Habitat Management and Monitoring Plan (HMMP)

Biodiversity Gain Site
Land at Wilsthorpe Road, Braceborough – ENVIRO23002-A
Lincolnshire
PE9 4NX

January 2025

Allied Ecology

enviroland

Site Address	Land at Wilsthorpe Road, Braceborough, Lincolnshire, PE9 4NX
Landowner(s)	George Bremner
Date of Issue	02/06/2025
Report Reference	ENVIRO23002-A – Braceborough HMMP

Liability

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Validity

Any alterations to the site boundary and / or proposals may invalidate the recommendations contained within this HMMP.

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1. Introduction

1.1. Background and Context

1.1.1. Enviroland has been appointed to prepare a Habitat Management and Monitoring Plan (HMMP); detailing habitat retention, creation, and enhancement prescriptions for the Biodiversity Gain Site at Land at Wilsthorpe Road, Braceborough, Lincolnshire, PE9 4NX (gird ref: TF 07882 14461). The Biodiversity Gain Site is referred to as Braceborough – ENVIRO23002-A.

1.1.2. The site is located to the north of Braceborough, Lincolnshire, between Stamford and Bourne, and largely comprises existing arable / cropland fields bound by off-site hedgerows and woodland planting, with a single small pocket of exiting grassland that is subject to period topping. Beyond the site, the surrounding landscape comprises arable / cropland with occasional woodland pockets and watercourses.

1.1.3. The HMMP has, in part, been informed by utilising the Statutory Biodiversity Metric; in order to establish the change (increase) in Biodiversity Units able to be delivered by the proposals.

1.1.4. Table 1.1 below provides an overview of the Habitat Management Plan, summarising key aspects.

Table 1.1. *Habitat Management Plan Overview.*

Site Details	
Project Type	Biodiversity Gain Site
Site Name	Braceborough – ENVIRO23002-A
Site Address	Land at Wilsthorpe Road, Braceborough, Lincolnshire, PE9 4NX
Central OS Grid Reference	TF 07882 14461
Local Planning Authority	South Kesteven District Council (SKDC)
National Character Area	Kesteven Uplands
Gain Site Register Reference	Not Available at This Stage
Landowner(s)	George Bremner
Land Manager	George Bremner
Provenance	
Author Organisation	Enviroland Ltd.- The Grey House, 3 Broad Street, Stamford, England, PE9 1PG
Lead Author	Jon Byrd – CEcol, MCIEEM
Period Covered	January 2025 – January 2055
Habitat Proposals Summary	
Irreplaceable Habitats Present?	No
Habitats to be Retained	A small section of existing Mixed Scrub, in poor condition, would be retained with no enhancement measures proposed.
Habitats to be Created	Other Neutral Grassland, Broadleaved Woodland and a Traditional Orchard will be created.
Habitats to be Enhanced	Existing Other Neutral Grassland would be enhanced to increase its condition, and to create a Traditional Orchard.

Net number and type of Biodiversity Units (bu) created	12.66 High Distinctiveness Grassland Biodiversity Units 79.34 Medium Distinctiveness Grassland Biodiversity Units 5.78 Medium Distinctiveness Woodland and Forest Biodiversity Units 3.89 High Distinctiveness Hedgerow Biodiversity Units
Implementation	
Phasing Strategy	Phase 1 will be implemented within 12 months following the sale of the site's first Biodiversity Units, with capital from these sales funding initial habitat establishment. This Site will be delivered in multiple phases. No subsequent phase will be implemented until all units associated with the habitats in the preceding phase have been sold, unless otherwise deemed appropriate by the landowner. Phase 1 will consist of *23002-A-A1, 23002-A-A2, 23002-A-A3, 23002-A-A4, HA and HB*. Phase 2 will consist of *23002-A-A5*. Phase 3 will consist of *23002-A-A6* and *23002-A-A7*
Monitoring Requirements	Annual monitoring will take place as part of the ongoing management regime, with periodic detailed botanical / habitat monitoring also undertaken in years 1, 2, 3, 5, 10, 15, 20, 25 and 30 following the anniversary of commencement of the first phase and thereafter aligned as remaining phases are implemented. In order to avoid unnecessary duplication of monitoring visits across subsequent phases, the timing of some monitoring years between year 10 to year 30 may be brought forward or aligned between phases, in order to avoid otherwise unnecessary duplication of effort for established habitats that are meeting their relevant character and condition requirements. This approach provides an appropriate level of flexibility for the landowner, reducing costs associated with multiple (otherwise unnecessary) monitoring visits undertaken in consecutive years, while maintaining compliance with statutory monitoring requirements and ensuring ecological objectives are met. Any further adjustments to the Monitoring Schedule will be made in response to the findings of the monitoring visits, in consultation with the project ecologist and, where required, agreed with the relevant approving authority.
Required Consents / Licences	N/A
Funding Mechanism	The habitat creation, enhancement, monitoring, and any remedial works will be funded through the sale of Biodiversity Units.

2. Roles and Responsibilities

2.1. Environmental Professional

2.1.1. Table 2.1 below identifies the organisation and lead surveyor / lead author responsible for preparation of the HMMP.

Table 2.1. *Environmental Professional's Details.*

Environmental Professional's Details			
Name	Jon Byrd (CEcol, MCIEEM)		
Organisation	Enviroland Ltd.		
Start Date	April 2023	**End Date**	~ January 2035
Responsibility			
Enviroland has undertaken baseline habitat and initial protected species suitability assessments, in order to inform the scope and content of the HMMP and has worked closely with the landowner and specialist habitat creation / management contractors to develop an appropriate and robust approach to the habitat creation and enhancement proposals.			
Statement of Competency			
Jon is a Chartered Ecologist (CEcol) and Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM), with over 16 years of relevant experience within an ecological consultancy setting. Jon has extensive experience in undertaking baseline habitat surveys for the habitats present within the site, and has been working with landowners throughout his career to advise on habitat creation and management proposals, and is suitably authoritative to advise on the creation and enhancement of the proposed habitats detailed within the HMMP. In addition to his extensive habitat survey and creation experience, Jon also holds Natural England protected species survey licences for Great Crested Newts (CL08), bats (CL17/CL18), Dormouse (CL10a), Barn Owl (CL29), and White-clawed Crayfish (CL11). Jon also holds Natural England Mitigation Class Licences for bats (BMCL - CL21) and Badger (CL35), and has held or been named on numerous standard Natural England mitigation licences for the above species.			

2.2. Landowner

2.2.1. Table 2.2 below identifies the landowner responsible for delivering the HMMP.

Table 2.2. *Landowner Details.*

Landowner Details
Responsibility
The landowner is responsible for the delivery of the HMMP, including ensuring that the habitat creation and enhancement prescriptions, and ongoing management / monitoring protocols are adhered to.
Statement of Competency
George Bremner is personally invested in the management and enhancement of the estate at Braceborough. Having been under family ownership for multiple generations, George has implemented a range of landscaping improvements and ecological schemes, demonstrating a clear commitment to enhancing the estate's natural character.

Working through a well-structured management approach, supported by retained expert consultants and a capable estate team, they have effectively overseen projects that have improved the ecological and aesthetic quality of the grounds. Their experience in coordinating and funding these improvements ensures that they are well-prepared to deliver the Biodiversity Gain Site project in line with legal, environmental, and planning requirements.

They possess the organisational acumen, financial resources, and commitment required to ensure the project's success. Their stewardship reflects a thoughtful balance of civic, environmental, and personal investment, ensuring the long-term sustainability of the estate and its surrounding landscape.

3. Land Use Summary and Ecological Constraints

3.1. Assessment Methodology

3.1.1. In order to classify the habitats present within the Biodiversity Gain Site, and establish their 'condition' at the time of survey, a two-stage assessment was undertaken, as described below.

Stage 1 Assessment

3.1.2. An initial desk-based assessment was undertaken; utilising available aerial imagery (current and historic), Ordnance Survey mapping, and a review of available context provided by the landowner, in order to identify the likely broad habitats that may be present. The location of identified broad habitats was digitised using Quantum GIS (QGIS), in order to further understand the extent of the on-site habitats and for use as part of the Stage 2 Assessment.

3.1.3. In order to obtain further available background information and context regarding relevant nearby statutory designations and Site of Special Scientific Interest (SSSI) Impact Risk Zones (IRZs), records provided on the online Multi-Agency Geographic Information for the Countryside (MAGIC) database were searched up to 15km from the Biodiversity Gain Site boundary.

3.1.4. Information relating to Priority Habitats within or adjacent to the site, along with any published protected species licensing records, was also searched for. In addition, records of any ancient, veteran or notable trees located within or adjacent to the site were searched for using the Woodland Trust's online database.

Stage 2 Assessment

3.1.5. In order to ground-truth the findings of the Stage 1 Assessment, and to classify the habitats present within the Biodiversity Gain Site, detailed field survey work was undertaken by a specialist botanical and habitat surveyor, based on the UK Habitat Classification ('UK Hab') methodology[1], undertaken in September 2023 in order to establish the detailed baseline status of the on-site habitats.

3.1.6. A key component of the survey comprised establishing the 'condition' of the identified habitats, utilising the relevant the Statutory Biodiversity Metric Condition Assessments supporting documentation and surveyor expertise.

3.1.7. In addition, and in order to establish whether any site-specific faunal constraints or risks may be present within the Biodiversity Gain Site, that could influence the habitat creation and management prescriptions, the habitat survey work was extended to include a general appraisal

[1] UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at https://www.ukhab.org)

of any ecological features of interest, including faunal features, in line with CIEEM Guidelines for Preliminary Ecological Appraisal[2] .

3.2. Baseline Habitat Overview

3.2.1. As detailed at Table 3.1 below, the site currently comprises cropland (cereal crop at the time of survey), with a small area of uncultivated field margin comprising 'poor' condition Other Neutral Grassland.

Table 3.1. *Baseline habitats overview*

Baseline Habitat	Distinctiveness	Condition	Habitat Description
Cereal Crops	Low	Condition Assessment N/A	Existing cropland to be replaced by higher distinctiveness habitats under the proposals.
Other Neutral Grassland	Medium	Poor	The north-western corner of a cropland field that has been removed from agricultural production, dominated by few coarse grasses with sparsely distributed forbs, with fewer than 6-8 species per square metre. To be enhanced to a 'good' condition.
Mixed Scrub	Medium	Poor	A small stand of largely Hawthorn and Blackthorn dominant scrub, with occasional Bramble, assessed to represent a poor condition habitat.

3.2.2. Table 3.2 below sets out a summary of potential ecological constraints / risks that have been considered when preparing the HMMP, and identifies how the proposals have responded to such risks (where necessary).

Table 3.2. *Summary of identified potential ecological constraints / risks*

Identified Potential Constraints / Risk	Response
Statutory / Non-statutory Designations	No statutory or non-statutory designations are present within the site. Nearby designations will not be impacted by the proposals, and are considered highly likely to benefit from the positive ecological management regime introduced to the Biodiversity Gain Site, which would ensure the continuation and creation of species-rich grassland habitats across the site and reduction in ongoing agricultural / cropland chemical inputs. The proposals are anticipated to provide measurable biodiversity benefits.
Protected / Notable Species	None of the baseline habitats are assessed as able to provide resting / refuge locations for protected faunal species, in their current state. It remains likely that Badger forage / commute through the site, albeit no setts were present at the time of the survey. Great Crested Newt have the potential to be present nearby (if present locally) albeit, given the nature of the site and proposed positive management interventions, no adverse

[2] Chartered Institute for Ecology and Environmental Management (CIEEM) (2013) 'Guidelines for Preliminary Ecological Appraisal.'

	impacts are predicted (no aquatic habitats are present within the site, albeit aquatic habitats would be created). Local bat, bird, and invertebrate populations are also considered likely to benefit from the proposals.
Invasive Non-native species	No invasive non-native species are recorded within the site or anticipated to be impacted under the proposals.
Public Access	No footpaths are present within the site, which is privately owned, and no evidence of pedestrian / recreational usage was identified during the survey work undertaken.
Climate	The habitats proposed for retention, enhancement and creation are considered to be resilient to changeable climatic conditions, and are therefore unlikely to be significantly adversely impacted by climate change throughout the management plan term.
Success of Grassland Creation	The specific grassland type proposed and the habitat creation / management interventions, and monitoring proposed, has been specifically designed to ensure that the grassland creation proposals are robust and will be able to achieve the anticipated condition. Further, the Statutory Biodiversity Metric assigns a 'low' level of difficulty to the grassland creation / enhancement proposals and as such, the risk of failure is considered to be very low.
Geology and Topography	The site is readily accessible for typical farm machinery, and currently comprises a relatively uniform surface.
Soils and Substrates	The levels of phosphates across the site are low-moderate, potassium is elevated within areas where Other Neutral Grassland is proposed, whilst very high levels of magnesium are present within much of the site with the exception of M16. These nutrients may lead to vigorous growth of coarse grasses and ruderals within the Other Neutral Grassland and orchard habitats. As such, the ongoing management, including the removal of arisings, is anticipated to mitigate for this risk and reduce the levels of these nutrients. Should this not be sufficient, detailed remediation measures are detailed at Table 4.3 to ensure the habitats proposed achieve their target condition. The pH levels across the site are high such that an appropriate seed mix has been chosen to ensure successful establishment (Pro Flora 4 - Calcareous Soils). The Other Neutral Grassland, woodland and orchard habitat types proposed are identified within the Statutory Biodiversity Metric as being of 'low' difficulty to create, and the proposed habitats / targeted conditions are entirely appropriate. Nevertheless, the existing nutrient load and pH of the soils at the site are detailed below.

Hydrology / Drainage	The site has a proven track record of grassland creation, with frequent woodland pockets in proximity. The hydrology / drainage is not anticipated to represent a risk to the HMMP aims and objectives.
Flood Risk	The majority of the Biodiversity Gain Site is topographically well separated from nearby watercourses such that it is not anticipated to represent a risk to the HMMP aims and objectives.

4. Planned Management Activities

4.1. Aims and Objectives

4.1.1. The Biodiversity Gain Site proposals will bring forward targeted and locally appropriate habitat creation and enhancement actions intended to measurably increase biodiversity, as measured by the Statutory Biodiversity Metric Calculation Tool. It is intended that the habitat creation and management proposals detailed within the HMMP will enable Biodiversity Units (a proxy measure of biodiversity) to be accessed by third-parties to address 'off-site' habitat requirements as part of the planning system.

4.1.2. The proposal to create and manage new species-rich grassland, woodland and hedgerow habitats, and bring existing 'poor' condition grassland habitat into an ecologically positive managed regime, has been devised in order to remain faithful to the agricultural setting of the site and wider landscape.

4.2. Design Principles

4.2.1. The proposed habitat creation and enhancements have been devised in close cooperation with the landowner and land manger, in order to ensure that they are entirely supportive of the proposals and also to guarantee that they are in full agreement with the aims and objectives, and the management prescriptions proposed to achieve them.

4.2.2. In addition to their suitability and appropriateness with regards the local landscape and on-site condition, the proposed habitats and their targeted conditions have been identified using the Statutory Biodiversity Metric Calculation Tool and following the prescriptions provided with its associated supporting documentation / technical supplements. The Statutory Biodiversity Metric Calculation Tool has been utilised to establish the extent and quantum of the change (increase) in Biodiversity Units.

4.2.3. Utilising the Statutory Biodiversity Metric Calculation Tool as a device to inform the habitat creation and enhancement proposals has established that the objective to deliver Other Neutral Grassland in 'good condition', Broadleaved Woodland in 'moderate condition', and new Traditional Orchard represents a 'low' level of difficulty risk. As it is intended that the Biodiversity Gain Site habitat creation and management proposals are funded through the sale of Biodiversity Units to third-parties, a key consideration of the project is to avoid unintentionally exaggerating or over-reaching with regards the habitat categories and their targeted conditions. Ensuring that the habitat creation and management proposals remain proportionate and achievable has been achieved by adopting a precautionary approach to the baseline assessments and scheme design. This approach has been informed and supported by specialist agricultural habitat creation and management contractors, to ensure that the proposed activities are appropriate and can be readily delivered.

4.3. Retained Habitats

4.3.1. A small area of Mixed Scrub, located in the north-western part of the site would be retained under the scheme with no management interventions proposed (other than to restrict its detrimental spread to neighbouring habitats).

4.4. Created and Enhanced Habitats

4.4.1. As set out in Table 4.1 below, and as shown on Plan ENVIRO 23002-A BNGA3, existing cropland will be subject to habitat creation works to establish and maintain Other Neutral Grassland, with Traditional Orchard and Broadleaved Woodland in Moderate Condition. A new species-rich hedgerow with trees would also be created. Habitat creation and management activities / detailed prescriptions are detailed at Appendix HMMP1.

Table 4.1. *Proposed Habitat Creation Works.*

Baseline	Proposed	Condition Assessment Criteria Targeted
Cereal Crops **Condition:** Condition Assessment N/A **Parcel Ref:** 23002-A-A1, 23002-A-A5, 23002-A-A6	**Other Neutral Grassland** **Condition:** Good **Years to Target Condition*:** 10 **Difficulty of Creation*:** Low	**A.** The grassland should represent a 'good' example of its type, with a consistently high proportion of characteristic indicator species present; **B.** A varied sward height (at least 20% of the sward <7cm and at least 20% >7cm; **C.** Cover of bare ground between 1%-5%; **D.** Cover of Bracken <20% and cover of scrub (including Bramble) <5%; **E.** Cover of species indicative of 'sub-optimal' condition and bare ground <5%. No invasive species (listed on Schedule 9 of the Wildlife and Countryside Act (1981), as amended; and **F.** 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type and excluding species indicative of 'sub-optimal' condition.
Cereal Crops **Condition:** Condition Assessment N/A **Parcel Ref:** 23002-A-A2, 23002-A-A7	**Other Woodland: Broadleaved** **Condition:** Moderate **Years to Target Condition*:** 15	Achieving >26 woodland condition assessment criteria. A minimum of 13 criteria are automatically assigned to woodlands, with at least 13 more criteria being achieved as follows: **B.** No significant browsing / herbivore damage; **C.** No invasive plant species;

	Difficulty of Creation*: Low	**D.** Five or more native tree or scrub species present; **E.** >80% canopy trees and understorey shrubs are native; **F.** 0-20% temporary open space; **H.** Tree mortality <10%; **I.** Recognisable NVC plant community; and **M.** No nutrient enrichment or damaged ground evident.
Cereal Crops **Condition:** Condition Assessment N/A **Parcel Ref:** 23002-A-A4	**Traditional Orchard** **Condition:** Moderate **Years to Target Condition*:** 20 **Difficulty of Creation*:** Low	**A.** Less than 5% of fruit trees are smothered by scrub; **B.** There is evidence of formative pruning to maintain longevity of trees; **C.** At least 95% of the trees are free from damage caused by humans or animals; **D.** Grassland is not overgrazed, poaching is not evident around the trees, with no more than 10% of trees poached under the canopy; **E.** Species richness of the grassland is equivalent to a medium, high, or very high distinctiveness grassland; and **F.** Absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of sub-optimal condition make up less than 10% of ground cover.
N/A	**Species-Rich Native Hedgerow with Trees** **Condition:** Good **Years to Target Condition*:** 20 **Difficulty of Creation*:** Low	**A1.** >1.5m average height; **A2.** >1.5m average width; **B1.** Gap between the ground and the base of canopy <0.5m; **B2.** <10% gaps and no gaps >5m; **C1.** >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of hedgerow length; **C2.** <20% cover of plant species indicative of nutrient enrichment; **D1.** Absence of invasive non-native plant species (as listed on Schedule 9 of WCA); **D2.** No damage from human activities; **E2.** At least 95% of hedgerow trees are in a healthy condition, with little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.

**As stated in the Statutory Biodiversity Metric.*

4.5. Enhanced Habitats

4.5.1. As set out in Table 4.2 below, and as shown on Plan ENVIRO 23002-A BNGA3, existing Other Grassland established to be in Poor condition, would be subject to enhancement works to create Other Neutral Grassland in Good condition, with Other Grassland established to be in Moderate condition enhanced to Traditional Orchard. Habitat enhancement and management activities are detailed at Appendix HMMP2.

Table 4.2. *Proposed Habitat Enhancement Works.*

Baseline	Proposed	Condition Assessment Criteria Targeted
Other Neutral Grassland **Condition:** Poor **Parcel Ref:** 23002-A-A3	**Other Neutral Grassland** **Condition:** Good **Years to Target Condition*:** 15 **Difficulty of Creation*:** Low	**A.** The grassland should represent a 'good' example of its type, with a consistently high proportion of characteristic indicator species present; **B.** A varied sward height (at least 20% of the sward <7cm and at least 20% >7cm; **C.** Cover of bare ground between 1%-5% **D.** Cover of Bracken <20% and cover of scrub (including Bramble) <5% **E.** Cover of species indicative of 'sub-optimal' condition and bare ground <5%. No invasive species (listed on Schedule 9 of the Wildlife and Countryside Act (1981), as amended; and **F.** 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type and excluding species indicative of 'sub-optimal' condition.

**As stated in the Statutory Biodiversity Metric*

Table 4.3. *Identified Risks and Proposed Remediation*

Habitat Type	Identified Risk	Trigger for Action	Remedial Measure
Neutral Grassland And Traditional Orchard	Grassland sward failing to establish	Greater than 5% of total grassland area failing to establish	Supplementary seeding of bare areas, in line with management activity sheets. Consideration given to reviewing / amending the seed mix or supplier to mitigate localised conditions being the reason.

Neutral Grassland	Grassland not achieving diversity of species target	Greater than 40% of total grassland area comprising <10 target species per m^2	Harvested 'green hay' from established grassland areas strewn over less productive / diverse grassland areas, following appropriate ground preparation in line with management activity sheets. Consideration given to overseeding / drilling, following appropriate ground preparation in line with management activity sheets. Consideration given to amending frequency / spacing and extent of ongoing management.
Neutral Grassland	Grassland not representing a 'good' example of the habitat	Greater than 40% of total grassland area not comprising / supporting characteristic indicator species and / or deemed to represent a 'good' example	Harvested 'green hay' from established grassland areas strewn over less productive / diverse grassland areas, following appropriate ground preparation in line with management activity sheets. Consideration given to overseeding / drilling, following appropriate ground preparation in line with management activity sheets. Consideration given to amending frequency / spacing and extent of ongoing management.
Neutral Grassland And Traditional Orchard	Bracken, scrub, and species indicative of sub-optimal condition encroachment	>20% Bracken >5% Scrub >5% Undesirable species	Undesirable weeds / persistent perennials should be hand pulled or spot-treated / weed wiped with a topical herbicide prior to further management. Consideration given to amending frequency / spacing and extent of ongoing management.
Traditional Orchard	Orchard trees failing to establish	Greater than 10% of planted trees failing to establish	Replanting of failed trees, following appropriate ground preparation in line with management activity sheets. Avoid planting during undesirable conditions and consider supplementary watering program during dry spell. Consideration given to reviewing / amending the species mix or supplier to mitigate localised conditions being the reason.
Traditional Orchard	Damaged orchard trees	Greater than 5% tree damage by wild animals	Replanting of unrecoverably damaged trees, with further pest control and protection measure implemented.

			Consideration of further fencing / exclusion measures to avoid future damage.
Traditional Orchard and Other neutral Grassland	Phosphate levels	Current baseline levels	Regular management and removal of grassland arisings is anticipated to reduce phosphate levels over time. Should grasses outcompete herb species such that the targeted species richness is not being met, the remedial actions detailed above regarding species richness will be undertaken.
Traditional Orchard and Other neutral Grassland	Potassium levels	Current baseline levels / dominance of grasses	Regular management and removal of grassland arisings is anticipated to reduce phosphate levels over time. Should grasses outcompete herb species such that the targeted species richness is not being met, the remedial actions detailed above regarding species richness will be undertaken.
Traditional Orchard and Other neutral Grassland	pH levels	Current baseline levels	An appropriate seed mix has been chosen to ensure successful establishment of the grassland (Pro Flora 4 - Calcareous Soils).
Traditional Orchard and Other neutral Grassland	Magnesium levels	Current baseline levels	Should the first attempt at establishment within field 23002-A-A1 fail (see M16 within the soil testing document), this area will be treated with gypsum to reduce the levels of magnesium.
All Habitats	Colonisation by Schedule 9* invasive species	Presence of Schedule 9* invasive species	A treatment / removal programme implemented at the earliest opportunity, with input provided by a specialist control company where necessary.

** Undesirable weeds / persistent perennials should be hand pulled or spot-treated / weed wiped with a topical herbicide prior to further management*

4.6. Biodiversity Units

4.6.1. The baseline habitats have been coded into the Statutory Biodiversity Metric Calculation Tool, alongside their condition assessment information and other spatial / locally strategic information. This information generates the baseline number of biodiversity units present within a site.

4.6.2. The extents of created and enhanced habitats, as shown on Plan ENVIRO 23002-A BNGA3, and as detailed at Tables 4.1 and 4.2 above have also been coded into the Statutory Biodiversity Metric Calculation Tool, alongside the proposed realistically achievable conditions that are targeted for each habitat type. Additional spatial / locally strategic information is also input, which enables the number of proposed or 'post-intervention' biodiversity units to be established.

4.6.3. In order to understand the 'net' biodiversity gains or losses, the predicted proposed / post-intervention biodiversity units are subtracted from the baseline conditions, from which a percentage change in biodiversity can be calculated (where necessary).

4.6.4. Table 4.3 below provides a summary of the predicted Biodiversity Units that the Biodiversity Gain Site is assessed as able to provide.

Table 4.4 *Biodiversity Units provided by Braceborough – ENVIRO23002-A*

Broad Habitat Category	Habitat Type	Distinctiveness	Net Number of Biodiversity Units Generated
Grassland	Other Neutral Grassland	Medium	79.34
Woodland and Forest	Other Woodland; Broadleaved	Medium	5.78
Grassland	Traditional Orchard	High	12.66
Hedgerow	Species-rich Native Hedgerow with Trees	High	3.89

5. Monitoring Schedule

5.1. Monitoring Strategy

5.1.1. Monitoring of the habitat creation and enhancement measures detailed within this HMMP will comprise a combination of land owner / manager monitoring (annual), and Environmental Professional monitoring (periodic), as stated at Appendix HMMP1

5.2. Monitoring Methods

5.2.1. Monitoring of the habitat creation and enhancement measures detailed within this HMMP will comprise two distinct approaches, as detailed below.

