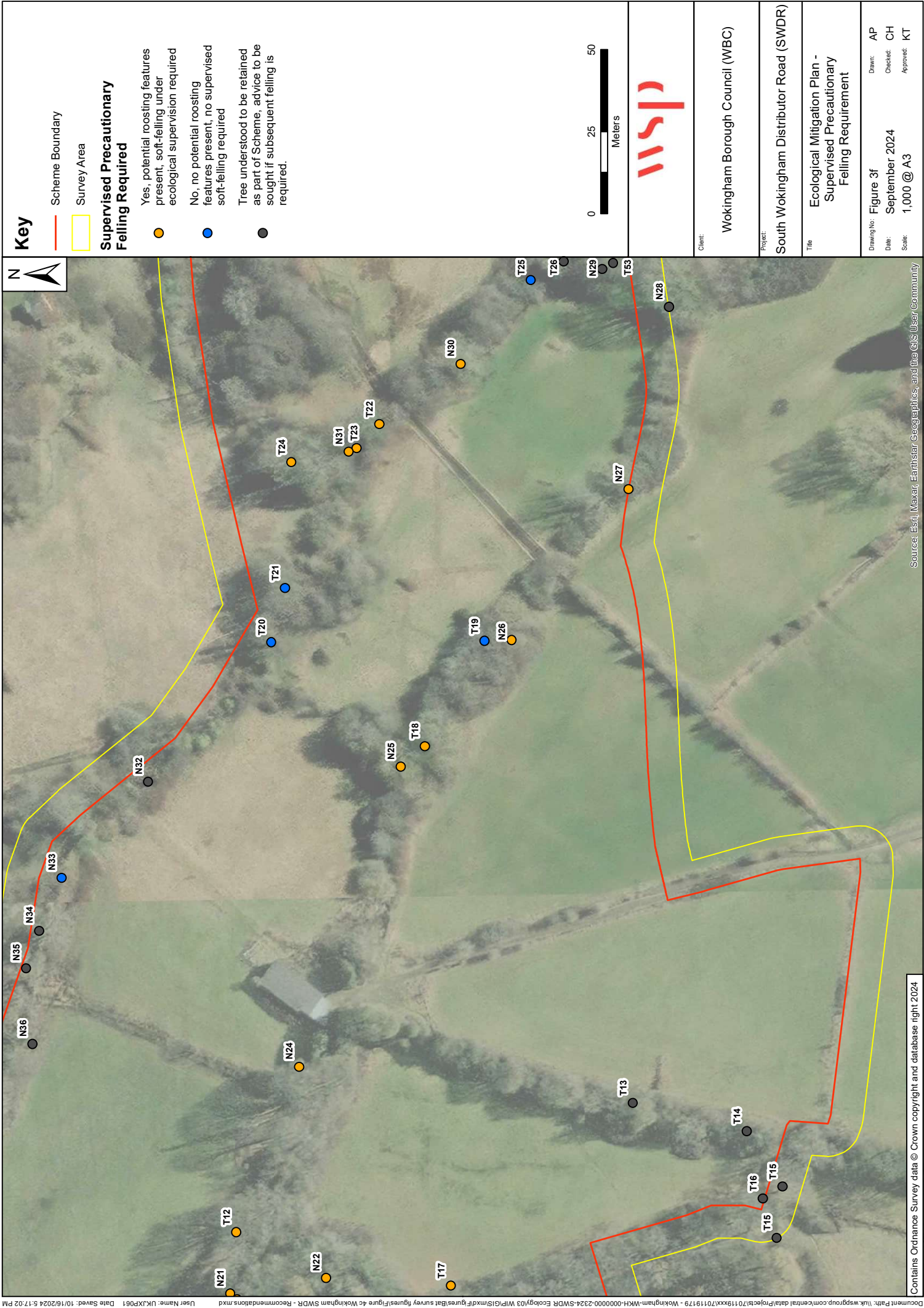
- Scheme Boundary
- Survey Area

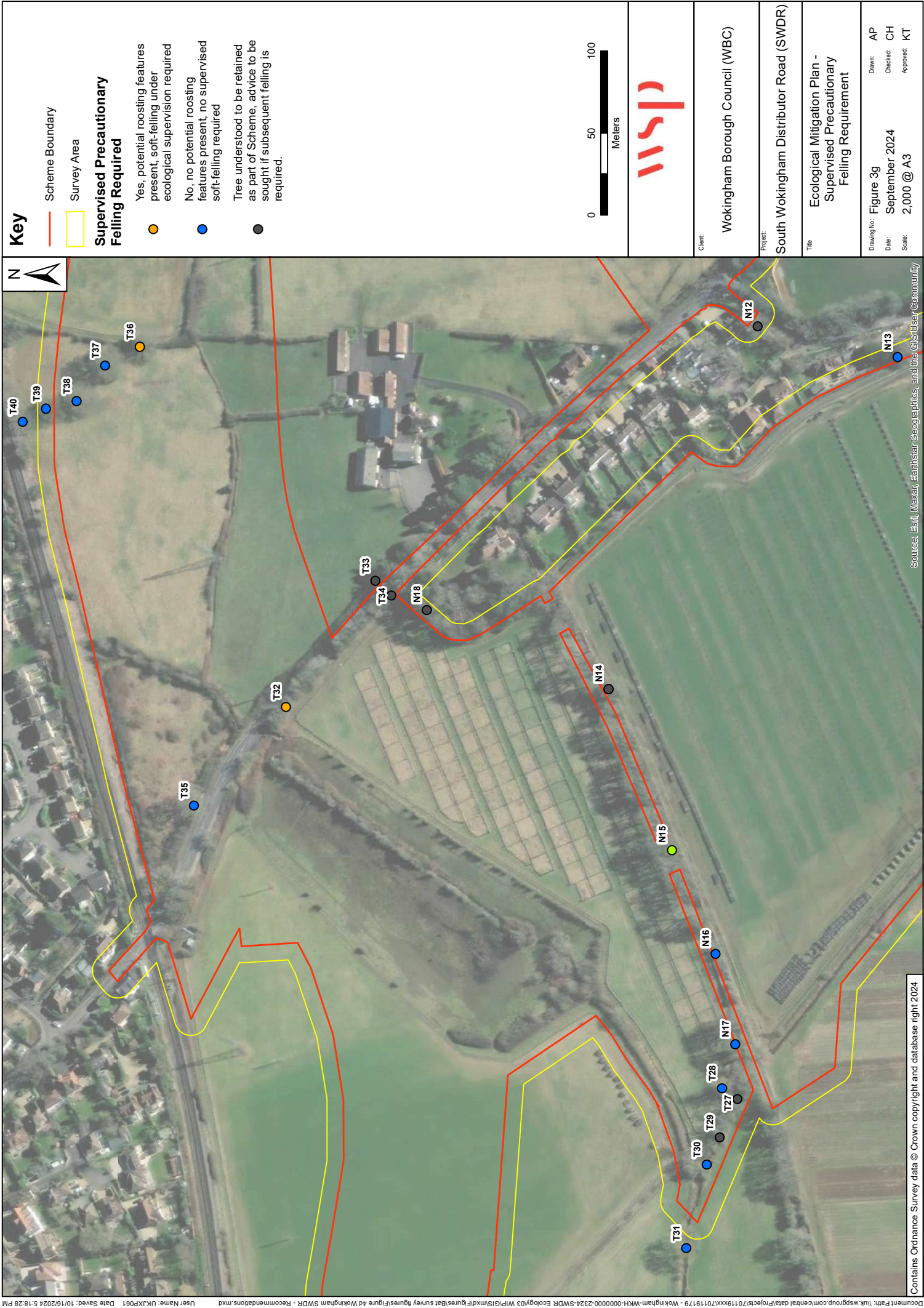
Supervised Precautionary Felling Required

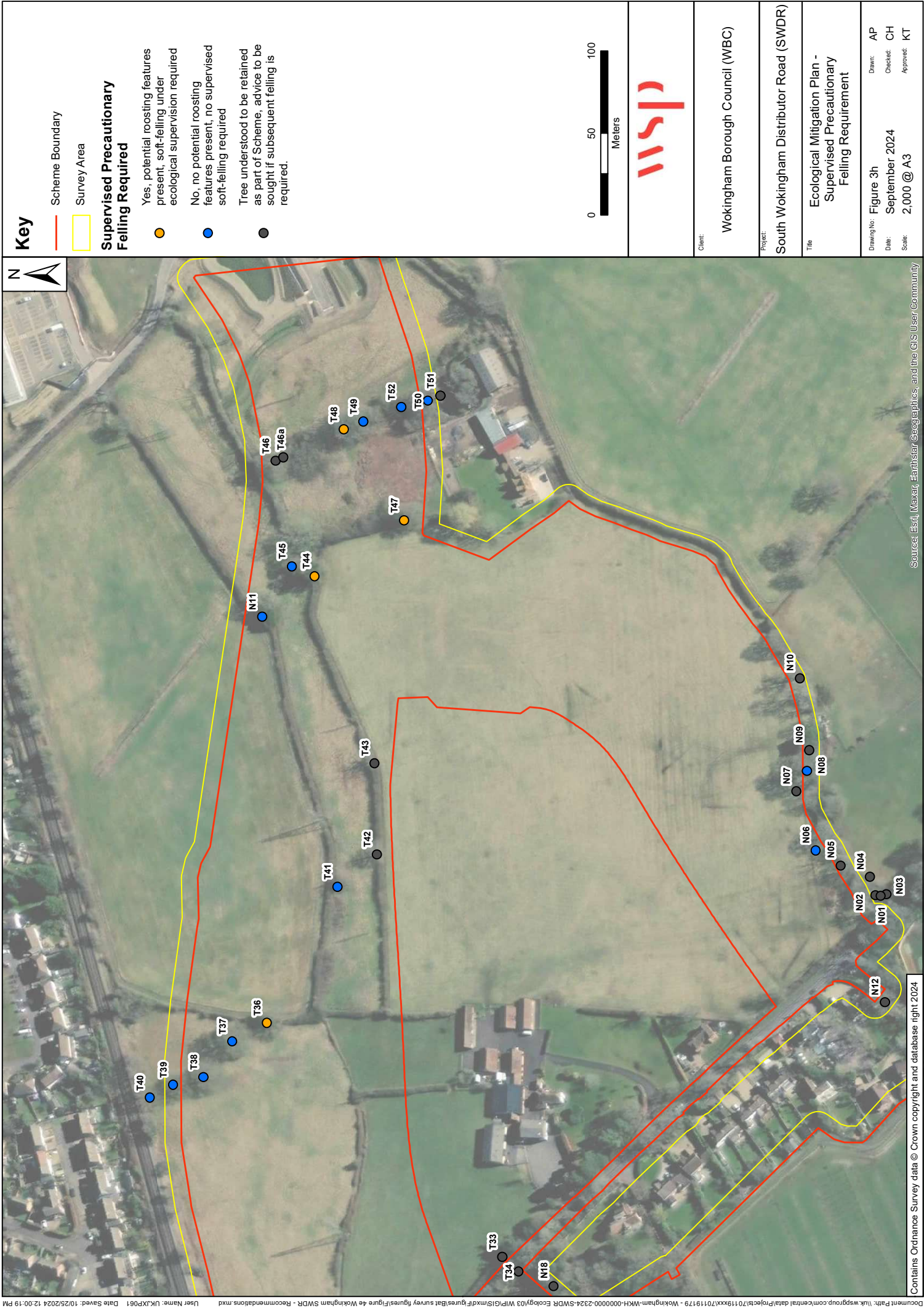
- Yes, potential roosting features present, soft-felling under ecological supervision required
- No, no potential roosting features present, no supervised soft-felling required
- Tree understood to be retained as part of Scheme, advice to be sought if subsequent felling is required.