5.3. Annual Monitoring

5.3.1. The landowner / manager and / or their site operatives will undertake an annual walkover of the created habitats between May – September as part of their ongoing management duties, in order to identify whether targeted condition criteria are being met. The primary focus of the walkover surveys, will be to assess the largely structural condition assessment criteria, able to be assessed without requiring a specialist level of botanical identification skill.

5.4. Periodic Monitoring

5.4.1. Habitats will also be periodically surveyed utilising the 'UK Hab' habitat classification methodology, or its successor (where relevant) by a suitably experienced Environmental Professional. This survey would establish the current habitat type present and assess all targeted condition criteria.

5.4.2. The intervals at which the periodic monitoring would be undertaken are habitat-specific and detailed alongside the management activity prescriptions at Appendix HMMP1

5.4.3. In order to avoid unnecessary duplication of monitoring visits across subsequent phases, the timing of some monitoring years between year 10 to year 30 may be brought forward or aligned

between phases, in order to avoid otherwise unnecessary duplication of effort for established habitats that are meeting their relevant character and condition requirements.

5.4.4. For example, should Phase 1 be at year 14 following creation and Phase 2 be at year 15, a single monitoring visit will be undertaken of both during the same year to act as the 15-year monitoring visit for both Phases. This will not reduce the minimum required time that the habitat is required to remain in place for (30 years).

5.4.5. This approach provides an appropriate level of flexibility for the landowner, reducing costs associated with multiple (otherwise unnecessary) monitoring visits undertaken in consecutive years, while maintaining compliance with statutory monitoring requirements and ensuring ecological objectives are met.

5.4.6. Any further adjustments to the Monitoring Schedule will be made in response to the findings of the monitoring visits, in consultation with the project ecologist and, where required, agreed with the relevant approving authority.

6. Reporting and Adaptive Management

6.1. Annual Monitoring Report

6.1.1. The Annual Monitoring findings distributed to the identified Environmental Professional for review. Where the Environmental Professional identifies that management interventions and / or remedial measures may be required, in order to ensure that the targeted habitat type(s) and condition criteria are able to be achieved, this will be communicated to the landowner / land manager and will inform ongoing management procedures. Where discrepancies or uncertainty regarding the findings arises, the Environmental Professional may undertake a further confirmatory walkover.

6.2. Periodic Monitoring Report

6.2.1. The Periodic Monitoring findings will be analysed by the appointed Environmental Professional, and communicated to the landowner and land manager. A summary report will also be provided to the Local Planning Authority or Responsibly Body within three months of the survey being undertaken.

6.2.2. Where the Environmental Professional identifies that management interventions and / or remedial measures may be required, in order to ensure that the targeted habitat type(s) and condition criteria are able to be achieved, this will be communicated to the landowner / land manager and the management prescriptions detailed at Appendix HMMP2, HMMP3 and Monitoring Requirements in Table 1.1. will be updated accordingly.

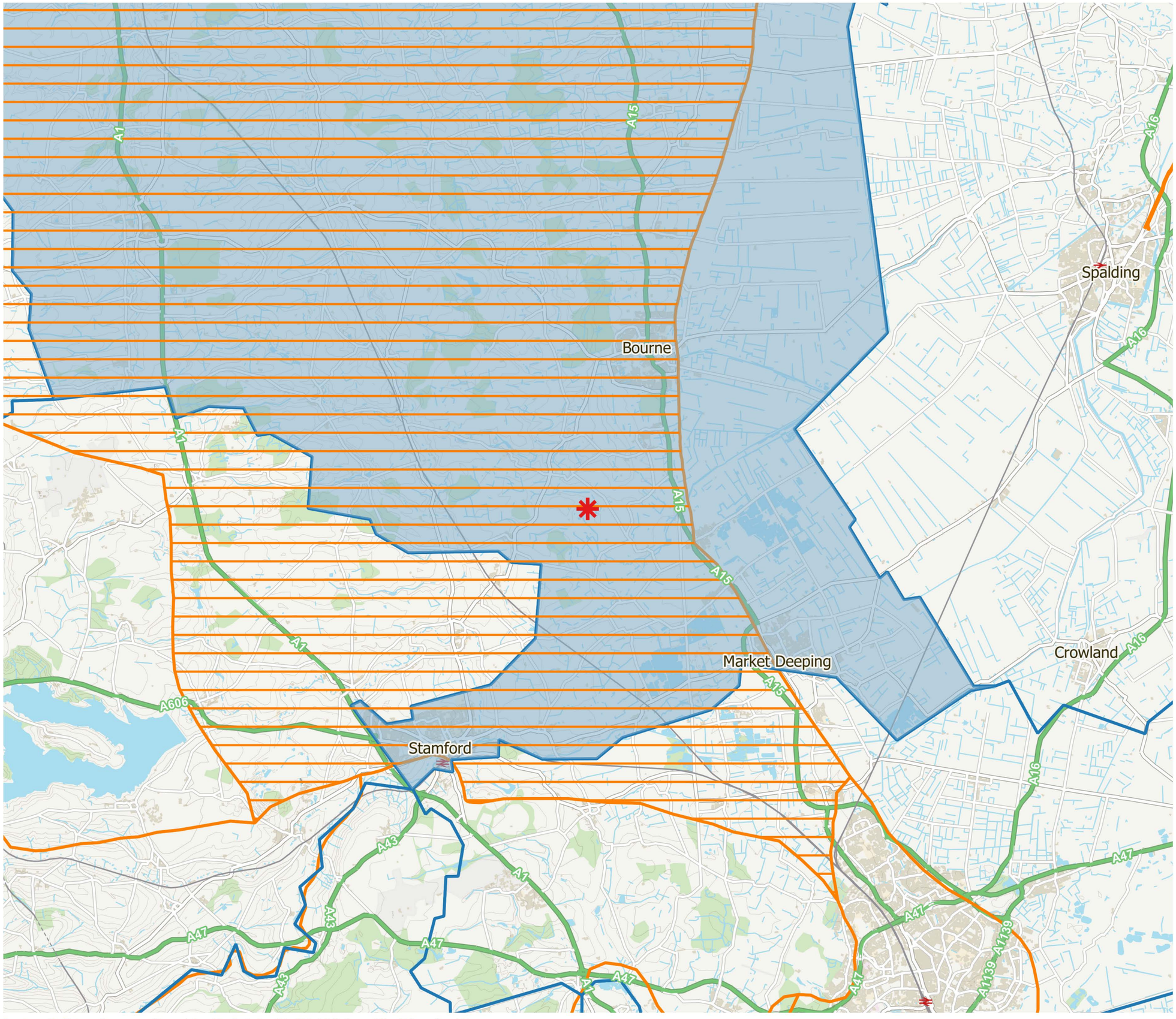
6.2.3. Any management interventions and / or remedial measures undertaken will be identified within the subsequent / following report to the Local Planning Authority or Responsible Body, which will include an appraisal of whether they have been successful or to detail whether further measures will be implemented.

6.2.4. As identified alongside the management activity prescriptions at Appendix HMMP2, HMMP3 and Monitoring Requirements in Table 1.1., a general management plan review will be undertaken at set periods following commencement of the works, to ensure that the plan can be appropriately adapted to the requirements of the site and in order to achieve the aims / objectives of the project.

7. Conclusions

The above Habitat Management and Monitoring Plan (HMMP) has been prepared in order to inform initial habitat creation and enhancement activities, and ongoing management at Braceborough – ENVIRO23002-A.

On the basis that the above HMMP is implemented in full, including adapting to any updated prescriptions that may be recommended following the comprehensive monitoring approach, it is anticipated that the Biodiversity Gain Site could provide a minimum of 95.69 Habitat Biodiversity Units and 3.89 Hedgerow Biodiversity Units.



Key:

- Biodiversity Gain Site Location
- Local Planning Authority (LPA) Boundaries
- South Kesteven District Council (SKDC) LPA
- National Character Area (NCA) (England) Boundaries
- Kesteven Uplands NCA

Land at Wilsthorpe Road, Lincolnshire, Braceborough, PE9 4NX

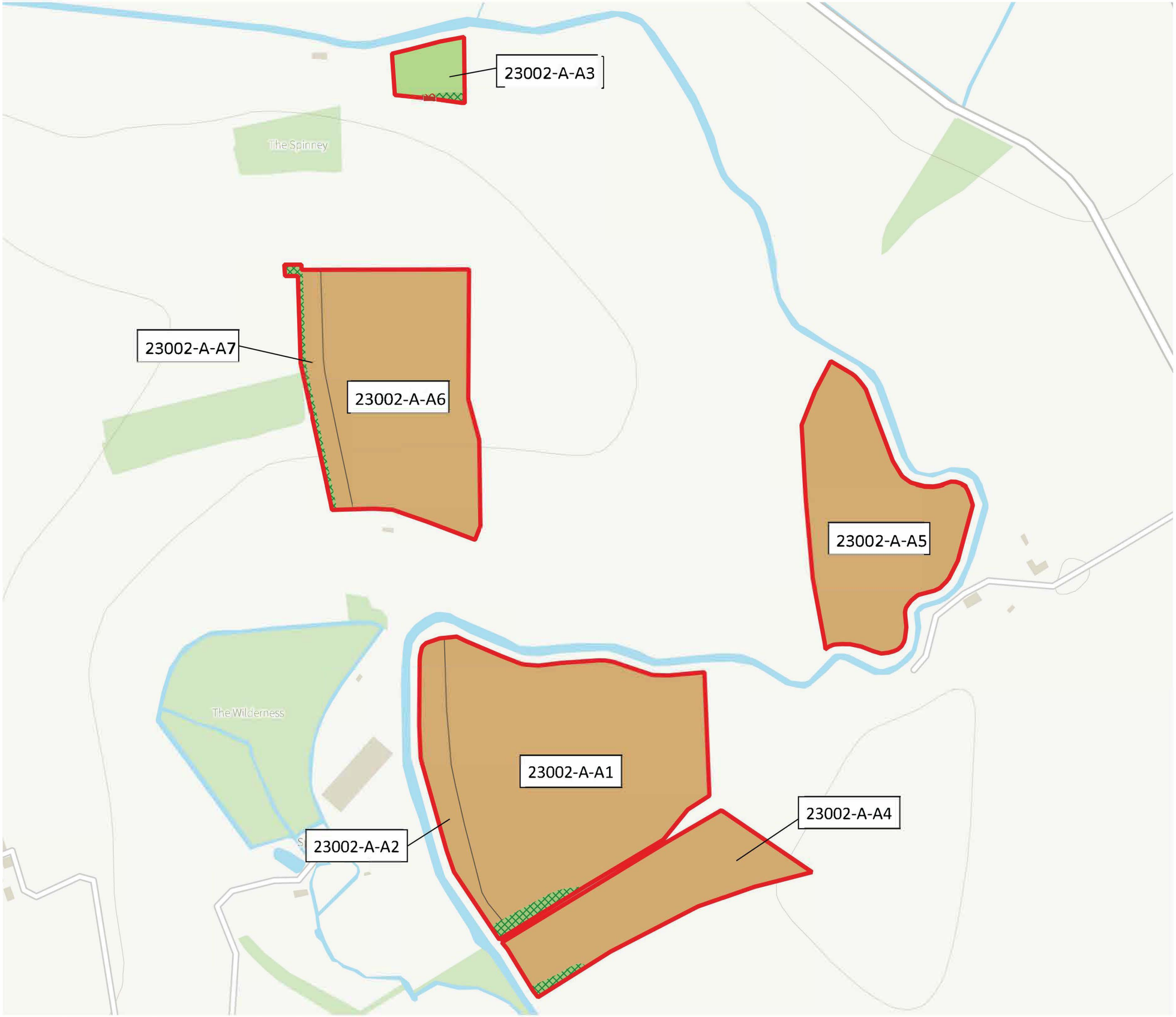
Biodiversity Gain Site Location (with LPA and NCA Boundaries)

ENVIRO 23002-A BNGA1

January 2025

Allied Ecology

enviroland



Key:

Biodiversity Gain Site Boundary

Existing Habitats:

Cropland: Cereal crops (16.5442ha)

Grassland: Other neutral grassland (poor condition) (0.3945ha)

Heathland and shrub: Mixed scrub (poor condition) (0.3951ha)

Land at Wilsthorpe Road, Lincolnshire, Braceborough, PE9 4NX

Baseline Habitats

ENVIRO 23002-A BNGA2

June 2025

Allied Ecology

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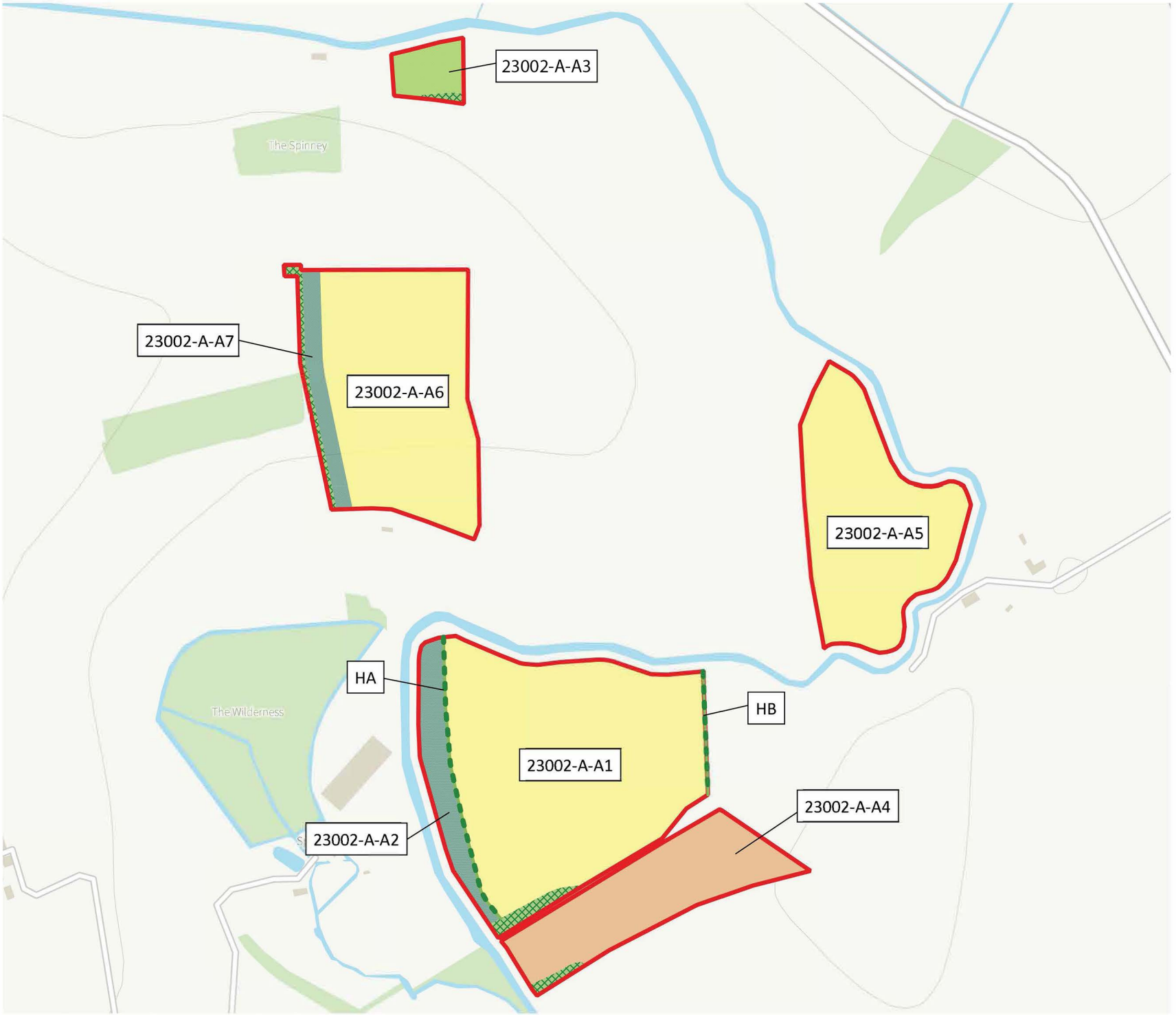

Key:

Biodiversity Gain Site Boundary

Retained Habitats:

Heathland and shrub: Mixed scrub (poor condition) (0.3951ha)

Enhanced Habitats:

Grassland: Other neutral grassland (good condition) (0.3945ha)

Newly Created Habitats:

Grassland: Other neutral grassland (good condition) (13.1595ha)

Woodland and forest: Other woodland; broadleaved (moderate condition) (1.2327ha)

Grassland: Traditional orchard (moderate condition) (2.1520ha)

Species-rich native hedgerow with trees (0.441km)

Land at Wilsthorpe Road, Lincolnshire, Braceborough, PE9 4NX

Proposed Habitats

ENVIRO 23002-A BNGA3

June 2025

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HMMP1.1 - GRASSLAND; OTHER NEUTRAL GRASSLAND

Habitat Creation, Management, and Monitoring Schedule

Initial Habitat Creation / Enhancement			
Targeted Condition	**Intended Outcome**	**Ground Preparation**	**Initial Creation / Enhancement Actions**
Good	• To achieve a 'good' representation of the habitat type, based on UK Hab definition, with the appearance and composition / characteristics (including identified indicator species) present throughout.	**Existing Cropland Areas** • Planting areas to be cultivated to enable undesirable species to germinate / chit, and they be herbicide sprayed to remove germinated weed species • Prior to sowing, the planting areas should be cultivated to create an appropriate seedbed for sowing / drilling **Existing Grassland Areas** • Undesirable weeds / persistent perennials should be hand pulled or spot-treated / weed wiped with a topical herbicide prior to further management • Mow to ~50mm prior to over-sowing in **Autumn** • All cuttings / arisings to be removed immediately • Prior to sowing, the planting areas should be harrowed / cultivated to expose soils and breakup existing grassland thatch **All Areas** • Any Schedule 9* invasive species to be subject to removal / control	**Existing Cropland Areas** • Sow **Shepherd Seeds General Purpose Wildflower Meadow Mixture** at a density of 40-60kg per hectare, dependent on the seedbed conditions **Existing Grassland Areas** • Sow **Shepherd Seeds General Purpose Wildflower Meadow Mixture** at a density of ~30kg per hectare **All Areas** • Sowing to be undertaken in Spring, to avoid waterlogged periods during Autumn / Winter, and the need for watering in Summer. Autumn sowing permitted dependent on prevailing weather • Seeds to be drilled, rather than broadcast to avoid wind damage and predation, drill to depth of the seed supplier – surface sown – but no deeper than 10cm • Sown areas to be rolled to improve contact with the soil, as needed

Ongoing Management					
Targeted Condition	**Specific Management Aims**	**Management Actions / Operation**			
		Year 1 (the calendar year following initial habitat creation) up to x2 cuts	**Years 2-5 x3 cuts***	**Years 6-10 x2 cuts**	**Years 11-30+ x1 cut**
Good	• Varied sward height (>20% less than 7cm, >20% more than 7cm) • Cover of bare ground between 1 and 5% • Less than 20% bracken and 5% scrub • Absence of Sch9 invasive species and less than 5% combined undesirable species or physical damage • Greater than 9 species per m^2	**Spring Sown** • First cut by mowing undertaken by late July / August at the latest (once Yellow Rattle has set seed) to 100mm • All cuttings / arisings to be left for ~5-7 days before removal **Autumn Sown** • First cut by mowing ~March (when ground firm) to 100mm • All cuttings / arisings to be left for ~5-7 days before removal **General** • Grassland to be mown monthly **August – October** to ~100mm (as necessary) • All cuttings / arisings to be removed immediately from these later cuts • Removal of colonising scrub by lopping or digging up by hand as required • Any Schedule 9* invasive species to be subject to removal / control	• Mow 80% to ~50mm in **March** (when ground is firm) • Mow 80% to ~50mm in **early-July** (once Yellow Rattle has set seed) • Consideration given to an Autumn cut to ~50cm, depending on persistence of undesirable species • All cuttings / arisings to be left for ~5-7 days before removal • Removal of colonising scrub by lopping or digging up by hand as required • Any Schedule 9* invasive species to be subject to removal / control • May need to scarify and add seed to prevent species diversity decline over the long-term	• Mow 80% to ~50mm in **March** (when ground is firm) • Mow 80% to ~50mm in **early-July** (once Yellow Rattle has set seed) • All cuttings / arisings to be left for ~5-7 days before removal • Removal of colonising scrub by lopping or digging up by hand as required • Any Schedule 9* invasive species to be subject to removal / control • May need to scarify and add seed to prevent species diversity decline over the long-term	• Mow 80% to ~50mm in **early-July** (once Yellow Rattle has set seed) • All cuttings / arisings to be left for ~5-7 days before removal • Removal of colonising scrub by lopping or digging up by hand as required • Any Schedule 9* invasive species to be subject to removal / control • May need to scarify and add seed to prevent species diversity decline over the long-term

Monitoring / Remedial Actions
Newly created habitats and existing habitats subject to the above management actions / operation will be subject to detailed botanical and condition assessment surveys in years 1, 3, and 5. Subsequent condition assessment monitoring would be undertaken every five years (i.e. year 10, 15, 20, 25, 30). Annual contractor monitoring will take place, to assess the structure, damage and presence of invasive / undesirable species. The management actions / operation will be reviewed every five years, following the condition assessment monitoring, with remedial actions advised where necessary, to ensure that the intended outcome is achieved.
Additional Notes
Where grassland habitat creation may be initially commenced or bolstered utilising 'green hay' or harvested vegetative arisings from locally sourced diverse grassland habitats, this should be strewn on prepared soils immediately after it's harvesting (likely mid-Summer), at a rate of ~1ha of donor grassland to ~3ha of receptor area. An assessment of its success / failure would be undertaken in the following Spring. If successful, year 2-5 / onwards management actions would follow. If less successful than anticipated, consideration will be given to re-application of green hay or 'over sowing' with **Shepherd Seeds General Purpose Wildflower Meadow Mixture** the following Autumn, and following remaining year 1 / onwards management actions. There may be a need / benefit in scarifying and adding additional seed / green hay from higher diversity areas periodically to prevent species diversity decline, over the long-term where practicable/appropriate. 'Hand-pulling' or cutting undesirable species will be favoured over 'Weed wiping' as a topical treatment for undesirable species / species indicative of poor quality grassland where practicable/appropriate. Fencing off grassland habitat, to reduce or remove potential access by the public / general footfall while establishing, to be considered where appropriate. *Schedule 9 invasive species refers to those listed in Part II of Schedule 9 to the Wildlife and Countryside Act 1981 (as amended). **Please note that, due to a range of factors, the above prescriptions cannot guarantee the successful creation and maintenance of the habitat. As such, ongoing monitoring and management plan updates / revisions would be made throughout the lifespan of the project.** **Additional, simple, faunal enhancements could include**: Erecting fence posts periodically through or at the edges of the habitat. Such features would encourage and facilitate hunting by Barn Owl, which are known to favour perch hunting during poor weather. Retaining and utilising woody vegetation / management arisings to create log / brash piles at the edges of habitats. Such habitat creation is unlikely to materially or adversely influence the success or failure of the grassland habitat creation and management, and would serve to increase shelter and foraging opportunities to a range of key faunal species.

GRASSLAND; TRADITIONAL ORCHARD (created on / enhancing existing lower diversity grassland)

Habitat Creation, Management, and Monitoring Schedule

Initial Habitat Creation / Enhancement			
Targeted Condition	**Intended Outcome**	**Ground Preparation**	**Initial Creation / Enhancement Actions**
Moderate	• To create a traditional orchard comprising open-grown fruit trees within herbaceous vegetation, that is otherwise managed in a low intensity way.	• In accordance with the Other Neutral Grassland ground preparation prescriptions.	• In accordance with the Other Neutral Grassland ground preparation prescriptions. • Fruit tree planting to be undertaken between October – April, with species comprising a mix of locally appropriate fruit and nut bearing trees • Trees should be planted at a density of no less than 50 fruit trees per hectare • New planting to be protected from grazing or browsing by rabbits / deer etc. • Initial watering and mulching of planted trees / shrubs undertaken, as necessary

Ongoing Management					
Targeted Condition	**Specific Management Aims**	**Management Actions / Operation**			
		Year 1 (the calendar year following initial habitat creation) up to x2 cuts (Grassland only)	**Years 2-5 x3 cuts (Grassland only)**	**Years 6-10 x2 cuts (Grassland only)**	**Years 11-30+ X1 cut (Grassland only)**
Moderate	• Varied grassland sward height (>20% less than 7cm, >20% more than 7cm) • Cover of bare ground between 1 and 5% • Less than 20% bracken and 5% scrub • Absence of Sch9 invasive species and less than 5% combined undesirable species or physical damage • Greater than 9 plants species per m2 • Less than 5% of fruit trees are smothered by scrub • Formative pruning to maintain longevity of trees • At least 95% of the trees are free from damage caused by humans or animals • Grassland is not overgrazed, poaching is not evident around the trees, with no more than 10% of trees poached under the canopy • There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of sub-optimal condition make up less than 10% of ground cover.	• In accordance with the Other Neutral Grassland Year 1 management. • Formative pruning of fruit trees on an as needed basis in line with Natural England Technical Information Note TIN016 (Natural England, 2010). At year 1, this will include establishing a leader by removing competing stems.	• In accordance with the Other Neutral Grassland Years 2-5 management. • Formative pruning of fruit trees on an as needed basis in line with Natural England Technical Information Note TIN016 (Natural England, 2010). At year 2 onwards, this includes pruning new feathers and previously pruned snags to the trunk.	• In accordance with the Other Neutral Grassland Years 6-10 management. • Formative pruning of fruit trees on an as needed basis in line with Natural England Technical Information Note TIN016 (Natural England, 2010). At year 6 onwards, this includes establishing secondary leaders and pruning these each year by a third and a half of the season's growth. Towards years 8 to 10, pruning will be adapted to encourage the development of fruit bearing growth in line with Natural England Technical Information Note TIN017 (Natural England, 2010).	• In accordance with the Other Neutral Grassland Years 11-30+ management. • Formative pruning of fruit trees on an as needed basis in line with Natural England Technical Information Note TIN017 (Natural England, 2010) to encourage the development of fruit bearing growth.

Monitoring / Remedial Actions
Newly created habitats and existing habitats subject to the above management actions / operation will be subject to detailed botanical and condition assessment surveys in years 1, 3, and 5. Subsequent condition assessment monitoring would be undertaken every five years (i.e. year 10, 15, 20, 25, 30). Annual contractor monitoring will take place, to assess the structure, damage and presence of invasive / undesirable species. The management actions / operation will be reviewed every five years, following the condition assessment monitoring, with remedial actions advised where necessary, to ensure that the intended outcome is achieved.
Additional Notes
Where grassland habitat creation may be initially commenced or bolstered utilising 'green hay' or harvested vegetative arisings from locally sourced diverse grassland habitats, this should be strewn on prepared soils immediately after it's harvesting (likely mid-Summer), at a rate of ~1ha of donor grassland to ~3ha of receptor area. An assessment of its success / failure would be undertaken in the following Spring. If successful, year 2-5 / onwards management actions would follow. If less successful than anticipated, consideration will be given to re-application of green hay or 'over sowing' with **Pro Flora 4 - Calcareous Soils** the following Autumn, and following remaining year 1 / onwards management actions. 'Weed wiping' may be used as a topical treatment for undesirable species / species indicative of poor quality grassland. Fencing off grassland habitat, to reduce or remove potential access by the public / general footfall while establishing, to be considered where appropriate. *Schedule 9 invasive species refers to those listed in Part II of Schedule 9 to the Wildlife and Countryside Act 1981 (as amended). Please note that, due to a range of factors, the above prescriptions cannot guarantee the successful creation and maintenance of the habitat. As such, ongoing monitoring and management plan updates / revisions would be made throughout the lifespan of the project. **Additional, simple, faunal enhancements could include:** Erecting fence posts periodically through or at the edges of the habitat. Such features would encourage and facilitate hunting by Barn Owl, which are known to favour perch hunting during poor weather. Retaining and utilising woody vegetation / management arisings to create log / brash piles at the edges of habitats. Such habitat creation is unlikely to materially or adversely influence the success or failure of the grassland habitat creation and management, and would serve to increase shelter and foraging opportunities to a range of key faunal species.

WOODLAND – BROADLEAVED WOODLAND

Habitat Creation, Management, and Monitoring Schedule

Initial Habitat Creation / Enhancement			
Targeted Condition	**Intended Outcome**	**Ground Preparation**	**Initial Creation / Enhancement Actions**
Moderate	• To create a semi-natural largely broadleaved woodland comprising locally appropriate native species, with a varied structure and diverse ground-flora.	• Planting areas to be cultivated / ploughed, and rolled, prior to planting • Any Schedule 9* invasive species to be subject to removal / control	• Planting to be undertaken between October – April, with species comprising a mix of locally appropriate bare-root broadleaved trees and shrubs • Tree planting, comprising a diverse mix of locally appropriate species (such as English Oak, Silver Birch, Downy Birch, Hazel, Hornbeam, and Beech) to be undertaken at 3-4m intervals • Trees should be planted in 'species-blocks' of 10-25 plants per block • Sporadic shrub planting, comprising a diverse mix of locally appropriate species (such as Field Maple, Guelder Rose, Spindle, Wayfaring Tree, Holly, Hazel, Hawthorn,) to be undertaken at 1-1.5m distance from trees • New planting to be protected from grazing or browsing by rabbits / deer etc. • Initial watering and mulching of planted trees / shrubs undertaken, as necessary

Ongoing Management					
Targeted Condition	**Specific Management Aims**	**Management Actions / Operation**			
		Year 1 (the calendar year following initial habitat creation) up to x2 cuts	**Years 2-5 x3 cuts***	**Years 6-10 x2 cuts**	**Years 11-30+ X1 cut**
Moderate	• At least 5 native woody species and shrubs established across the woodland parcel • Absence of Schedule 9* invasive species • Little impact from or obvious damage from grazing / browsing • Diverse woodland structure with varying ages classes and heights • Little impact from or obvious disturbance / nutrient enrichment • Clearings, glades or rides present providing sheltered edges	• Periodic watering and mulching undertaken on an 'as-needed' basis • Mow between planting areas in Spring, to reduce colonising ruderals / Bramble • Removal of colonising Bramble by lopping or digging up by hand, as required • Any Schedule 9* invasive species to be subject to removal / control	• Mow between planting areas in Spring, to reduce colonising ruderals / Bramble • Removal of colonising Bramble by lopping or digging up by hand as required • Any Schedule 9* invasive species to be subject to removal / control	• Prune / coppice ~50% of shrubs in years 6 and 10, to be undertaken between November – February (inclusive) • Selective thinning and targeted mowing, to create and maintain clearings / glades, and rides, as required • Any Schedule 9* invasive species to be subject to removal / control	• Prune / coppice ~50% of shrubs every 5 years, to be undertaken between November – February (inclusive) • Selective thinning and targeted mowing, to create and maintain clearings / glades, and rides, as required • Any Schedule 9* invasive species to be subject to removal / control

Monitoring / Remedial Actions
Newly created habitats and existing habitats subject to the above management actions / operation will be subject to detailed botanical and condition assessment surveys in years 1, 3, and 5. Subsequent condition assessment monitoring would be undertaken every five years (i.e. year 10, 15, 20, 25, 30). Annual contractor monitoring will take place, to assess the structure, damage and presence of invasive / undesirable species. The management actions / operation will be reviewed every five years, following the condition assessment monitoring, with remedial actions advised where necessary, to ensure that the intended outcome is achieved.
Additional Notes
Mulching / matting of newly planted trees and shrubs can be undertaken, where appropriate, to promote establishment. However, this should be avoided, where practicable, to avoid 'over nutrifying' and potentially suppressing desirable ground-flora. Fencing off planting areas, to reduce or remove potential grazing / browsing while establishing, should be considered as an alternative to / in preference over 'plastic-free' biodegradable guard use, and to reduce or remove potential access by the public / general footfall while establishing. Consideration may be given to the application of herbicide treatment, either prior to planting, or spot treatment of 'problematic areas', albeit hand-pulling or non-chemical control methods should first be reasonably exhausted. It is important that pruning / coppicing is undertaken in late winter, in order to avoid the recognised nesting bird season (March – August inclusive) and a potential breach of the relevant legislation (Wildlife and Countryside Act 1981 (as amended)). Where this is not practicable, pruning / coppicing will take place following a Nesting Bird Survey. This would aim to establish whether any active bird nests are present and, where appropriate, instate an appropriate buffer to the proposed works. Such a buffer should remain in place until the chicks have fledged and the nest becomes inactive. Such surveys must be carried out within three days of pruning / coppicing commencing. *Schedule 9 invasive species refers to those listed in Part II of Schedule 9 to the Wildlife and Countryside Act 1981 (as amended). **Please note that, due to a range of factors, the above prescriptions cannot guarantee the successful creation and maintenance of the habitat. As such, ongoing monitoring and management plan updates / revisions would be made throughout the lifespan of the project.** **Additional, simple, faunal enhancements could include**: Retaining and utilising woody vegetation / management arisings to create, log / brash piles at the edges of habitats. Such habitat creation is unlikely to materially or adversely influence the success or failure of the habitat creation and management, and would serve to increase shelter and foraging opportunities to a range of key faunal species.

SPECIES-RICH NATIVE HEDGEROW WITH TREES

Habitat Creation, Management, and Monitoring Schedule

Initial Habitat Creation			
Targeted Condition	**Intended Outcome**	**Preparation**	**Initial Creation Actions**
Good	• To create a native hedgerow with 5 or more different woody species per 30m of length, with individual / standard trees present, that is free from damage and undesirable species.	• Planting areas to be cultivated to enable undesirable species to germinate / chit, and they be herbicide sprayed to remove germinated weed species • Prior to sowing, the planting areas should be cultivated to create an appropriate seedbed for sowing / drilling • Any Schedule 9* invasive species to be subject to removal / control	• Planting to be undertaken between October – April, with species comprising a diverse mix of locally appropriate bare-root shrubs (such as Midland Hawthorn, Wayfaring Tree, Field Maple, Guelder Rose, Spindle, Hazel, Blackthorn, Dog Rose) • Planting to comprise at least 5 different species per 30m length of hedgerow • New planting to be protected from grazing or browsing by rabbits / deer etc. • Initial watering and mulching of planted shrubs undertaken, as necessary

Ongoing Management					
Targeted Condition	**Specific Management Aims**	**Management Actions / Operation**			
		Year 1	**Years 2-5**	**Years 6-10**	**Years 11-30+**
Good	• >1.5m average height • >1.5m average width • Gap between the ground and hedgerow vegetation <0.5m • No hedgerow gaps present • Undisturbed edge >1m from outer edge of hedgerow vegetation • <20% cover of undesirable species indicative of nutrient enrichment • Absence of Sch9 invasive species • No damage caused by human activities • Trees present are healthy	• Periodic watering and mulching undertaken on an 'as-needed' basis • Removal of colonising Bramble by lopping or digging up by hand, as required • Any Schedule 9* invasive species to be subject to removal / control	• Minimal pruning / trimming to maintain height and width, with trimming undertaken on a rotational basis, leaving a proportion (~1/3) untrimmed in any one cut, to be undertaken between November – February (inclusive) • Width to be maintained to prevent encroachment into adjacent habitats • Removal of colonising Bramble by lopping or digging up by hand in years 2 and 5 • Any Schedule 9* invasive species to be subject to removal / control	• Minimal pruning / trimming to maintain height and width, with trimming undertaken on a rotational basis, leaving a proportion (~1/3) untrimmed in any one cut, to be undertaken between November – February (inclusive) • Width to be maintained to prevent encroachment into adjacent habitats • Removal of colonising Bramble by lopping or digging up by hand in years 2 and 5 • Any Schedule 9* invasive species to be subject to removal / control	• Minimal pruning / trimming to maintain height and width, with trimming undertaken on a rotational basis, leaving a proportion (~1/3) untrimmed in any one cut, to be undertaken between November – February (inclusive) • Width to be maintained to prevent encroachment into adjacent habitats • Removal of colonising Bramble by lopping or digging up by hand in years 2 and 5 • Any Schedule 9* invasive species to be subject to removal / control

Monitoring
Newly created habitats and existing habitats subject to the above management actions / operation will be subject to detailed botanical and condition assessment surveys in years 1, 3, and 5. Subsequent monitoring would be undertaken every five years (i.e. year 10, 15, 20, 25, 30). The management actions / operation will be reviewed every five years, with remedial actions advised where necessary, to ensure that the intended outcome is achieved.
Additional Notes
Mulching / matting of newly planted shrubs should be undertaken, where appropriate, to promote establishment. This should be avoided, where practicable, to avoid 'over nutrifying' and potentially supressing desirable ground-flora. Fencing off planting areas, to reduce or remove potential grazing / browsing while establishing, should be considered as an alternative to / in preference over 'plastic-free' biodegradable guard use, and to reduce or remove potential access by the public / general footfall while establishing. Consideration may be given to the application of herbicide treatment, either prior to planting, or spot treatment of 'problematic areas', albeit hand-pulling or non-chemical control methods should first be reasonably exhausted. It is important that pruning / management is undertaken in late winter, in order to avoid the recognised nesting bird season (March – August inclusive) and a potential breach of the relevant legislation (Wildlife and Countryside Act 1981 (as amended). *Schedule 9 invasive species refers to those listed in Part II of Schedule 9 to the Wildlife and Countryside Act 1981 (as amended). **Please note that, due to a range of factors, the above prescriptions cannot guarantee the successful creation and maintenance of the habitat. As such, ongoing monitoring and management plan updates / revisions would be made throughout the lifespan of the project.** **Additional, simple, faunal enhancements could include**: Retaining and utilising woody vegetation / management arisings to create, log / brash piles at the edges of habitats. Such habitat creation is unlikely to materially or adversely influence the success or failure of the habitat creation and management, and would serve to increase shelter and foraging opportunities to a range of key faunal species.

Photographs

Photo 1. Typical arable – ONG and Traditional Orchard proposed

Photo 2. Typical arable – ONG and Traditional Orchard proposed

Photo 3. ONG – Traditional Orchard proposed

Photo 4. Close up of ONG sward

Photo 3. Typical arable – woodland and ONG proposed

Photo 4. Poor condition ONG – grassland enhancement proposed

C. M. Bremner & Son
The Lodge
Wilsthorpe Road, Braceborough
Stamford
Lincs.
PE9 4NX

Farms: Manor Farm

Nutrient analysis from 23 Apr 2024 **to** 26 Apr 2024

Area manager: Harry Reynolds

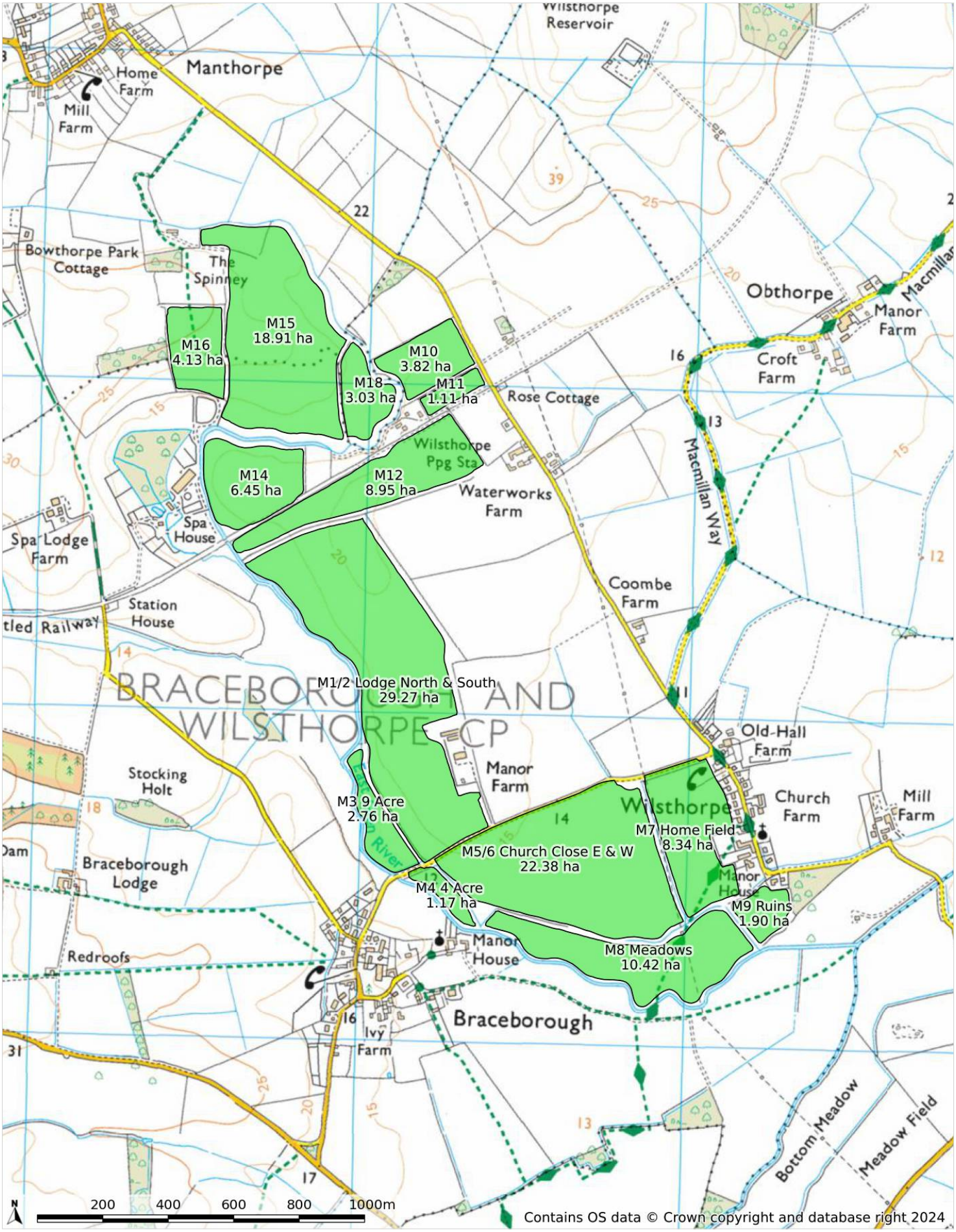
C. M. Bremner & Son

Farm name	Field name	Job ref.	Service	Area (ha)	Sampled
Manor Farm	M1/2 Lodge North & South	HY018	PK Standard	29.27	26 Apr 2024
Manor Farm	M10	HY018	PK Standard	3.82	25 Apr 2024
Manor Farm	M11	HY018	PK Standard	1.11	25 Apr 2024
Manor Farm	M12	HY018	PK Standard	8.95	25 Apr 2024
Manor Farm	M14	HY018	PK Standard	6.45	25 Apr 2024
Manor Farm	M15	HY018	PK Standard	18.91	25 Apr 2024
Manor Farm	M16	HY018	PK Standard	4.13	25 Apr 2024
Manor Farm	M18	HY018	PK Standard	3.03	25 Apr 2024
Manor Farm	M3 9 Acre	HY018	PK Standard	2.76	23 Apr 2024
Manor Farm	M4 4 Acre	HY018	PK Standard	1.17	23 Apr 2024
Manor Farm	M5/6 Church Close E & W	HY018	PK Standard	22.38	23 Apr 2024
Manor Farm	M7 Home Field	HY018	PK Standard	8.34	23 Apr 2024
Manor Farm	M8 Meadows	HY018	PK Standard	10.42	23 Apr 2024
Manor Farm	M9 Ruins	HY018	PK Standard	1.9	23 Apr 2024
				122.64	