Client:	Wokingham Borough Council (WBC)
Project:	South Wokingham Distributor Road (SWDR)
Title:	Ecological Mitigation Plan - Supervised Precautionary Felling Requirement
Drawing No:	Figure 3e
Date:	September 2024
Scale:	1,000 @ A3
Drawn:	AP
Checked:	CH
Approved:	KT

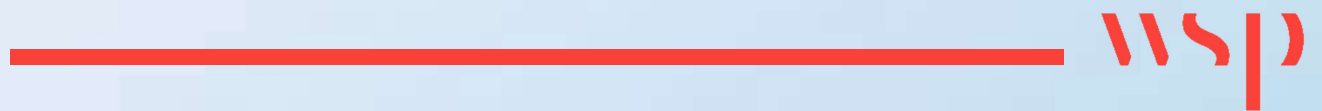






Appendix A

TOOL BOX TALK



Tool Box Talk

Reptiles

There are several common reptiles species found within the UK: slow worms (which look like snakes but are in fact legless lizards), common lizards, grass snakes and adders. Adders should be treated with caution as their bite is venomous. Adders can be distinguished by the zig-zag markings down their body although they can sometimes be completely black.



Slow worm



Common lizard



Grass snake



Adder

All reptiles are protected under UK law from intentional killing or harm. A suitably qualified ecologist is required for any works which may harm reptiles and a licence may be required if they are to be translocated. A suitably qualified ecologist and a licence is required for any works which may disturb these species.

Reptiles are often found basking on grassy verges and areas of heath during the summer. They are commonly found under debris, for example roadside litter or piles of logs where it is warm.

In the winter reptiles hibernate in hibernacula, for example under tree roots, log piles or large items such as railway sleepers. Grass snakes and slow worms are confirmed to be present on site.

Great Crested Newts

One of three native newt species. Can be identified by presence of orange belly, white streak on tail and white warty marks on skin. Can be confused with smooth newt males which can also have an orange belly.



Great Crested Newt



Smooth Newt

Great crested newts and their breeding or resting places are protected under UK and European law. A suitably qualified ecologist and a licence is required for any works which may disturb great crested newts.

Found in ponds when breeding but more commonly found on damp land in leaf litter or grass or under debris and log piles. Can be difficult to spot due to their dark colour.

Badgers

Badgers sleep in setts which can consist of a single or multiple entrances often in dense undergrowth or along hedgerows.

Badger setts are protected under UK law. A suitably qualified ecologist and a licence is required for any works which may disturb a badger sett.

Breeding Birds

Bird nests can be found in trees, scrubs and on the ground.

In order to minimise the risk of disturbing breeding birds, removal of trees and vegetation should be undertaken outside of the breeding season (breeding bird season is March to July inclusive). The majority of birds breed within this time period, although species such as wood pigeons can breed at any time of year. Active nests must be left undisturbed until they are no longer active before works that will disturb them can commence. A suitably qualified ecologist is required for any works which may disturb an active bird nest, for example vegetation clearance.

Otter

Otters live on the banks of rivers in holts, and may leave signs such as spraint or feeding remains around the site. Otter spraint and feeding remains have been identified within the site.

To minimise risks to otter, potential hazards such as steep sided excavations which could act as a trap should not be left open overnight. Any excavations which are to be left open overnight should have a means of escape for trapped animals, such as a branch or ladder. Any pipes or materials stored overnight should be checked for otter before being moved.



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