Area manager: Harry Reynolds

Printed May 07, 2024

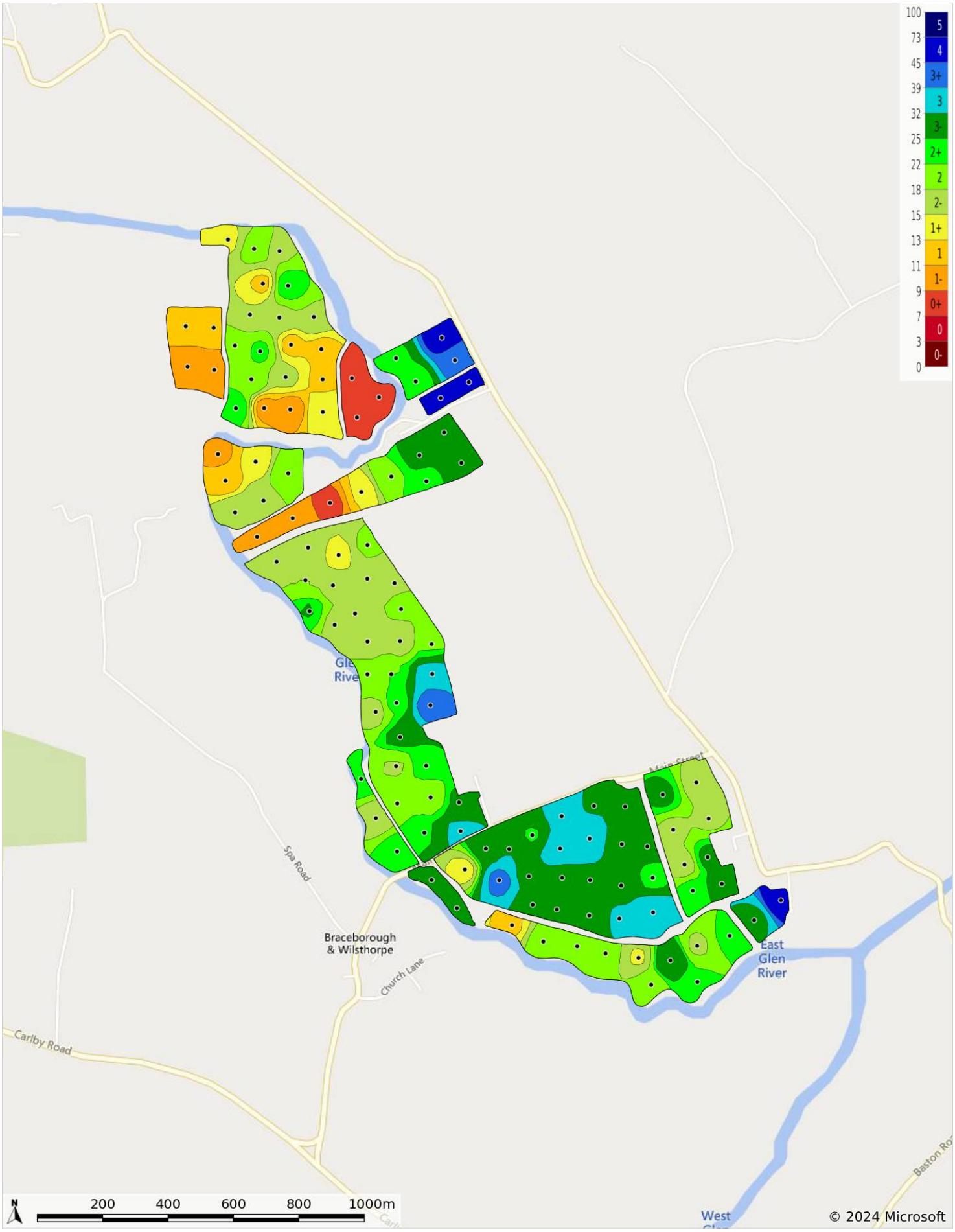
Manor Farm



Total area 122.64 ha

Printed May 07, 2024

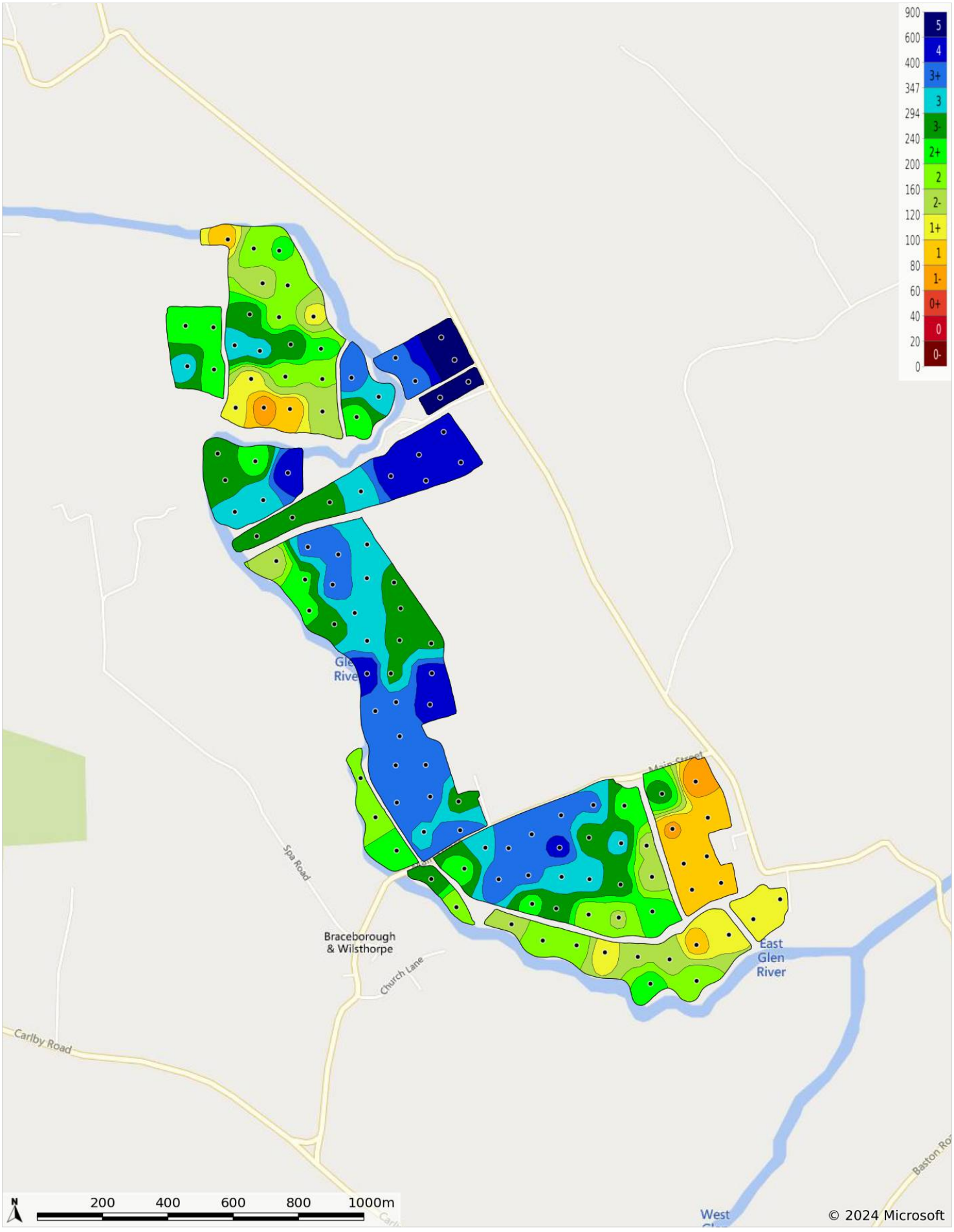
Manor Farm - Phosphorus



Total area 122.64 ha

Printed May 07, 2024

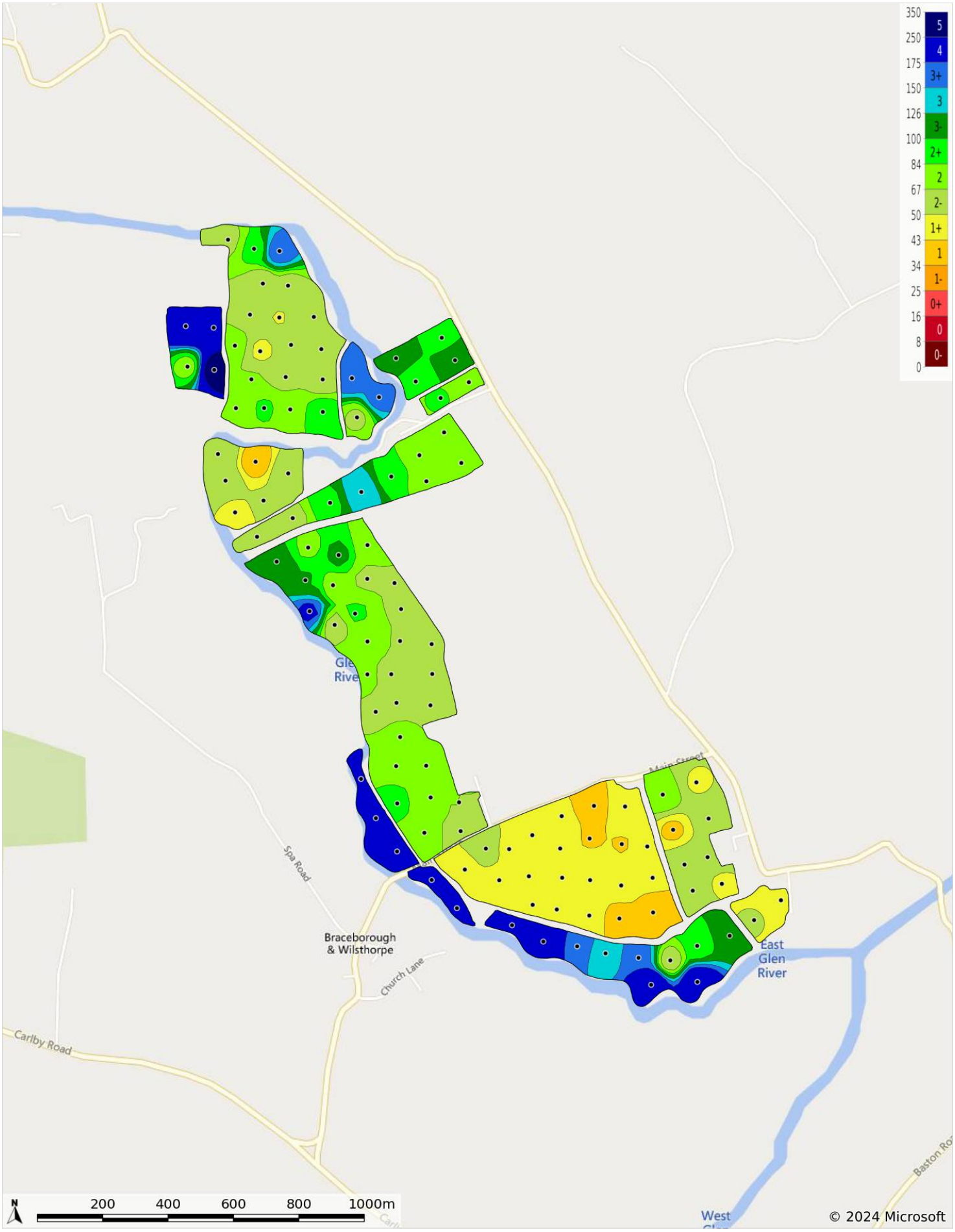
Manor Farm - Potassium



Total area 122.64 ha

Printed May 07, 2024

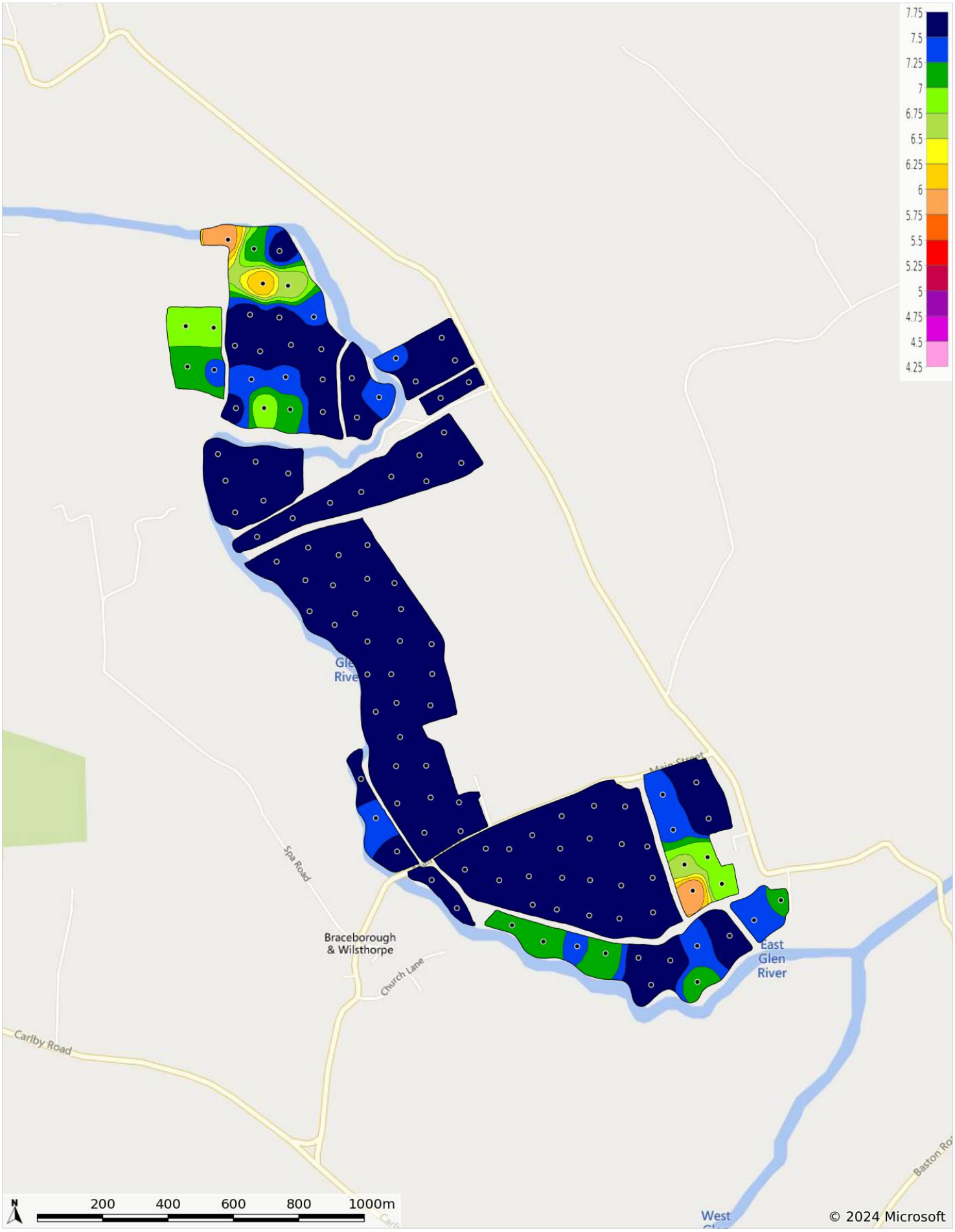
Manor Farm - Magnesium



Total area 122.64 ha

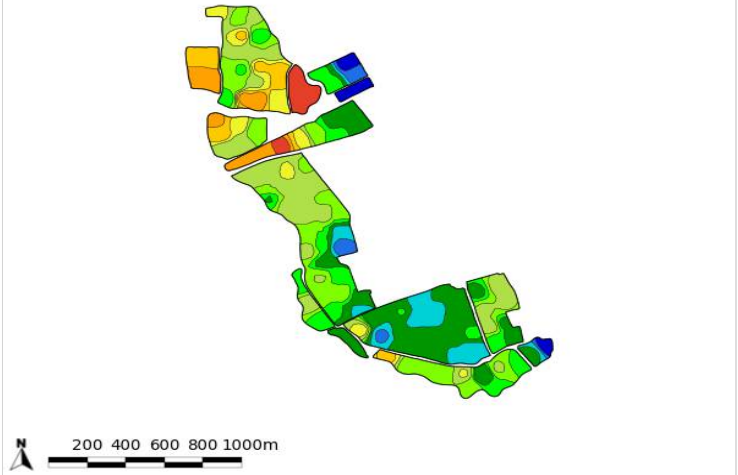
Printed May 07, 2024

Manor Farm - pH



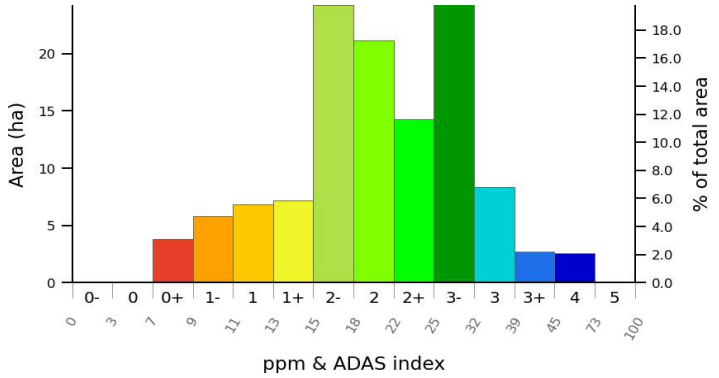
Total area 122.64 ha

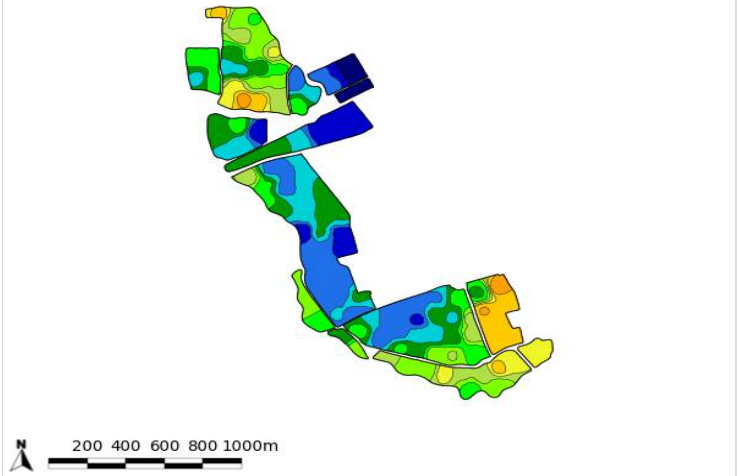
Printed May 07, 2024



Phosphorus

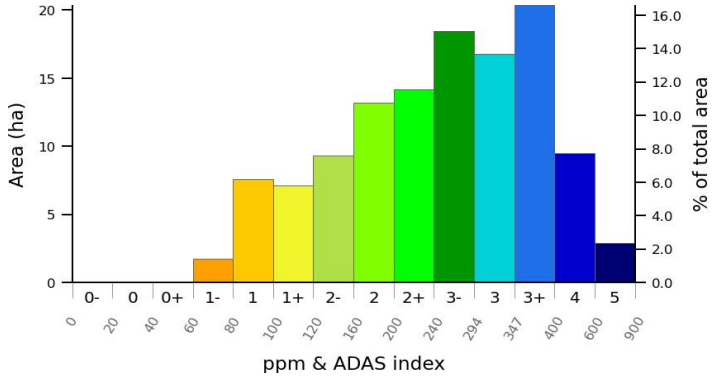
Avg: 22.0 ppm (2+), **Area:** 122.64 ha
Sampled: 23 Apr 2024 **to** 26 Apr 2024

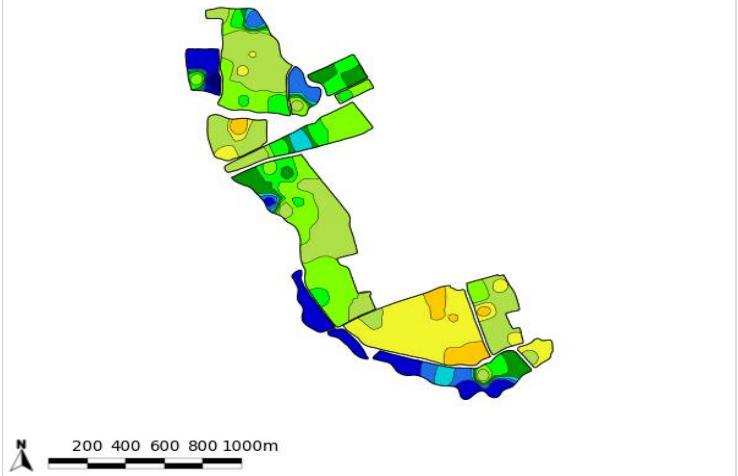




Potassium

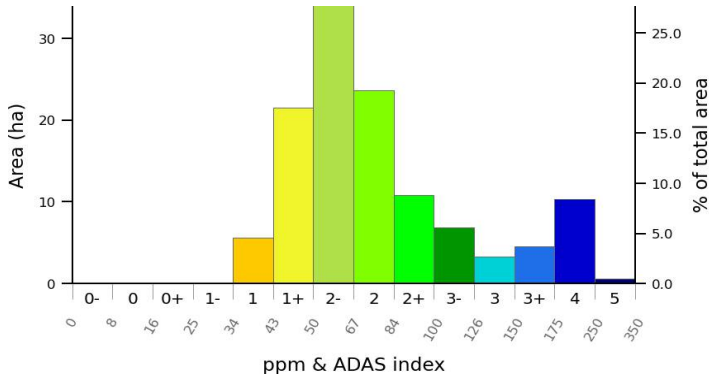
Avg: 267.6 ppm (3-), **Area:** 122.64 ha
Sampled: 23 Apr 2024 **to** 26 Apr 2024

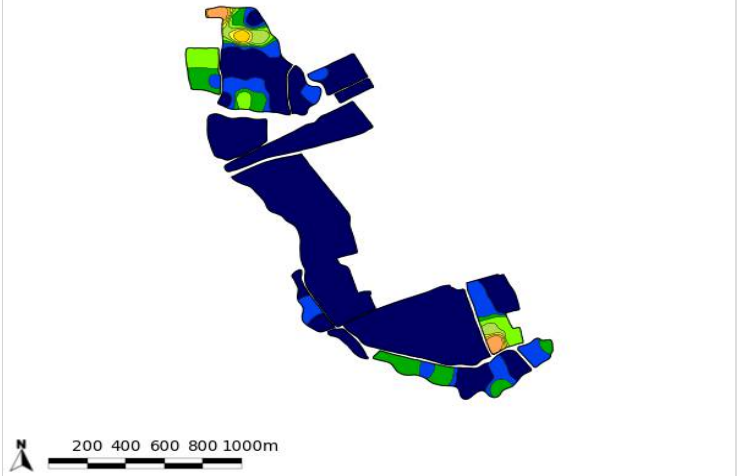




Magnesium

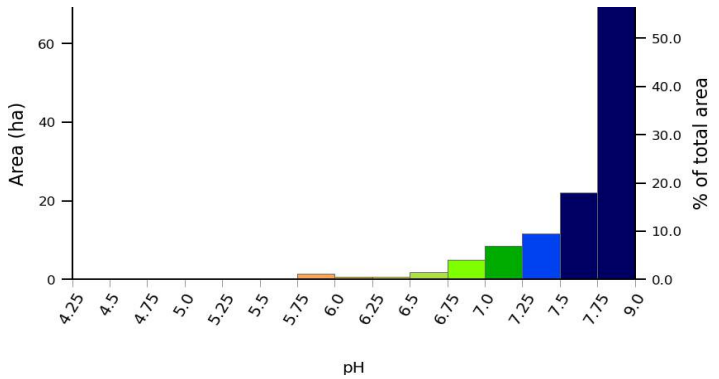
Avg: 84.6 ppm (2+), **Area:** 122.64 ha
Sampled: 23 Apr 2024 **to** 26 Apr 2024

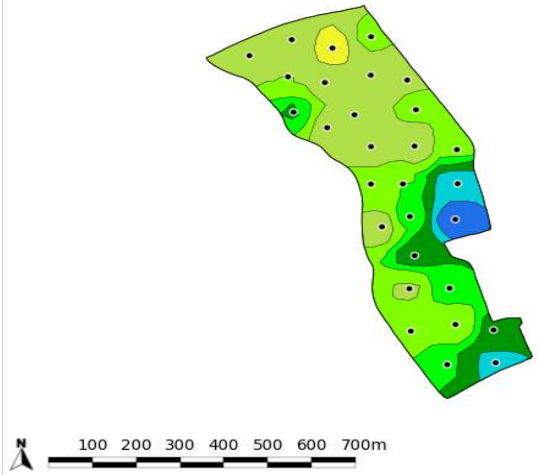




pH

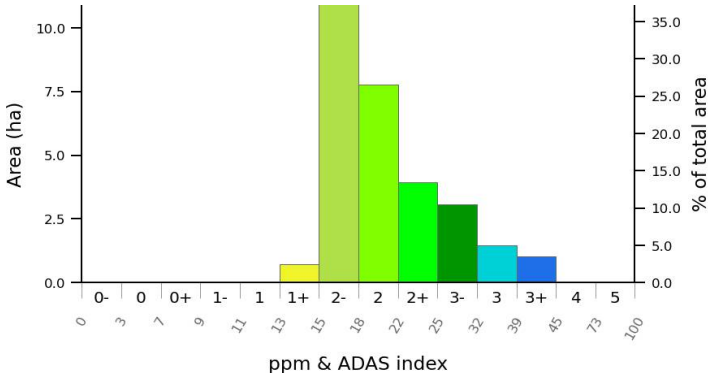
Avg: 7.7 pH, **Area:** 122.64 ha
Sampled: 23 Apr 2024 **to** 26 Apr 2024

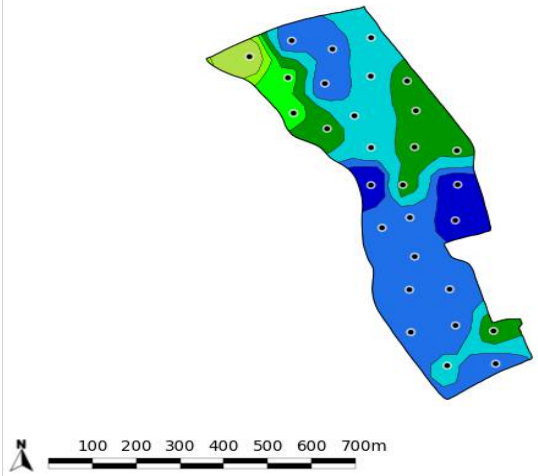




Phosphorus

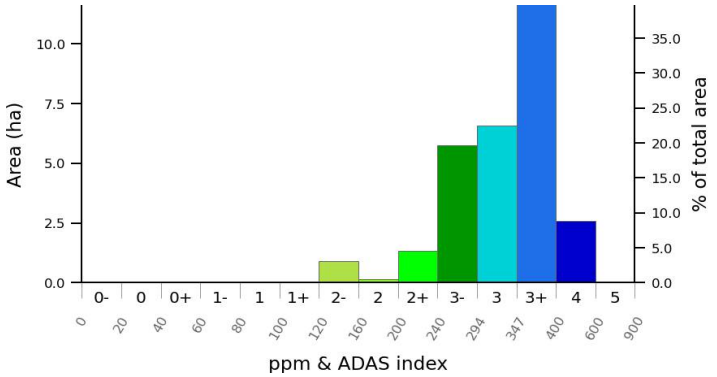
Avg: 21.3 ppm (2), **Area:** 29.27 ha
Sampled: 26 Apr 2024

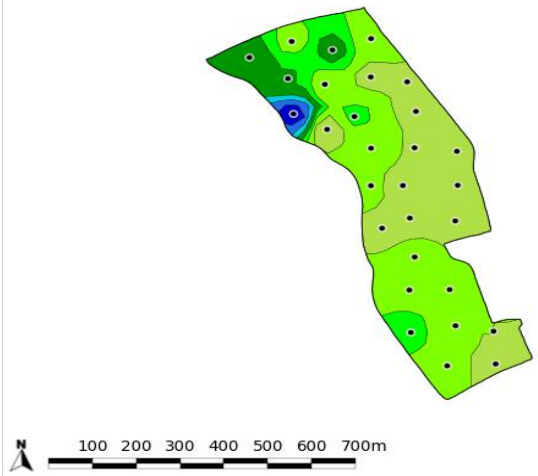




Potassium

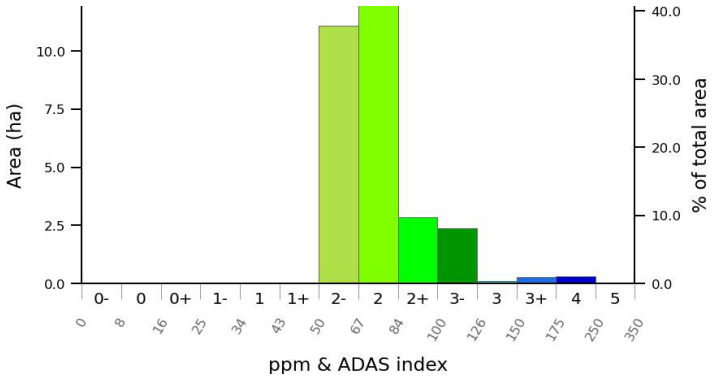
Avg: 332.3 ppm (3), **Area:** 29.27 ha
Sampled: 26 Apr 2024

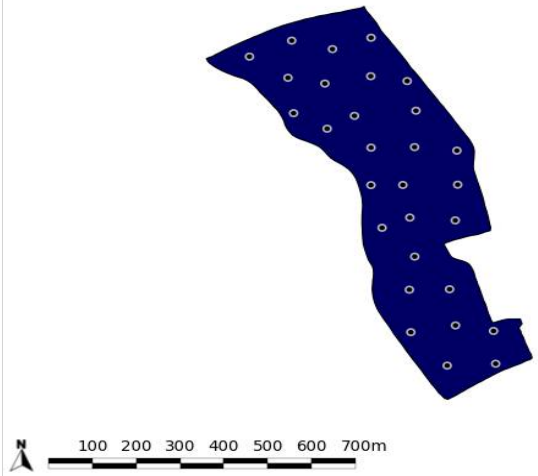




Magnesium

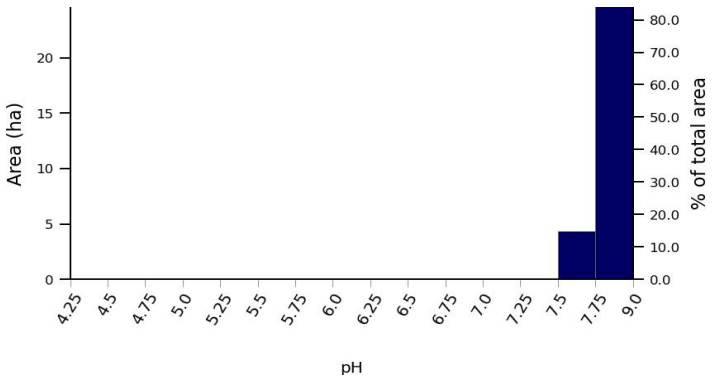
Avg: 76.6 ppm (2), **Area:** 29.27 ha
Sampled: 26 Apr 2024

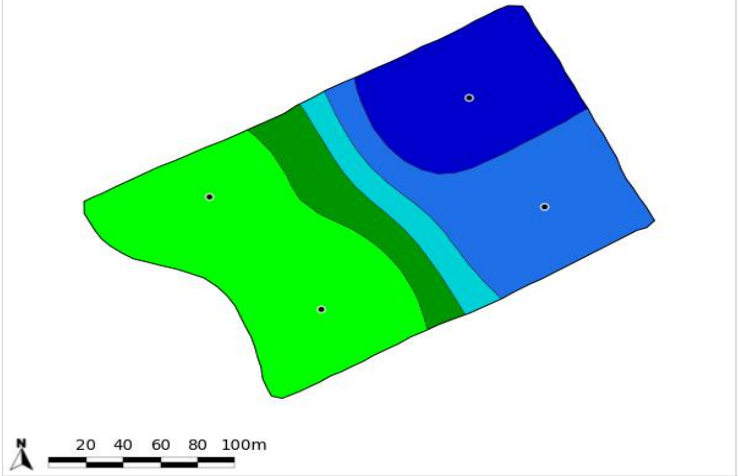




pH

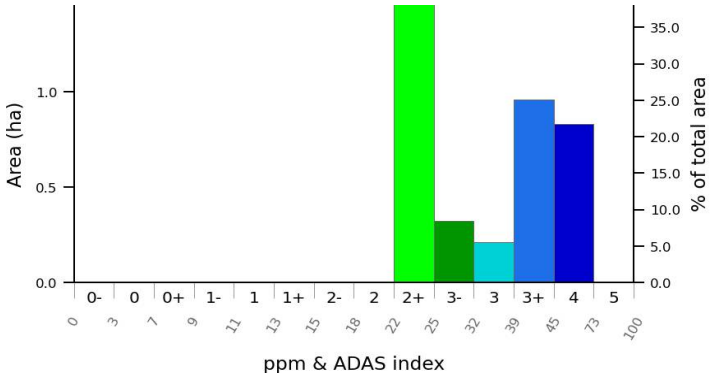
Avg: 7.9 pH, **Area:** 29.27 ha
Sampled: 26 Apr 2024

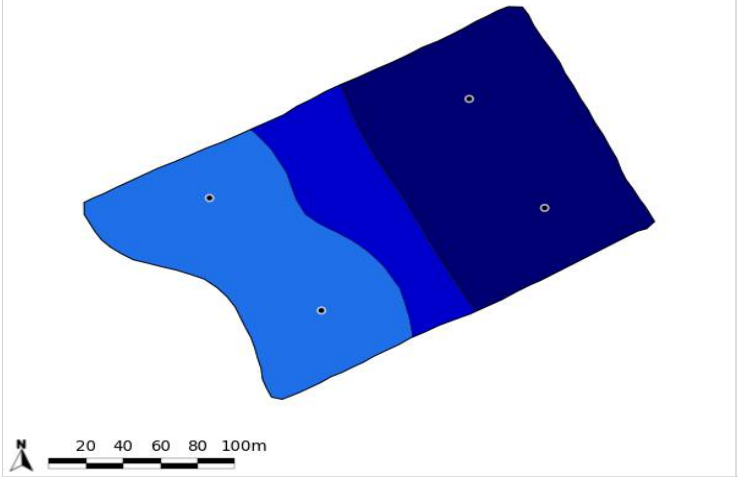




Phosphorus

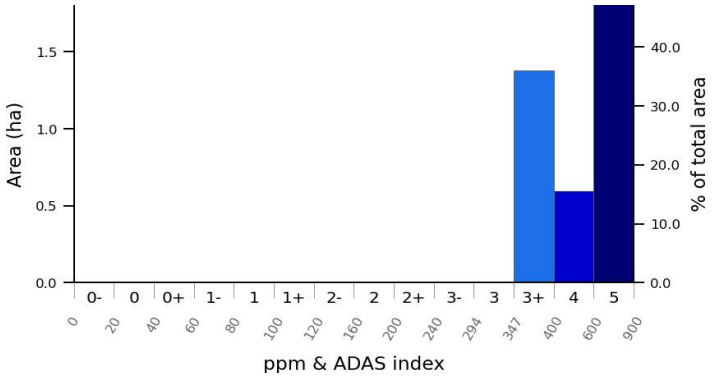
Avg: 34.4 ppm (3), **Area:** 3.82 ha
Sampled: 25 Apr 2024

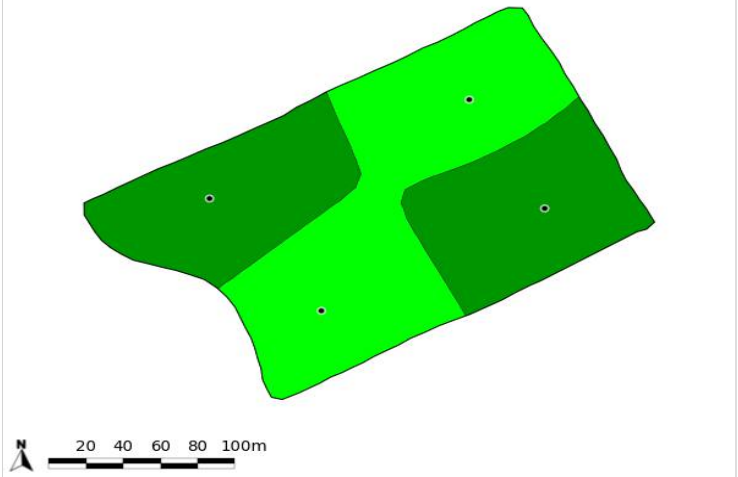




Potassium

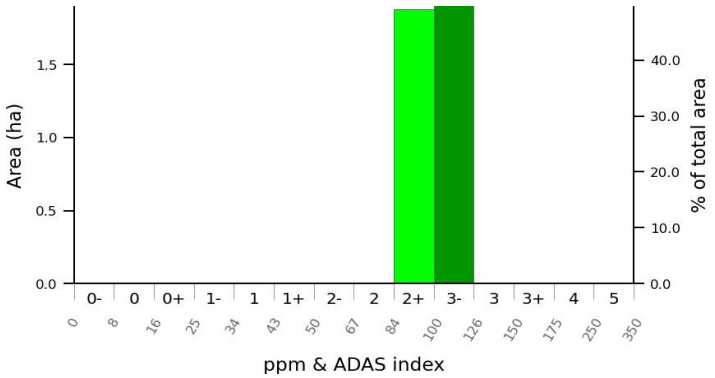
Avg: 545.2 ppm (4), **Area:** 3.82 ha
Sampled: 25 Apr 2024

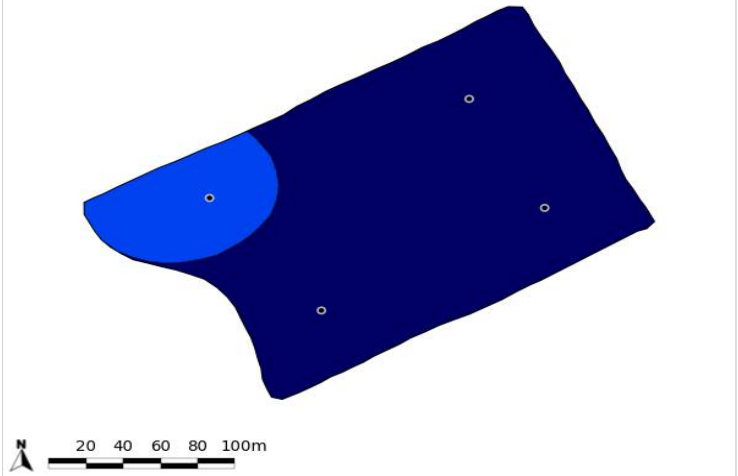




Magnesium

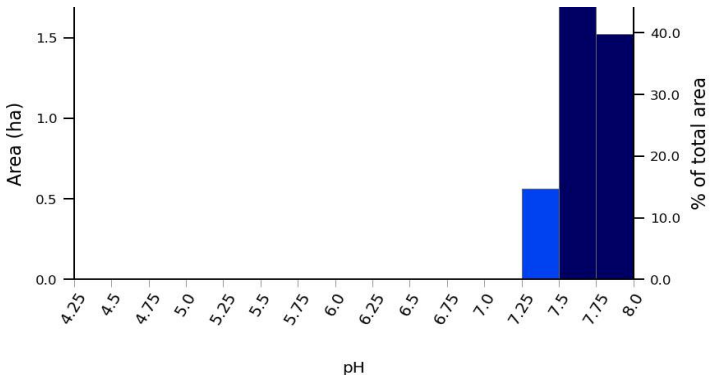
Avg: 100.9 ppm (3-), **Area:** 3.82 ha
Sampled: 25 Apr 2024

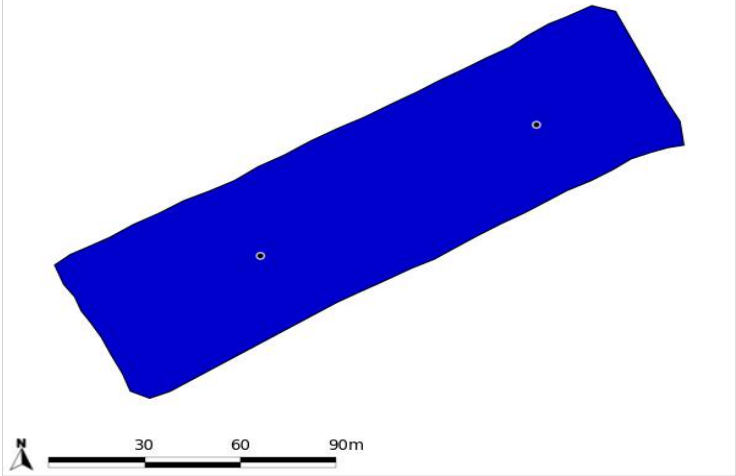




pH

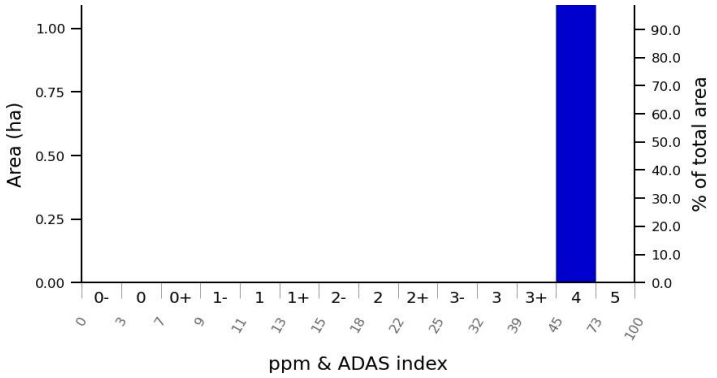
Avg: 7.7 pH, **Area:** 3.82 ha
Sampled: 25 Apr 2024

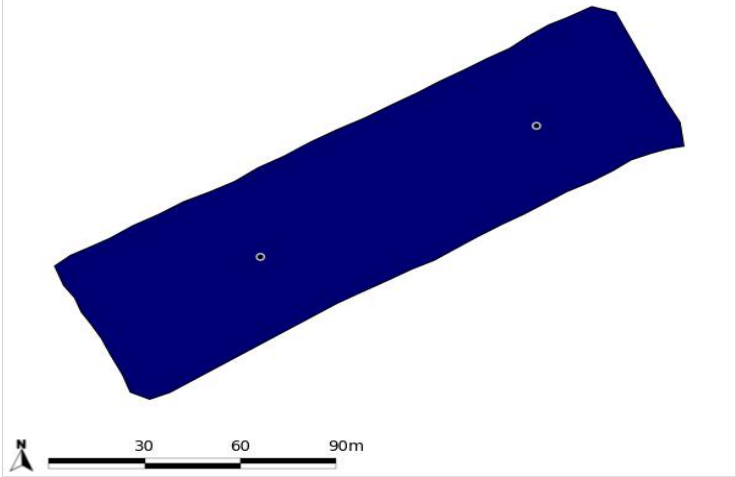




Phosphorus

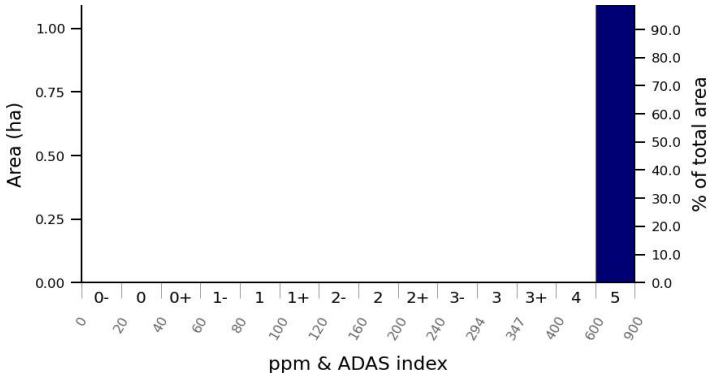
Avg: 57.3 ppm (4), **Area:** 1.11 ha
Sampled: 25 Apr 2024

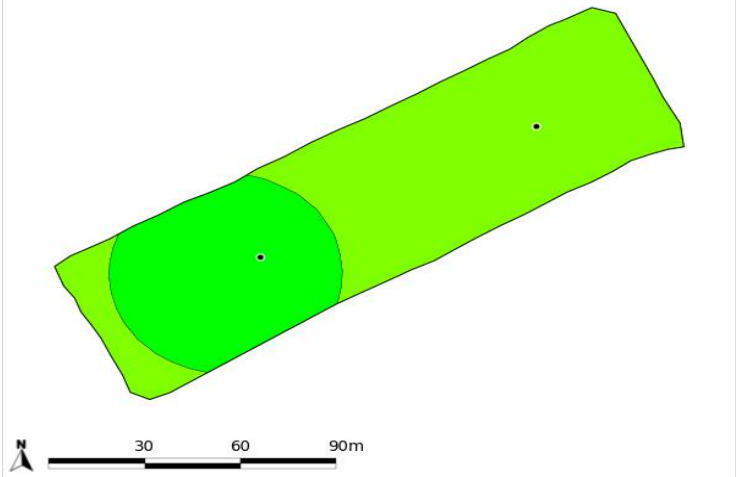




Potassium

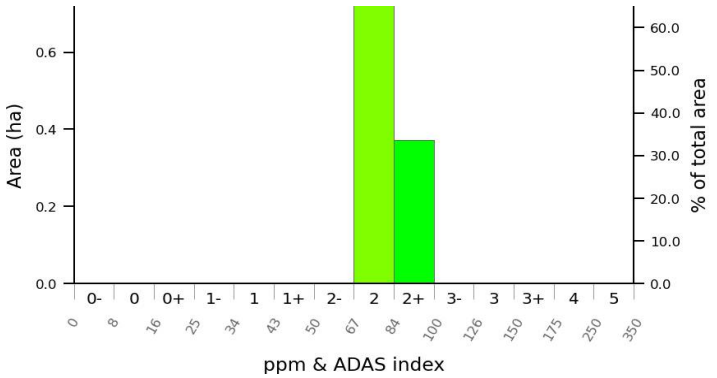
Avg: 626.1 ppm (5), **Area:** 1.11 ha
Sampled: 25 Apr 2024

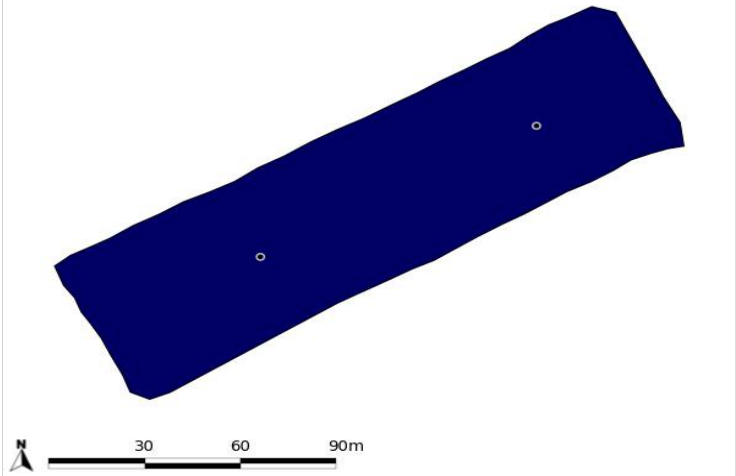




Magnesium

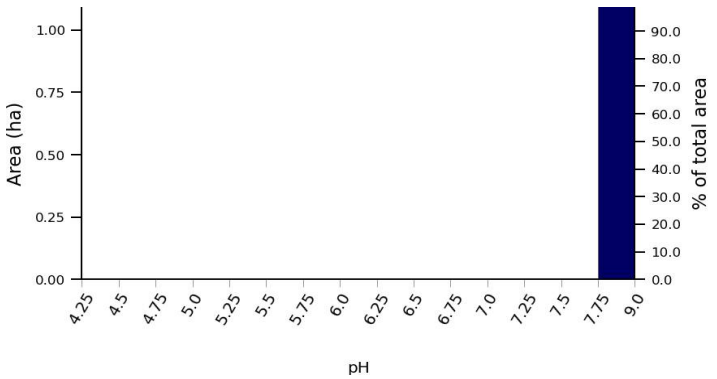
Avg: 78.5 ppm (2), **Area:** 1.11 ha
Sampled: 25 Apr 2024

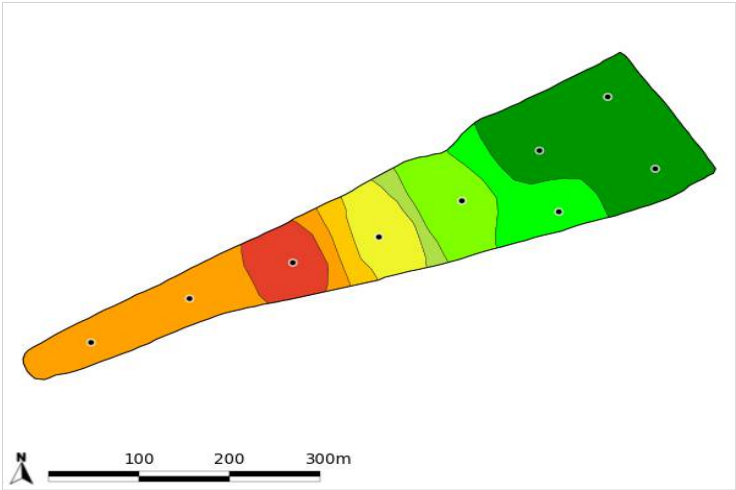




pH

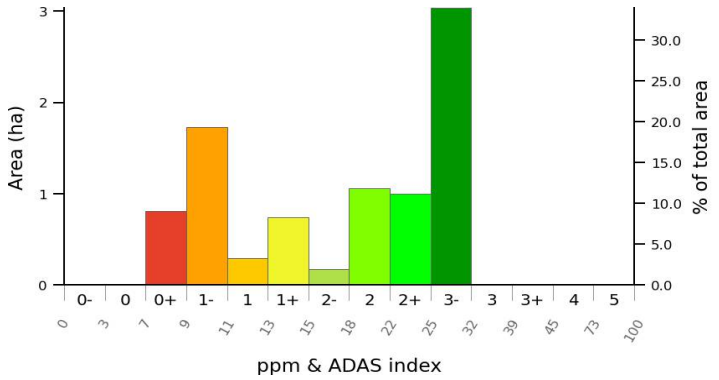
Avg: 7.9 pH, **Area:** 1.11 ha
Sampled: 25 Apr 2024

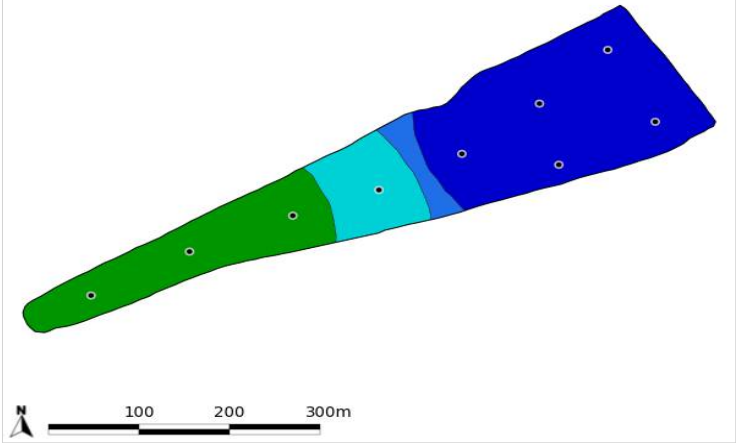




Phosphorus

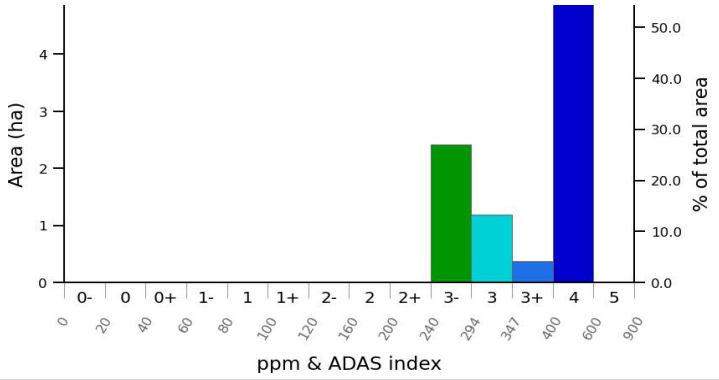
Avg: 19.7 ppm (2), **Area:** 8.95 ha
Sampled: 25 Apr 2024

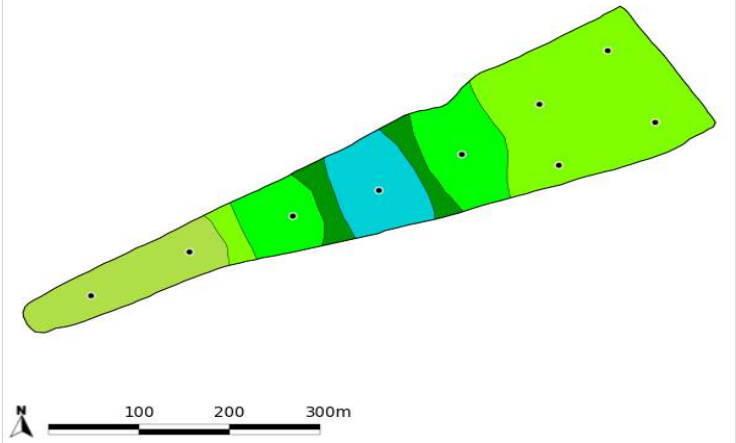




Potassium

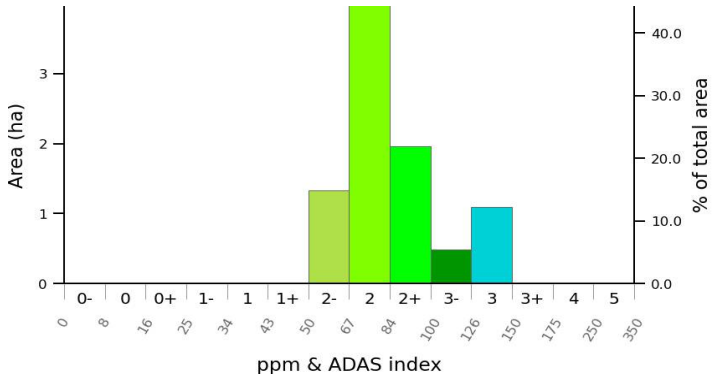
Avg: 372.1 ppm (3+), **Area:** 8.95 ha
Sampled: 25 Apr 2024

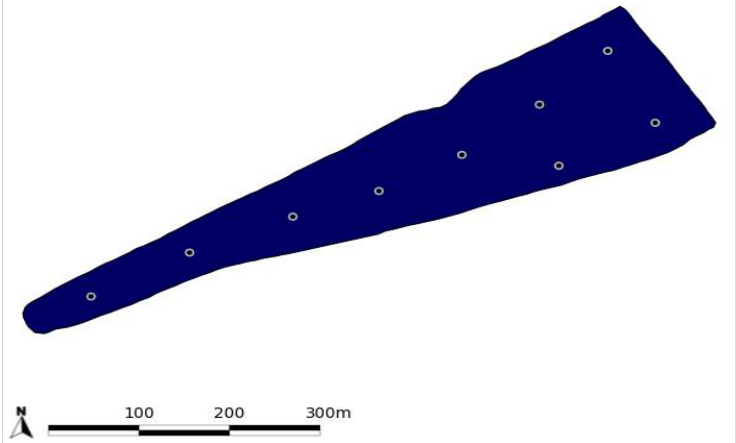




Magnesium

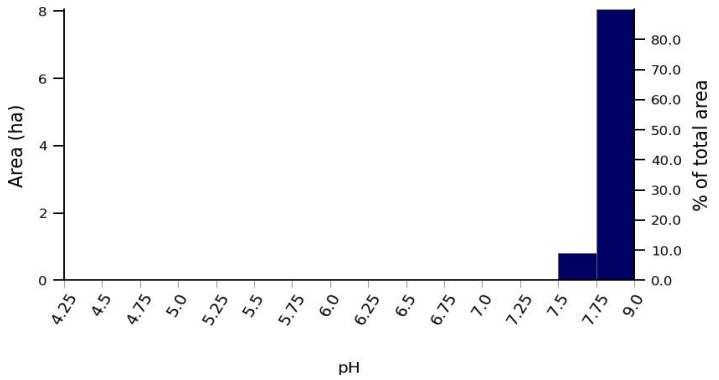
Avg: 87.8 ppm (2+), **Area:** 8.95 ha
Sampled: 25 Apr 2024

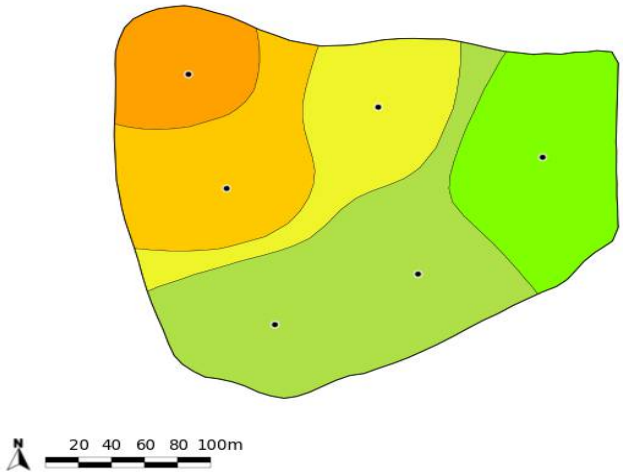




pH

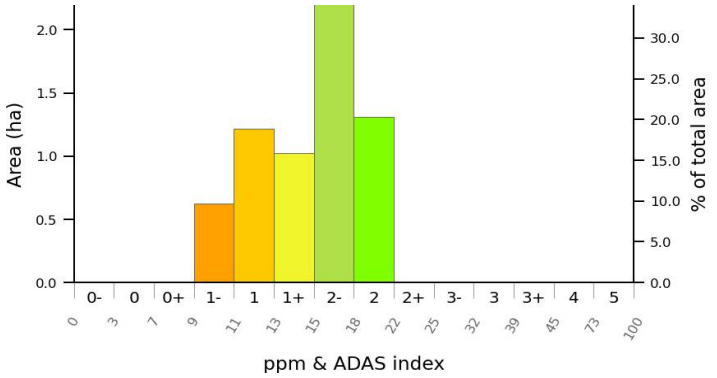
Avg: 7.9 pH, **Area:** 8.95 ha
Sampled: 25 Apr 2024

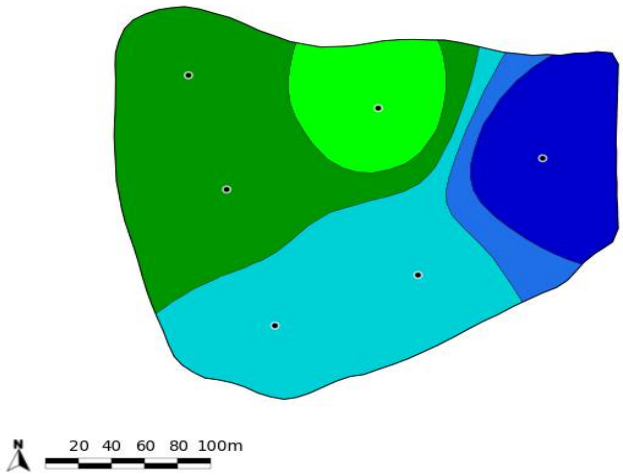




Phosphorus

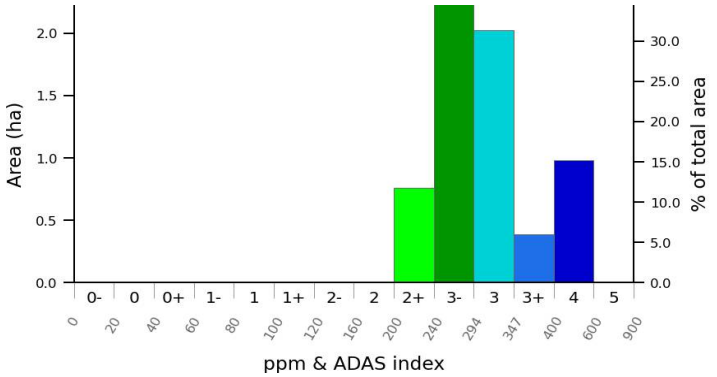
Avg: 15.6 ppm (2-), **Area:** 6.45 ha
Sampled: 25 Apr 2024

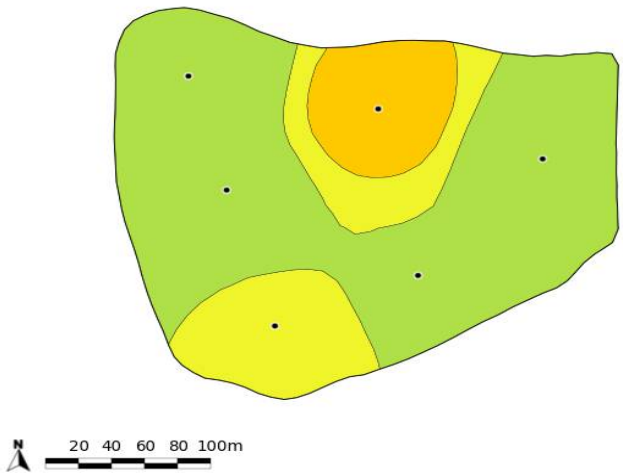




Potassium

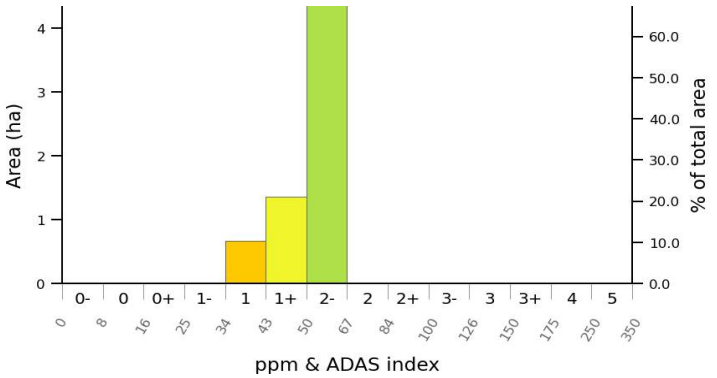
Avg: 310.0 ppm (3), **Area:** 6.45 ha
Sampled: 25 Apr 2024

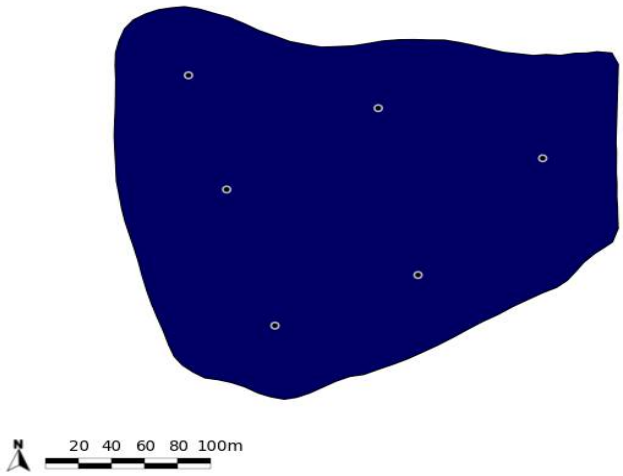




Magnesium

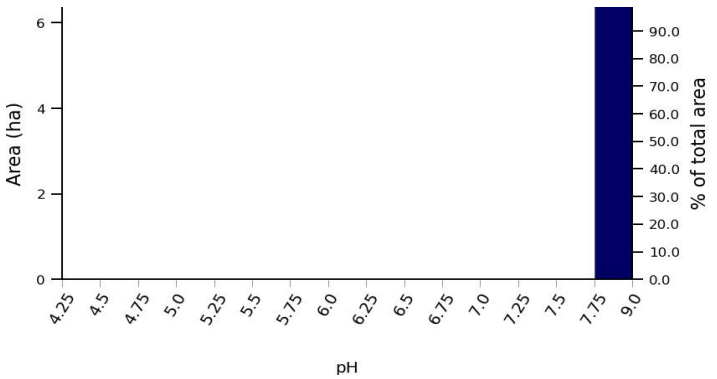
Avg: 51.8 ppm (2-), **Area:** 6.45 ha
Sampled: 25 Apr 2024

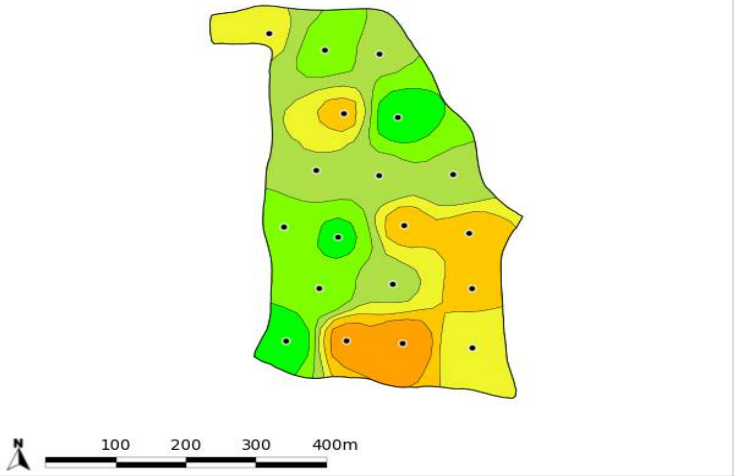




pH

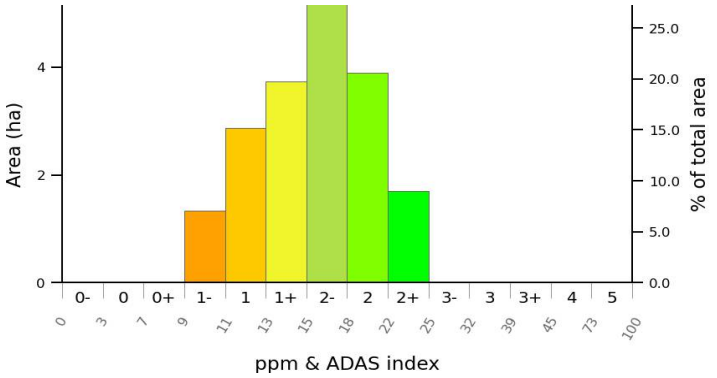
Avg: 8.1 pH, **Area:** 6.45 ha
Sampled: 25 Apr 2024

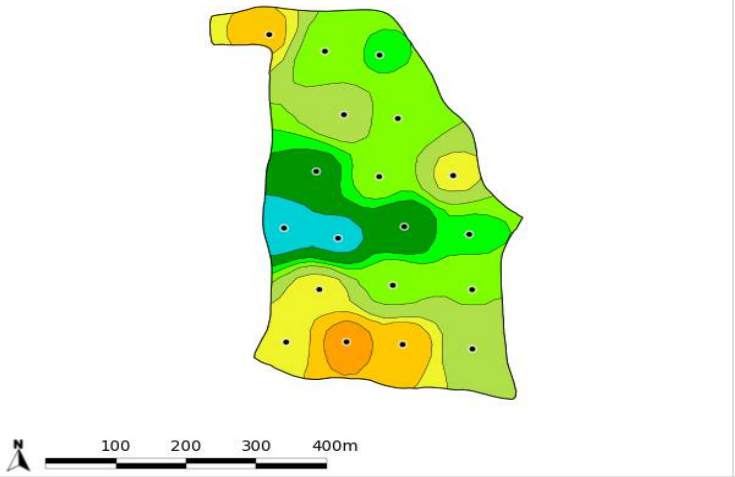




Phosphorus

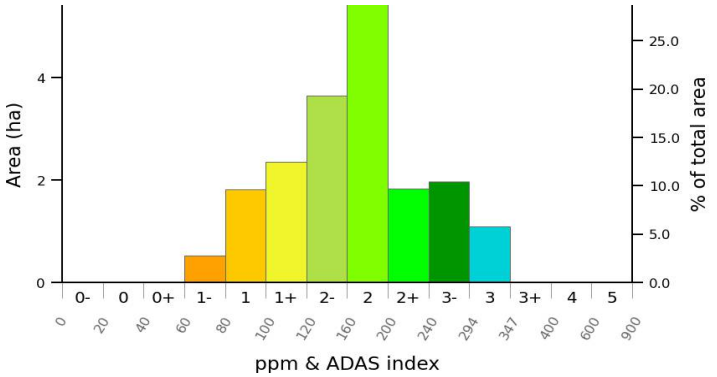
Avg: 16.3 ppm (2-), **Area:** 18.91 ha
Sampled: 25 Apr 2024

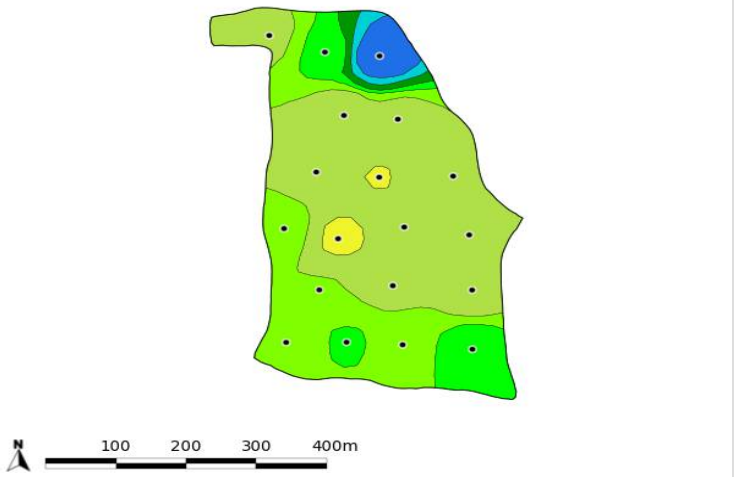




Potassium

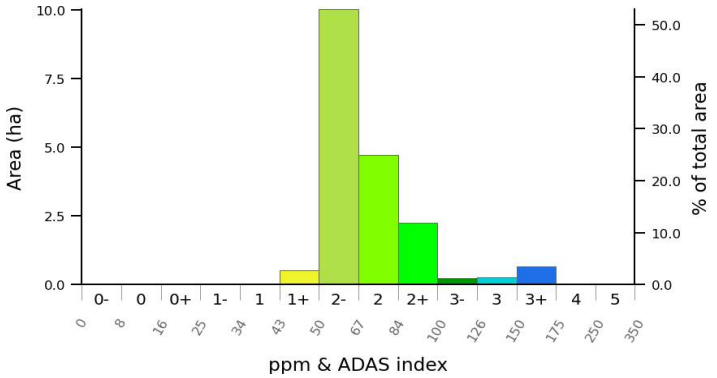
Avg: 171.3 ppm (2), **Area:** 18.91 ha
Sampled: 25 Apr 2024

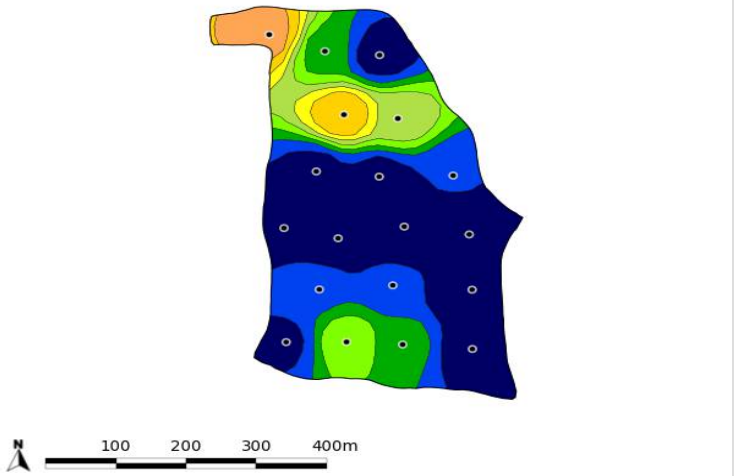




Magnesium

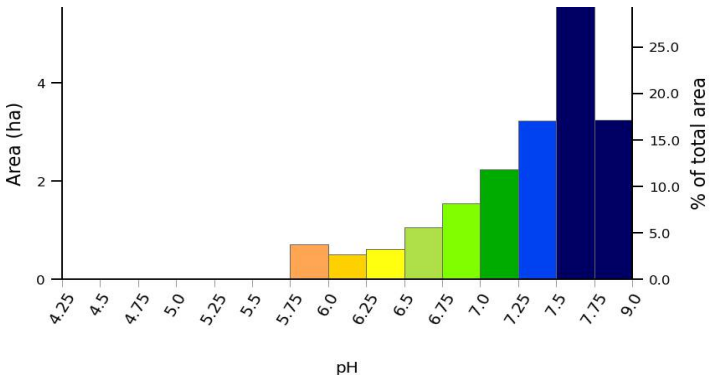
Avg: 72.1 ppm (2), **Area:** 18.91 ha
Sampled: 25 Apr 2024

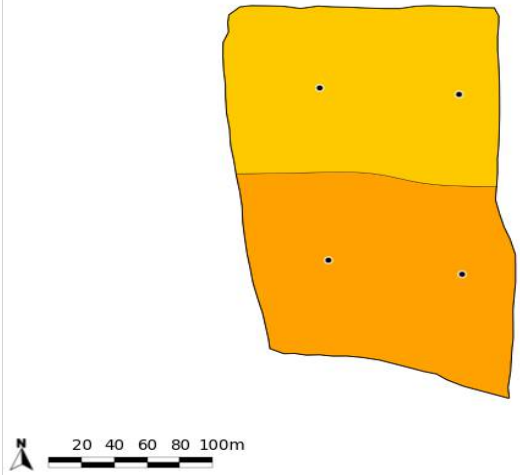




pH

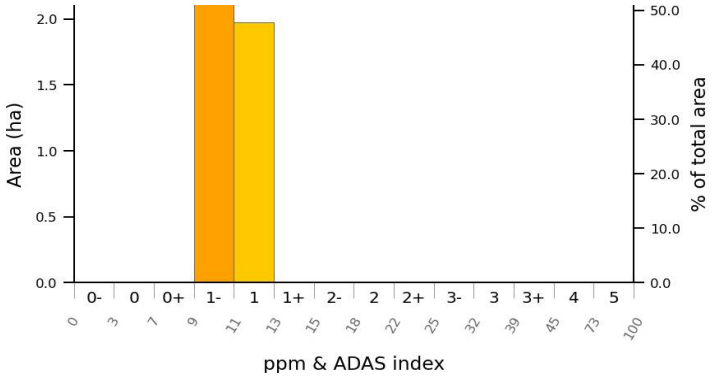
Avg: 7.3 pH, **Area:** 18.91 ha
Sampled: 25 Apr 2024

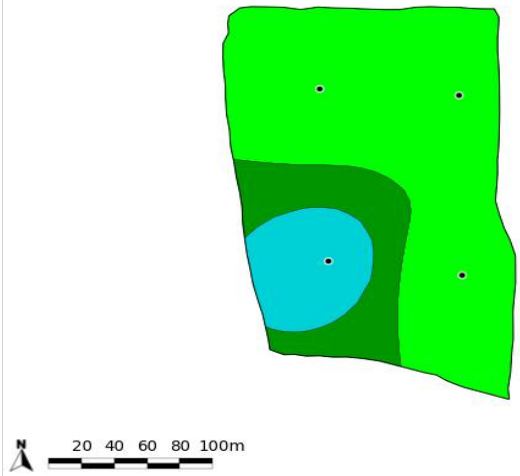




Phosphorus

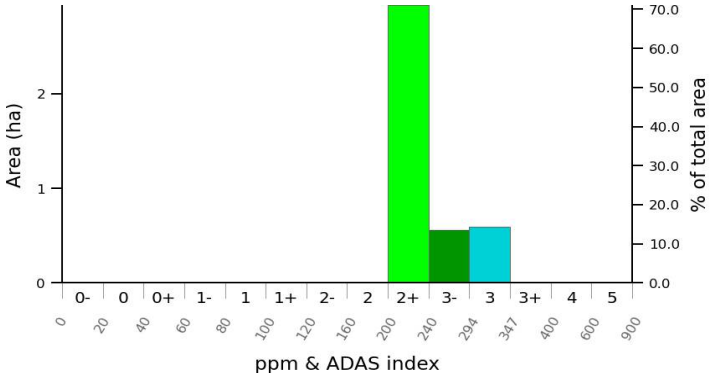
Avg: 11.0 ppm (1-), **Area:** 4.13 ha
Sampled: 25 Apr 2024

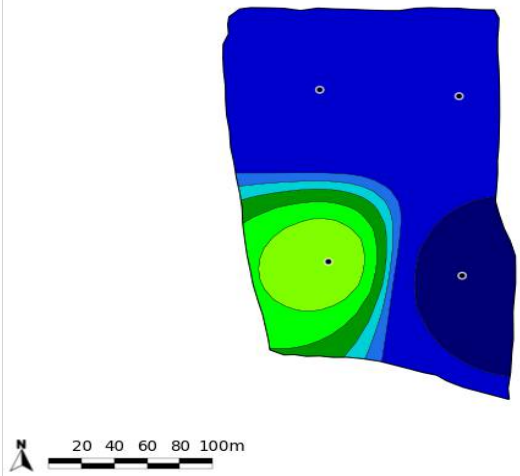




Potassium

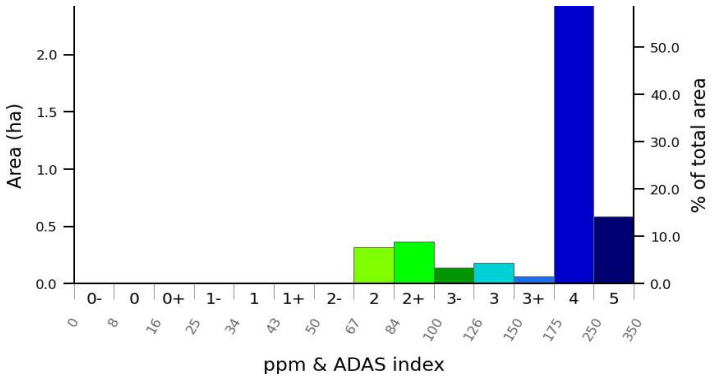
Avg: 235.8 ppm (2+), **Area:** 4.13 ha
Sampled: 25 Apr 2024

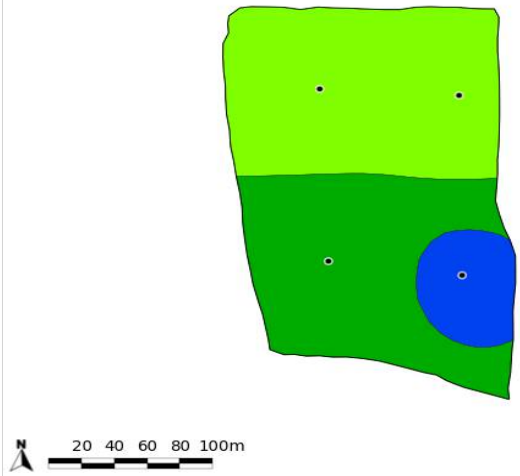




Magnesium

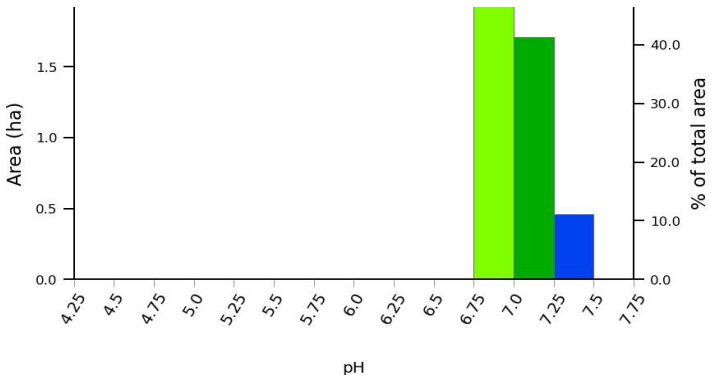
Avg: 201.6 ppm (4), **Area:** 4.13 ha
Sampled: 25 Apr 2024

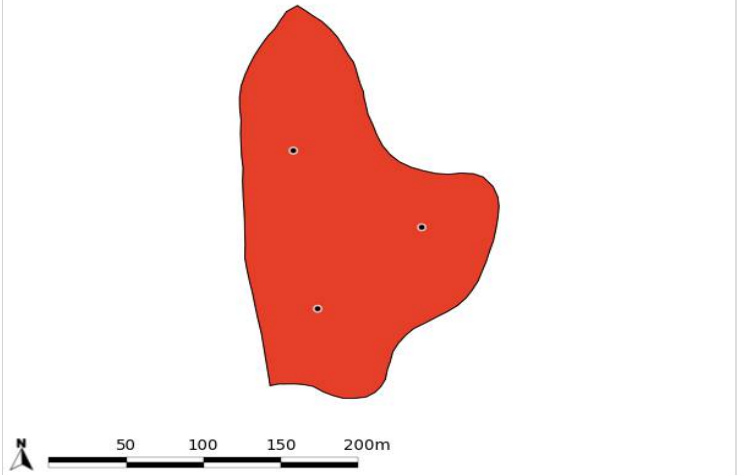




pH

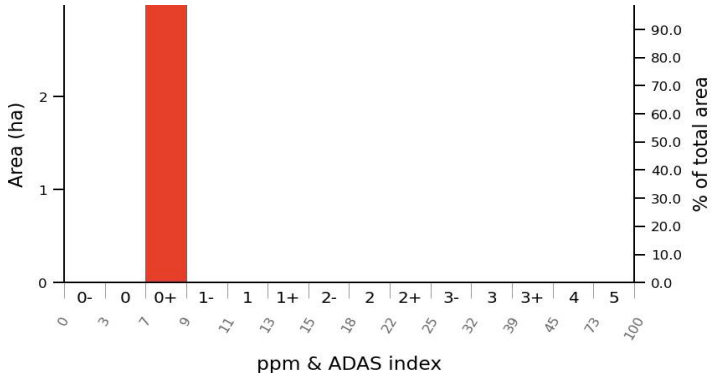
Avg: 7.0 pH, **Area:** 4.13 ha
Sampled: 25 Apr 2024

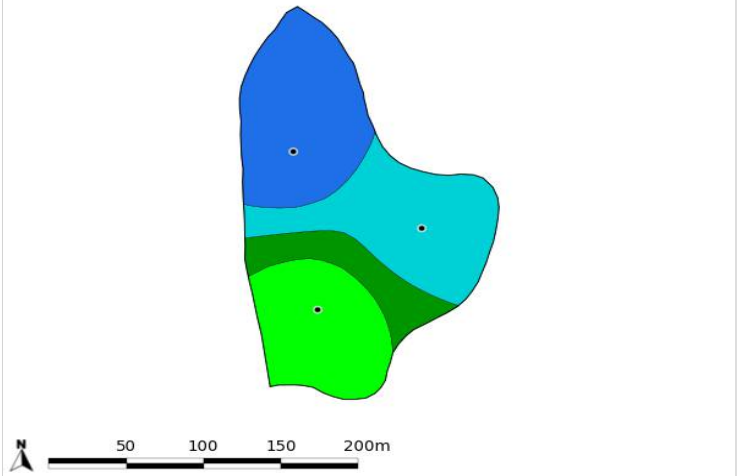




Phosphorus

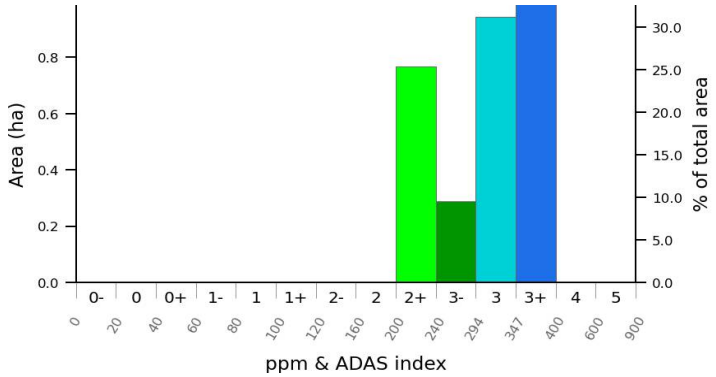
Avg: 8.1 ppm (0+), **Area:** 3.03 ha
Sampled: 25 Apr 2024

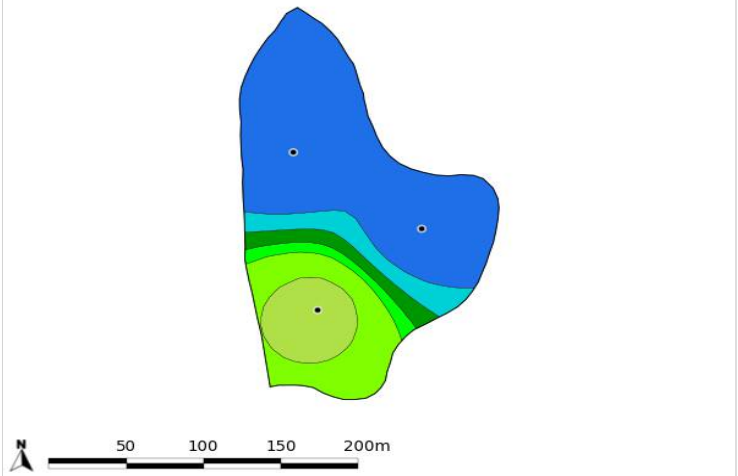




Potassium

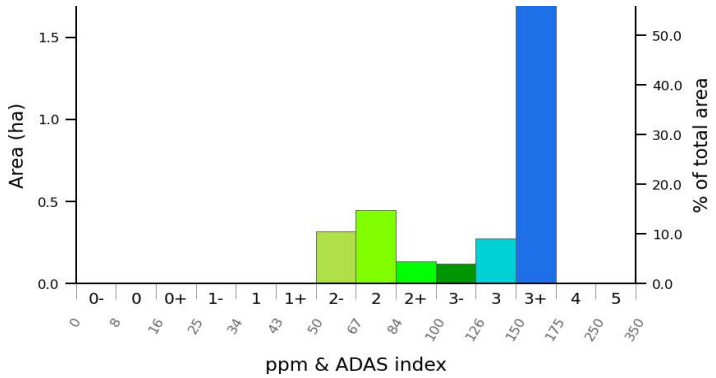
Avg: 300.6 ppm (3), **Area:** 3.03 ha
Sampled: 25 Apr 2024

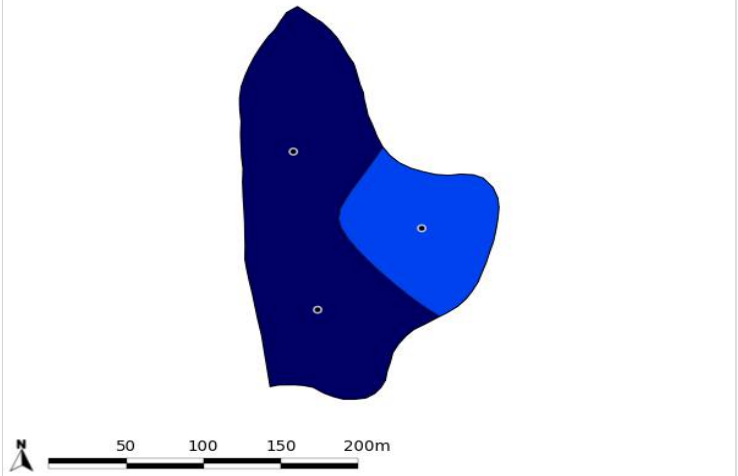




Magnesium

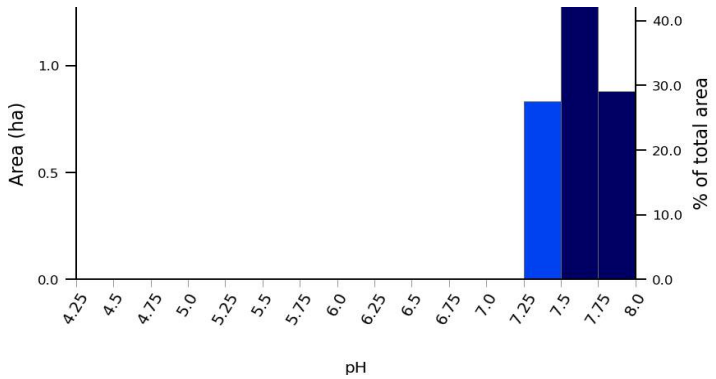
Avg: 129.1 ppm (3), **Area:** 3.03 ha
Sampled: 25 Apr 2024

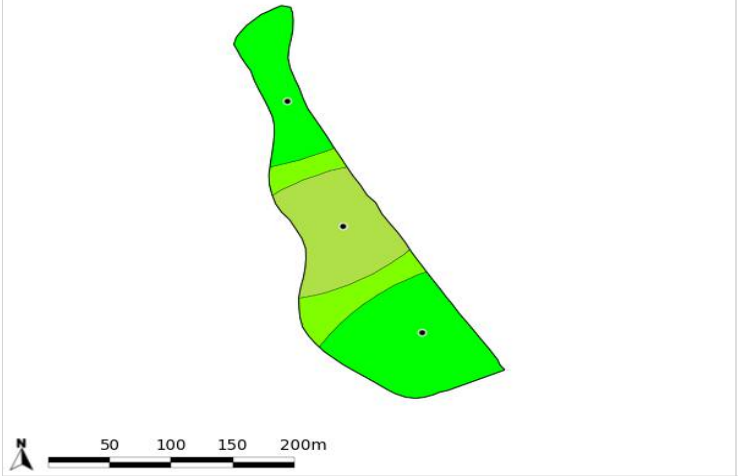




pH

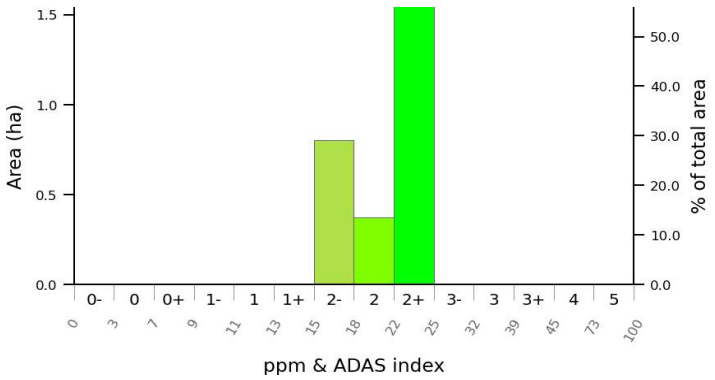
Avg: 7.6 pH, **Area:** 3.03 ha
Sampled: 25 Apr 2024

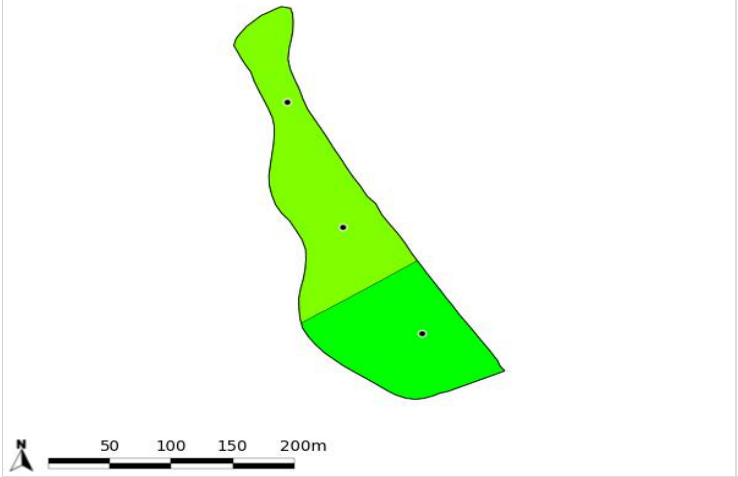




Phosphorus

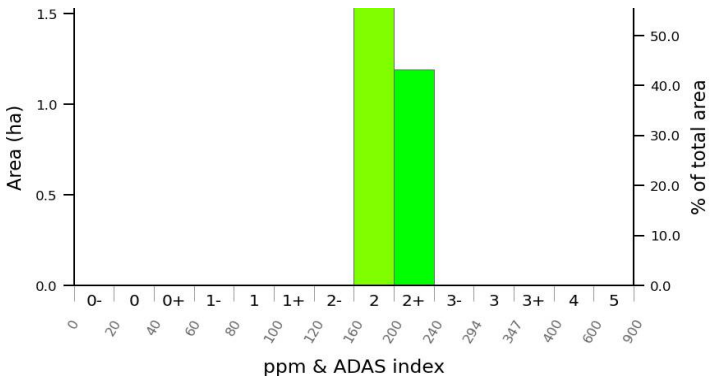
Avg: 21.1 ppm (2), **Area:** 2.76 ha
Sampled: 23 Apr 2024

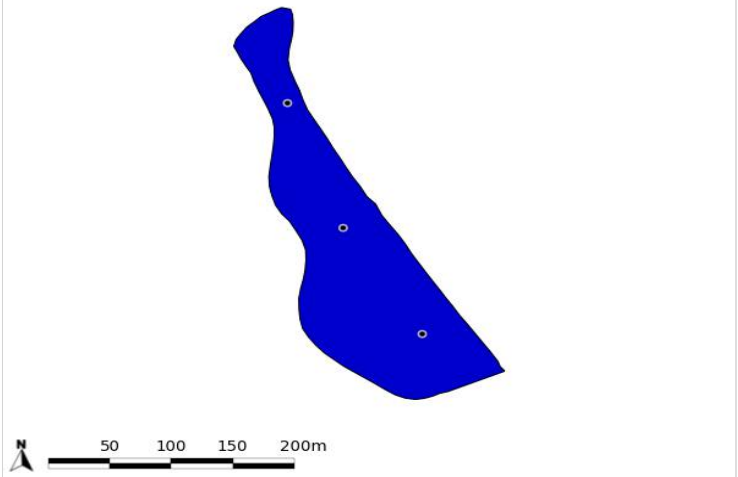




Potassium

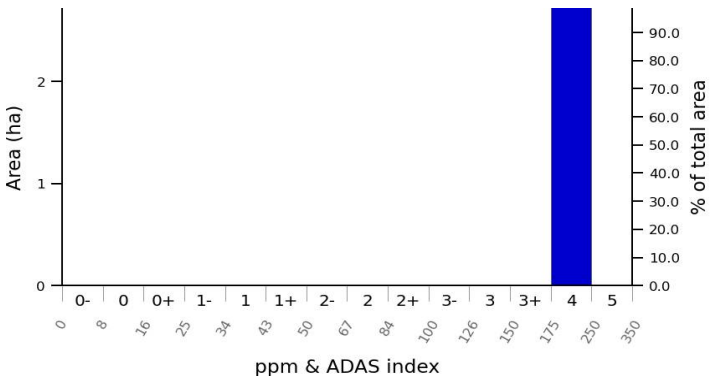
Avg: 201.1 ppm (2+), **Area:** 2.76 ha
Sampled: 23 Apr 2024

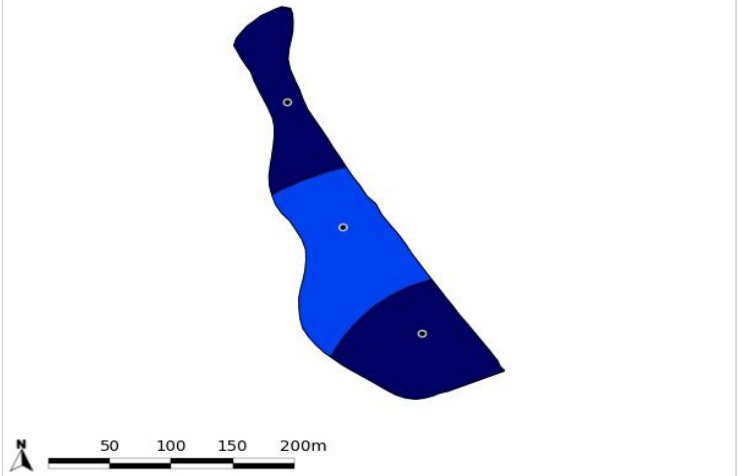




Magnesium

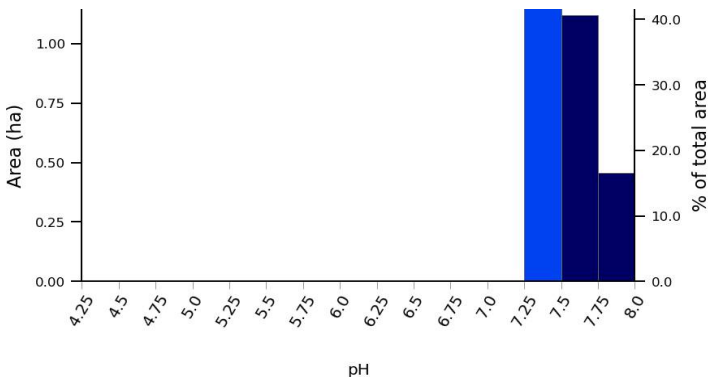
Avg: 211.0 ppm (4), **Area:** 2.76 ha
Sampled: 23 Apr 2024

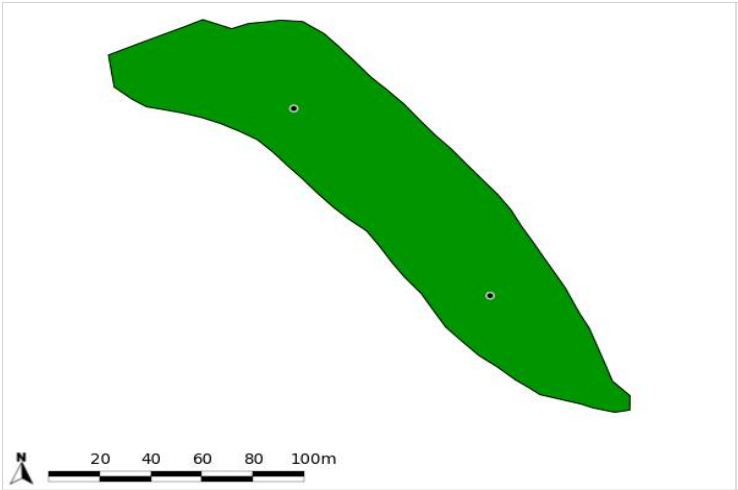




pH

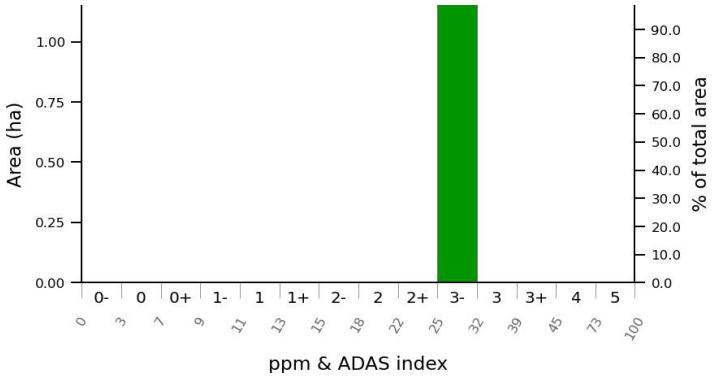
Avg: 7.5 pH, **Area:** 2.76 ha
Sampled: 23 Apr 2024

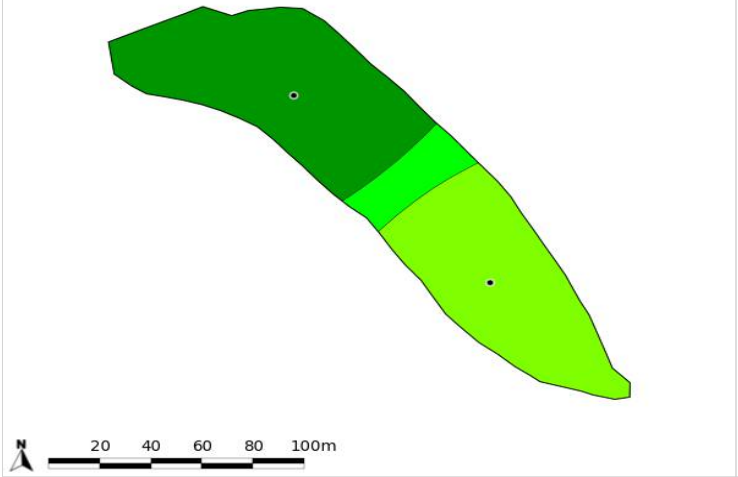




Phosphorus

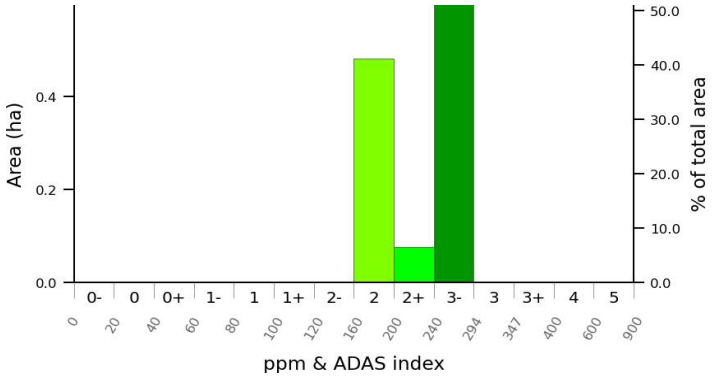
Avg: 28.3 ppm (3-), **Area:** 1.17 ha
Sampled: 23 Apr 2024

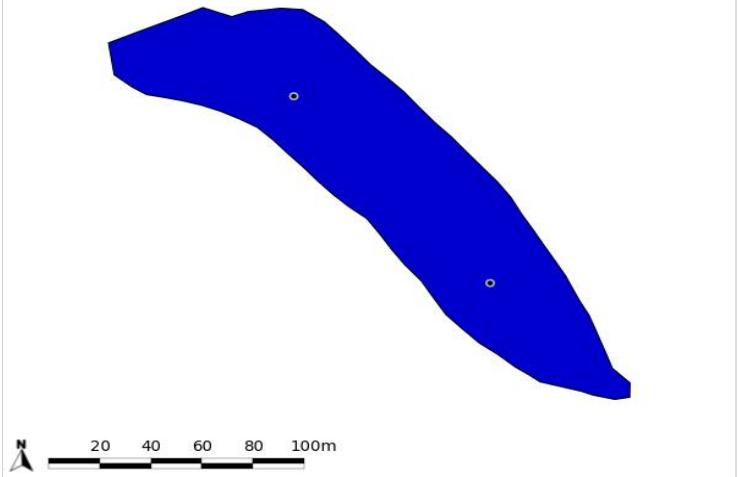




Potassium

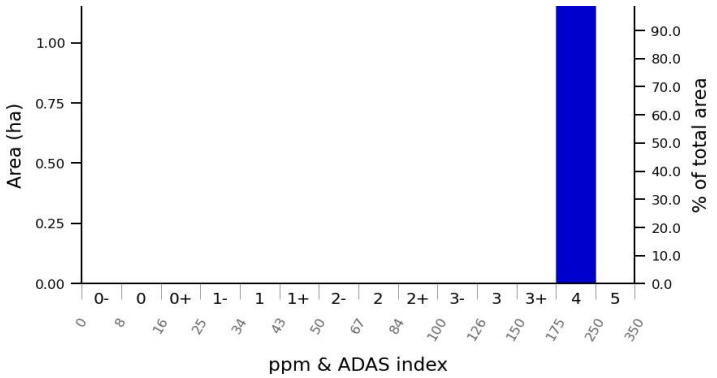
Avg: 224.5 ppm (2+), **Area:** 1.17 ha
Sampled: 23 Apr 2024

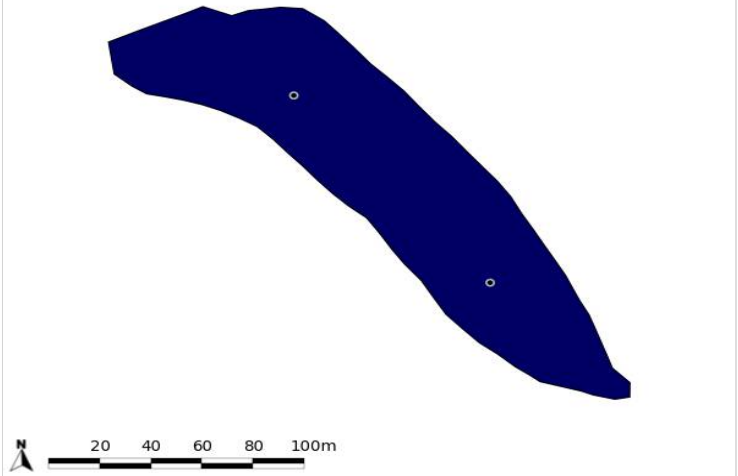




Magnesium

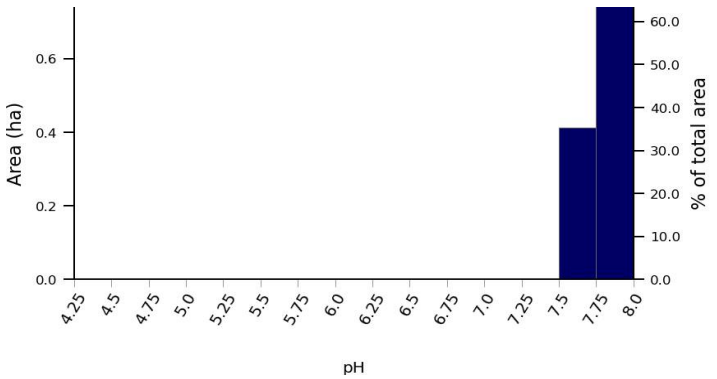
Avg: 200.5 ppm (4), **Area:** 1.17 ha
Sampled: 23 Apr 2024

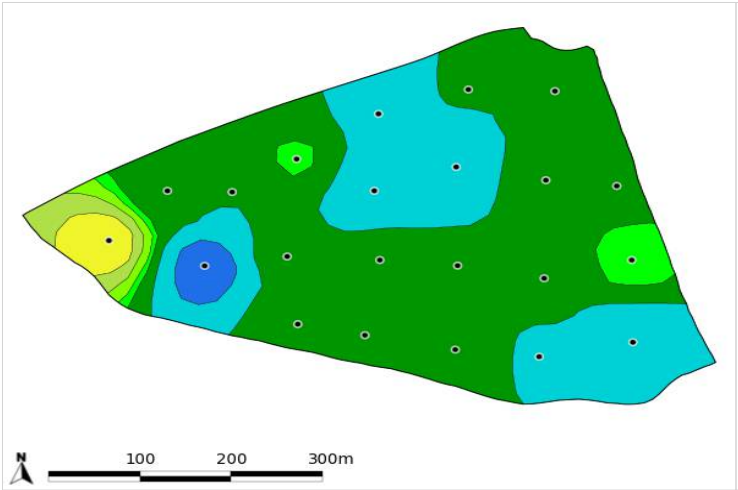




pH

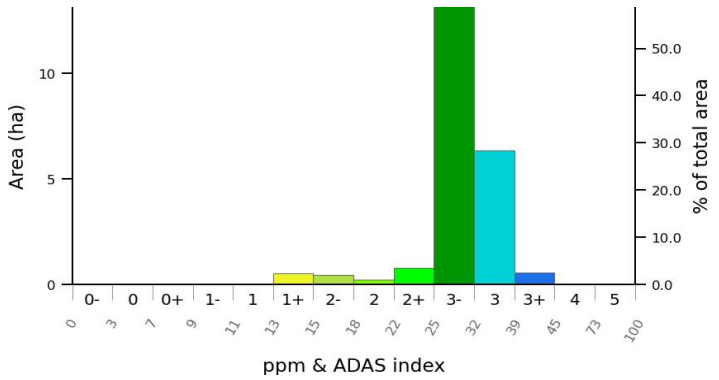
Avg: 7.8 pH, **Area:** 1.17 ha
Sampled: 23 Apr 2024

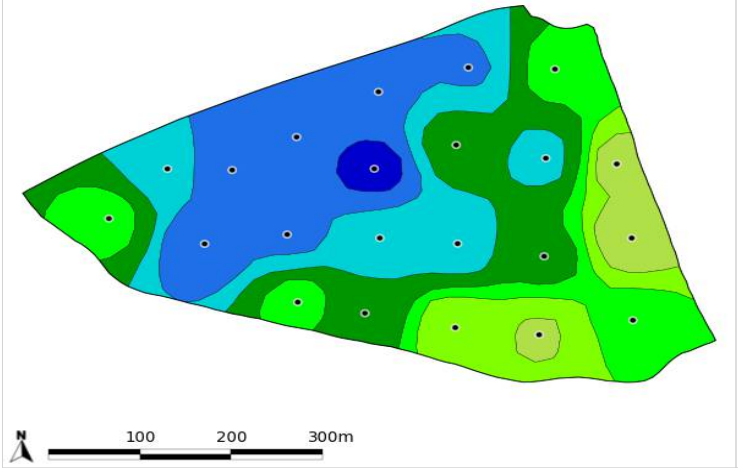




Phosphorus

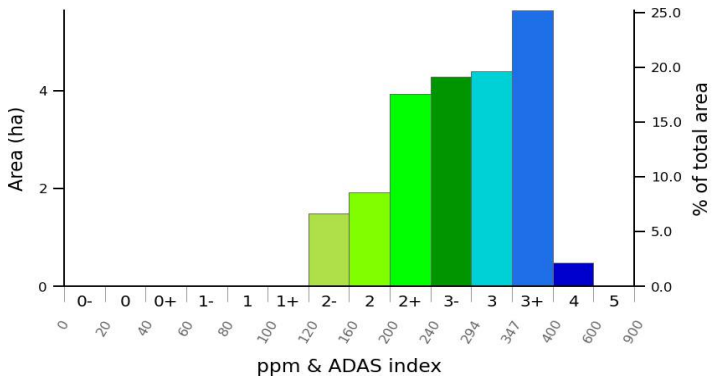
Avg: 30.5 ppm (3-), **Area:** 22.38 ha
Sampled: 23 Apr 2024

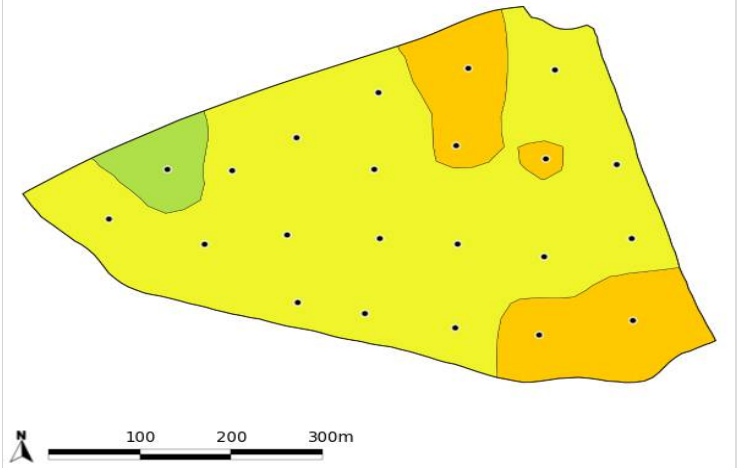




Potassium

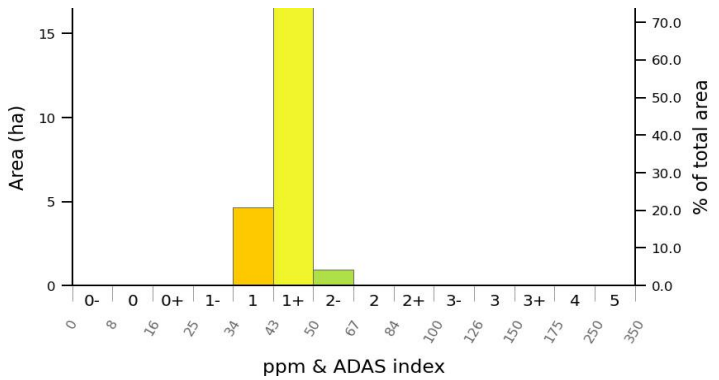
Avg: 282.8 ppm (3-), **Area:** 22.38 ha
Sampled: 23 Apr 2024

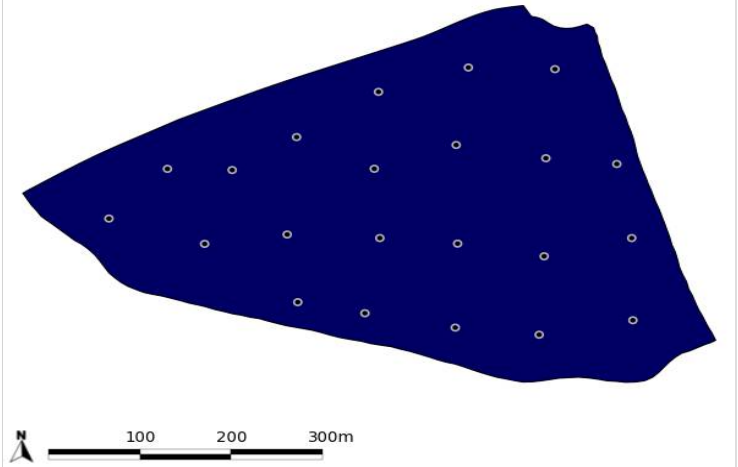




Magnesium

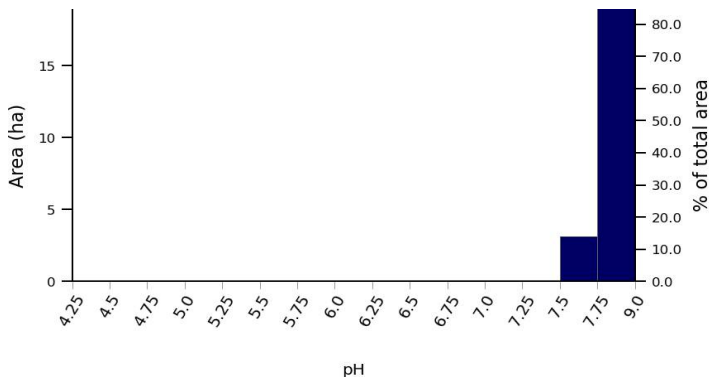
Avg: 45.3 ppm (1+), **Area:** 22.38 ha
Sampled: 23 Apr 2024

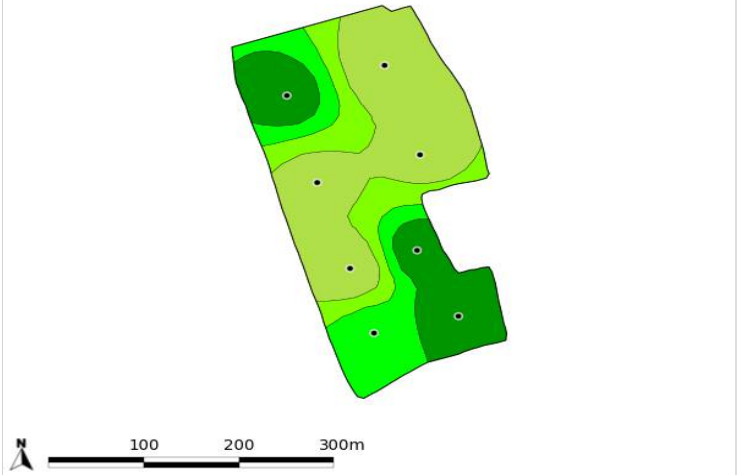




pH

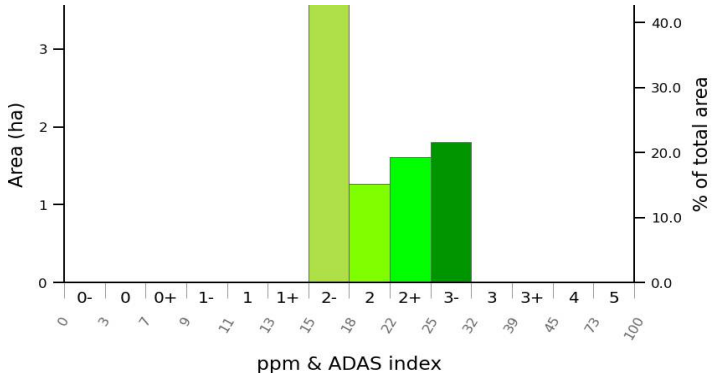
Avg: 8.0 pH, **Area:** 22.38 ha
Sampled: 23 Apr 2024

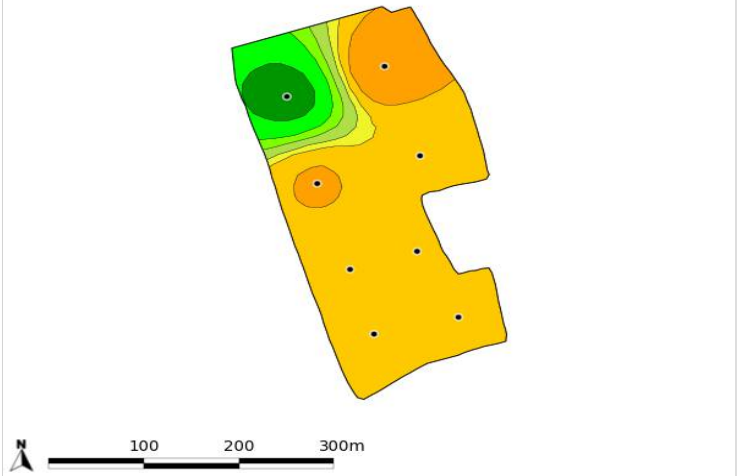




Phosphorus

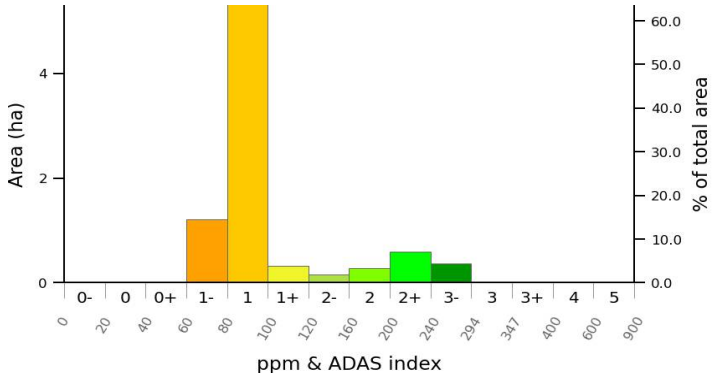
Avg: 20.7 ppm (2), **Area:** 8.34 ha
Sampled: 23 Apr 2024

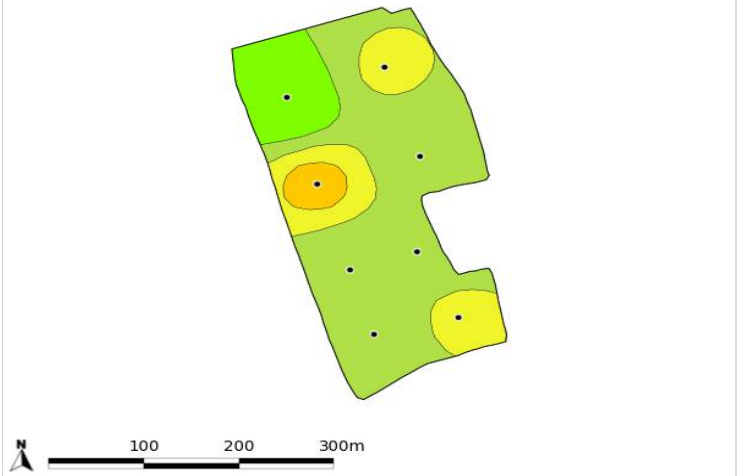




Potassium

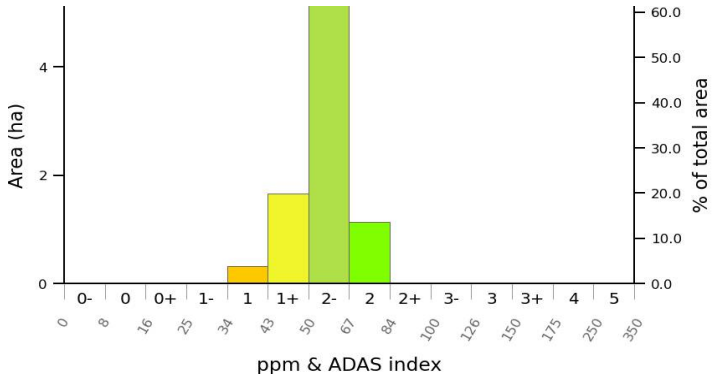
Avg: 110.5 ppm (1+), **Area:** 8.34 ha
Sampled: 23 Apr 2024

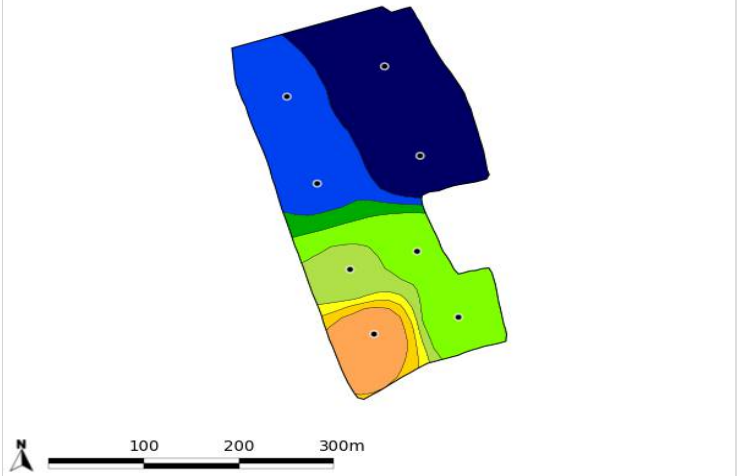




Magnesium

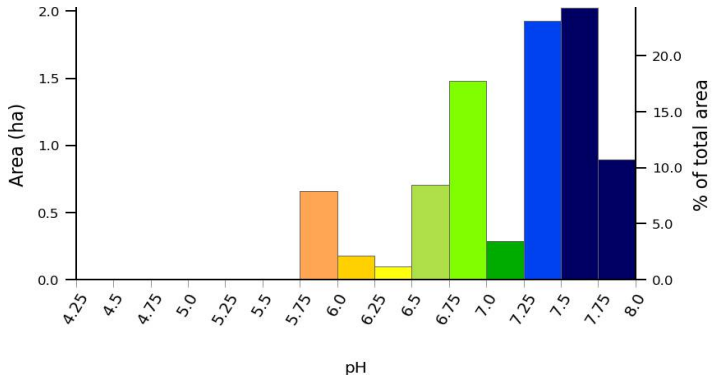
Avg: 55.9 ppm (2-), **Area:** 8.34 ha
Sampled: 23 Apr 2024

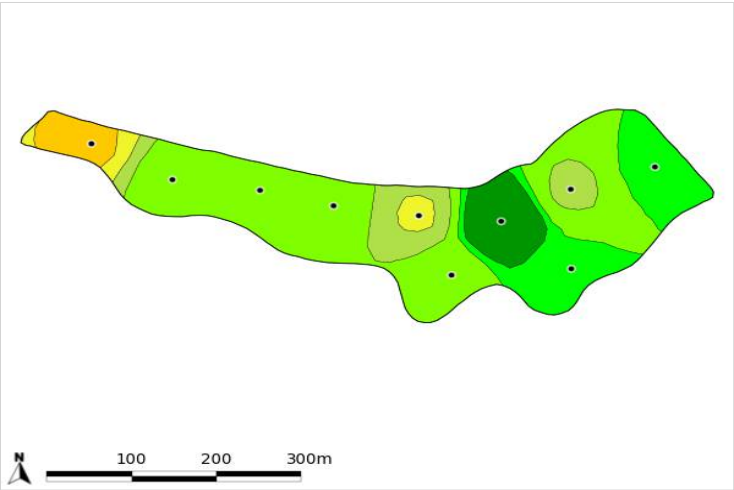




pH

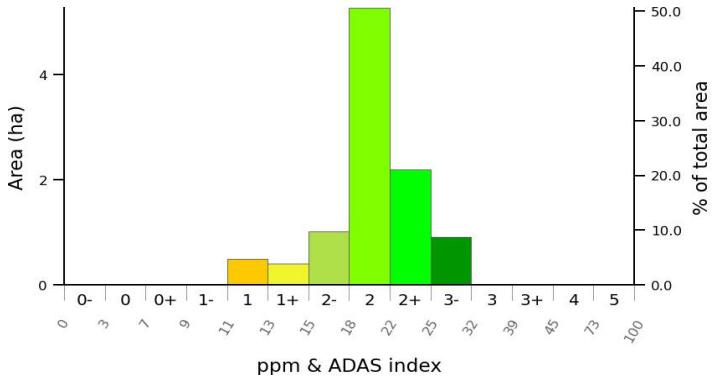
Avg: 7.2 pH, **Area:** 8.34 ha
Sampled: 23 Apr 2024

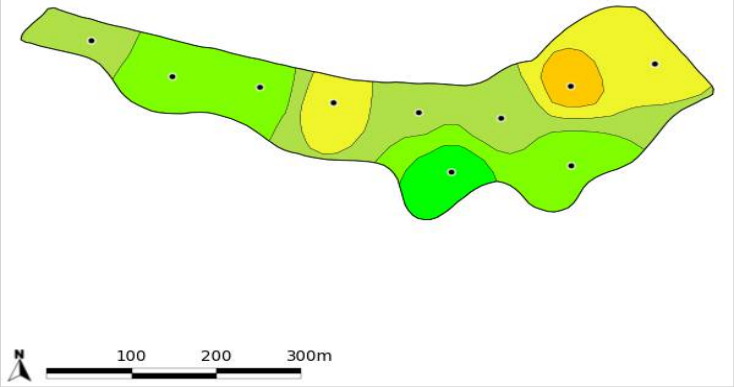




Phosphorus

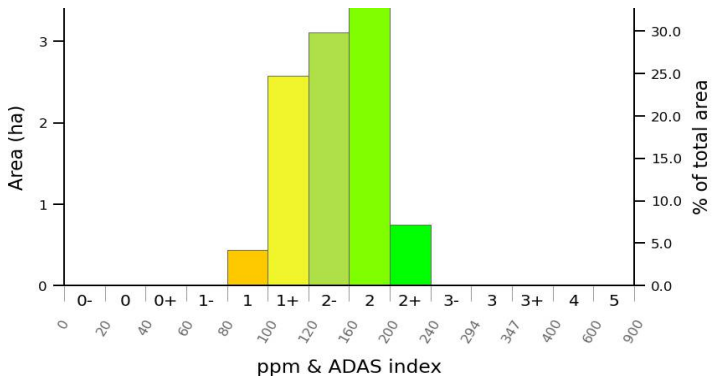
Avg: 20.2 ppm (2), **Area:** 10.42 ha
Sampled: 23 Apr 2024

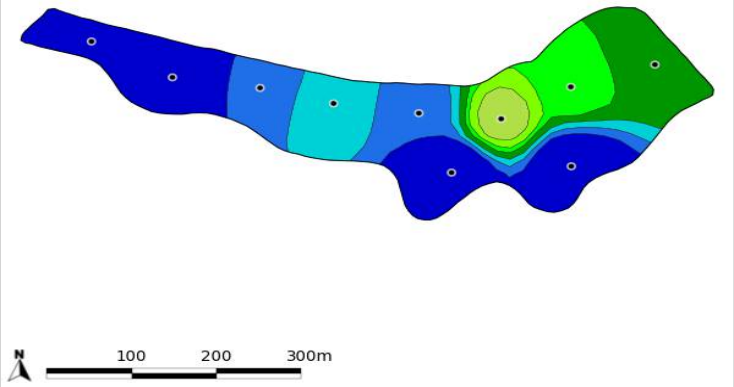




Potassium

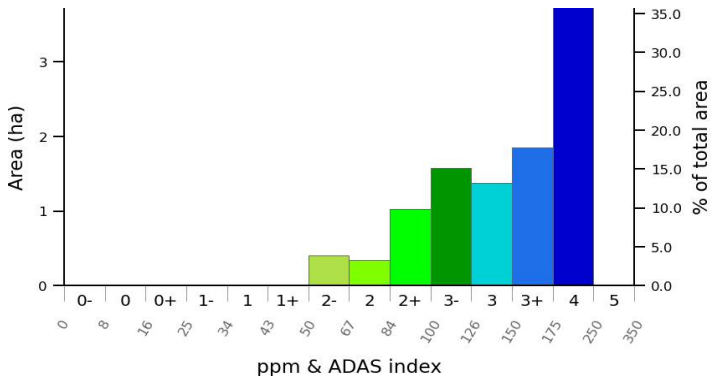
Avg: 151.7 ppm (2-), **Area:** 10.42 ha
Sampled: 23 Apr 2024

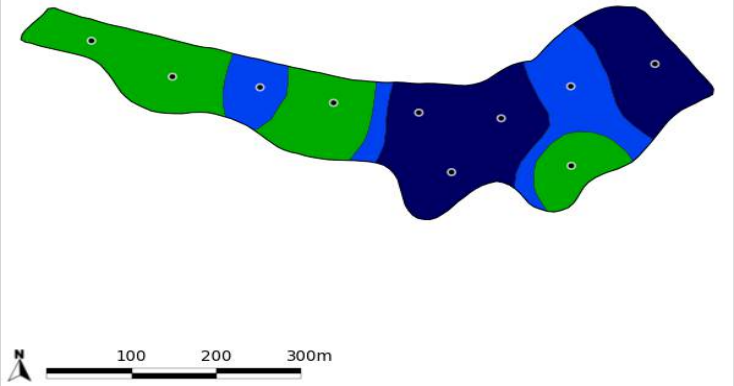




Magnesium

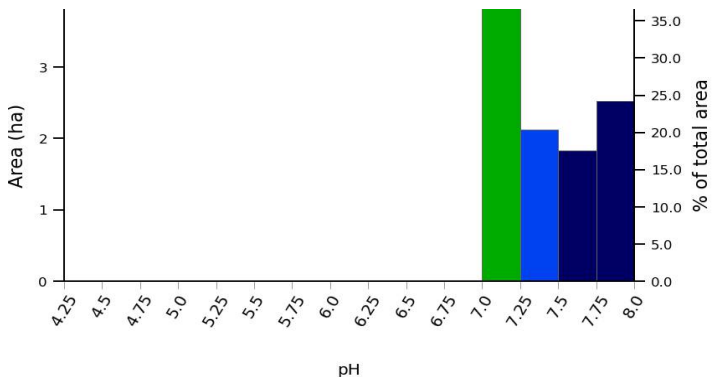
Avg: 150.1 ppm (3+), **Area:** 10.42 ha
Sampled: 23 Apr 2024

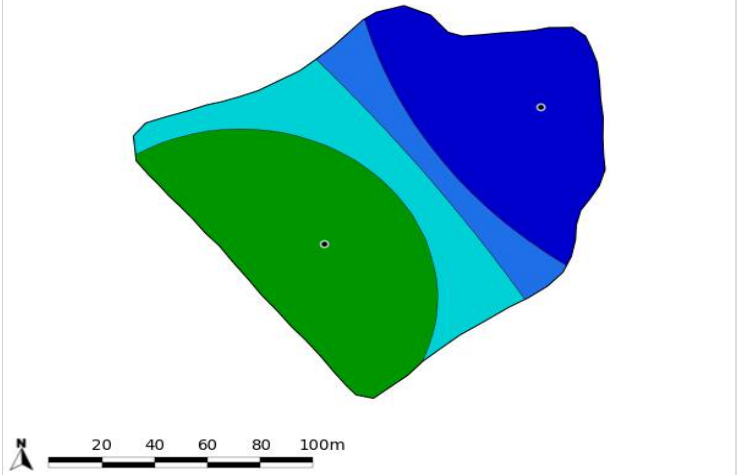




pH

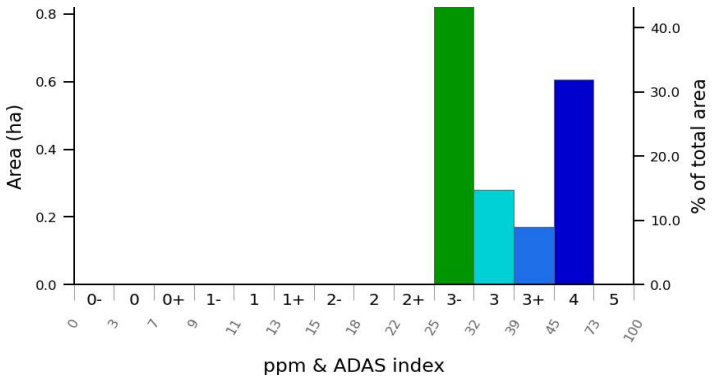
Avg: 7.4 pH, **Area:** 10.42 ha
Sampled: 23 Apr 2024

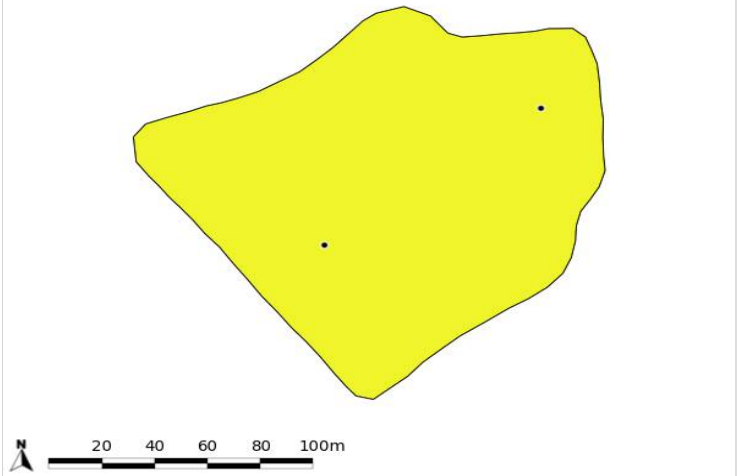




Phosphorus

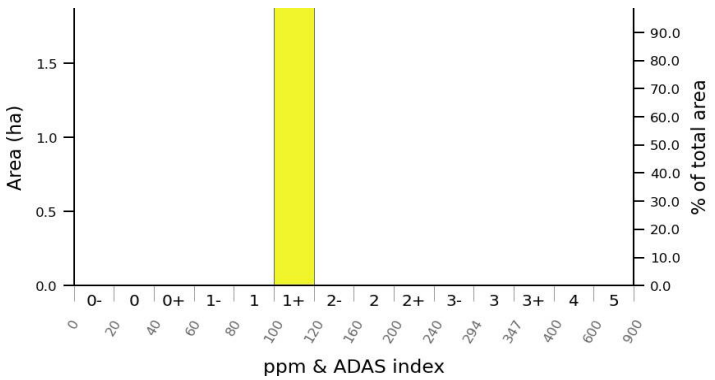
Avg: 38.4 ppm (3), **Area:** 1.9 ha
Sampled: 23 Apr 2024

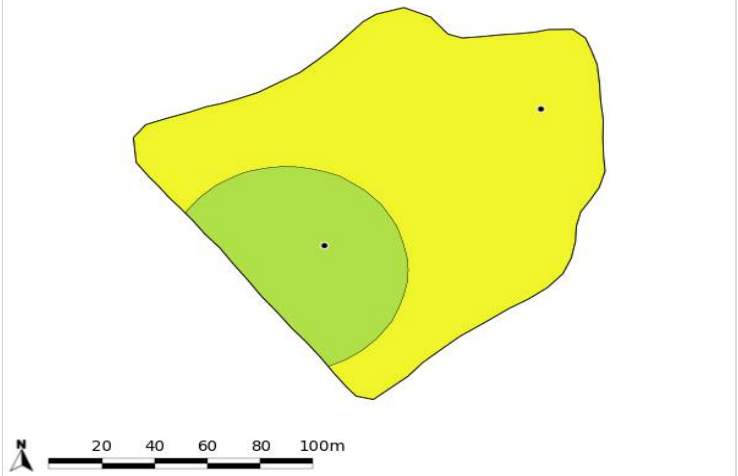




Potassium

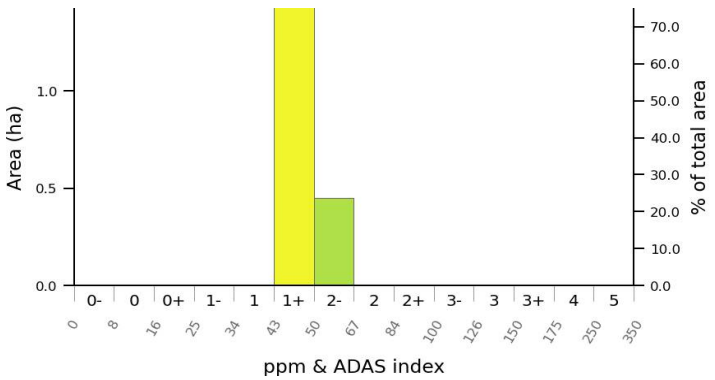
Avg: 108.3 ppm (1+), **Area:** 1.9 ha
Sampled: 23 Apr 2024

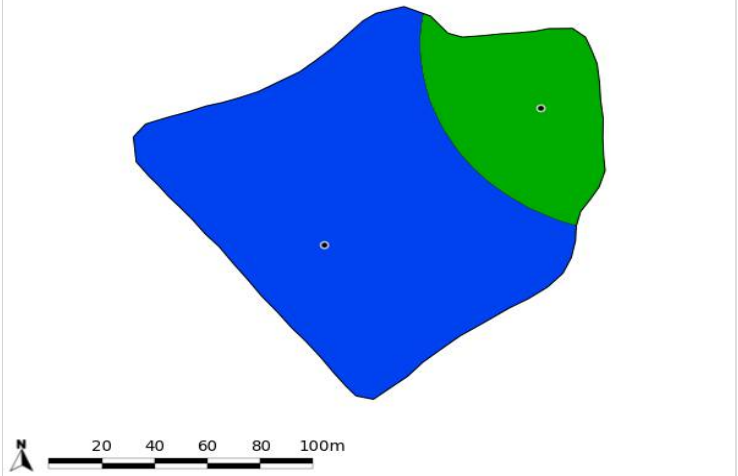




Magnesium

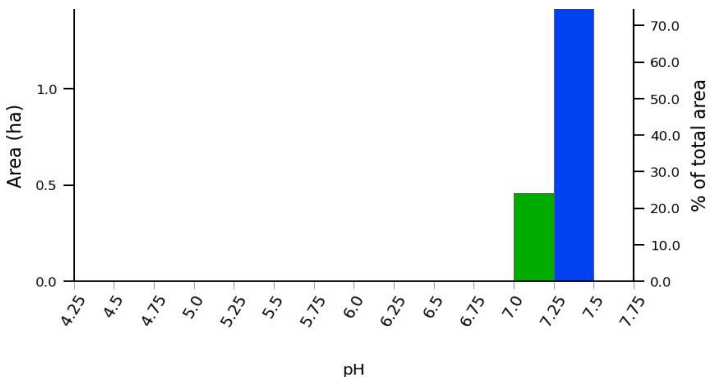
Avg: 49.1 ppm (1+), **Area:** 1.9 ha
Sampled: 23 Apr 2024





pH

Avg: 7.4 pH, **Area:** 1.9 ha
Sampled: 23 Apr 2024



SOIL life ORGANIC MATTER

Client:	**C. M. Bremner & Son**
Farm Name:	**Manor Farm (Soil Life)**
Address:	**The Lodge**
	Wilsthorpe Road, Braceborough
	Stamford
	Lincs.
	PE9 4NX
Report Date:	**24/05/2024**

Soil Organic Matter

Date Sampled	Lab Ref. No	Field Name	OM (Dumas) %	Index
23/04/2024	695463	M5/6 Church Close E & W	5.4	Good
23/04/2024	695472	M3 9 Acre	7.0	High
23/04/2024	695466	M4 4 Acre	8.0	High
23/04/2024	695464	M8 Meadows	6.4	High
23/04/2024	695465	M9 Ruins	5.9	Good
25/04/2024	696290	M10	5.0	Good
25/04/2024	696289	M11	7.3	High
25/04/2024	696291	M12	7.1	High
25/04/2024	696292	M14	3.9	Normal
25/04/2024	696288	M15	3.4	Normal
25/04/2024	696294	M16	5.8	Good
25/04/2024	696293	M18	6.9	High
23/04/2024	695467	M7 Home Field	4.3	Normal
26/04/2024	696295	M1/2 Lodge North & South	5.2	Good

There are a number of methods for analysing OM at the laboratory. The important element is to monitor the OM of soil over time. It is the net changes in OM that should be assessed, particularly making sure that OM levels do not go down. The Dumas method measures the CO2 given off from a soil sample after combusting and is a measure of soil carbon, which is a fixed proportion of organic matter content. The Dumas method is, in our opinion, the more accurate measurement of soil organic matter.