MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Environmental Statement

Volume 3, Annex 3.9: Water vole survey technical report

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Prepared by:

RPS

Prepared for:

Morgan Offshore Wind Limited, Morecambe Offshore Windfarm Ltd

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Glossary

Term	Meaning
400 kV grid connection cables	Cables that will connect the proposed onshore substations to the existing National Grid Penwortham substation.
Applicants	Morgan Offshore Wind Limited (Morgan OWL) and Morecambe Offshore Windfarm Ltd (Morecambe OWL).
Baseline	The status of the environment without the Transmission Assets in place.
EIA Scoping Report	A report setting out the proposed scope of the Environmental Impact Assessment process. The Transmission Assets Scoping Report was submitted to The Planning Inspectorate (on behalf of the Secretary of State) for the Morgan and Morecambe Offshore Windfarms Transmission Assets in October 2022.
Evidence Plan Process	A voluntary consultation process with specialist stakeholders to agree the approach to, and information to support, the Environmental Impact Assessment and Habitats Regulations Assessment processes for certain topics.
Environmental Impact Assessment	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
Expert Working Group	A forum for targeted engagement with regulators and interested stakeholders through the Evidence Plan Process.
Intertidal Infrastructure Area	The temporary and permanent areas between MLWS and MHWS.
Lancashire Environment Record Network	Provider of ecological records within Lancashire area used as part of the desk study data.
Landfall	The area in which the offshore export cables make landfall (come on shore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area at Lytham St. Annes between Mean Low Water Springs and the transition joint bays inclusive of all construction works, including the offshore and onshore cable routes, intertidal working area and landfall compound(s).
Mean High Water Springs	The height of mean high water during spring tides in a year.
Mean Low Water Springs	The height of mean low water during spring tides in a year.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	The offshore and onshore infrastructure connecting the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm to the national grid. This includes the offshore export cables, landfall site, onshore export cables, onshore substations, 400 kV grid connection cables and associated grid connection infrastructure such as circuit breaker compounds. Also referred to in this report as the Transmission Assets, for ease of reading.
Onshore export cables	The cables which would bring electricity from the landfall to the onshore substations.

Term	Meaning
Onshore Order Limits	See Transmission Assets Order Limits: Onshore (below).
Onshore substations	The onshore substations will include a substation for the Morgan Offshore Wind Project: Transmission Assets and a substation for the Morecambe Offshore Windfarm: Transmission Assets. These will each comprise a compound containing the electrical components for transforming the power supplied from the generation assets to 400 kV and to adjust the power quality and power factor, as required to meet the UK Grid Code for supply to the National Grid.
Planning Inspectorate	The agency responsible for operating the planning process for applications for development consent under the Planning Act 2008.
Study area	This is an area which is defined for each environmental topic which includes the Transmission Assets Order Limits as well as potential spatial and temporal considerations of the impacts on relevant receptors. The study area for each topic is intended to cover the area within which an impact can be reasonably expected.
Survey area	The area within which each survey has been undertaken. This may differ from the Study Area as a Survey Area will be based on species or survey-specific guidance on the extent of survey required, which may be limited by, for example, habitat conditions, or be defined in terms of buffer areas around an area of potential impact.
Transmission Assets	See Morgan and Morecambe Offshore Wind Farms: Transmission Assets (above).
Transmission Assets Order Limits: Onshore	The area within which all components of the Transmission Assets landward of Mean High Water Springs will be located, including areas required on a temporary basis during construction and/or decommissioning (such as construction compounds). Also referred to in this report as the Onshore Order Limits, for ease of reading.

Acronyms

Acronym	Meaning
EIA	Environmental Impact Assessment
ES	Environmental Statement
EWG	Expert Working Group
BHS	Biological Heritage Site
Defra	Department for Environment, Food and Rural Affairs
JNCC	Joint Nature Conservation Committee
LERN	Lancashire Environment Record Network
MAGIC	Multi Agency Geographic Information for the Countryside
MLWS	Mean Low Water Springs
MHWS	Mean High Water Springs

Units

Unit	Description
km	Kilometres
m	Metres

1 Water vole survey technical report

1.1 Introduction

1.1.1.1 This document forms Volume 3, Annex 3.9: Water vole survey technical report of the Environmental Statement (ES) prepared for the Morgan and Morecambe Offshore Wind Farms: Transmission Assets (hereafter referred to as 'the Transmission Assets'). The ES presents the preliminary findings of the Environmental Impact Assessment (EIA) process for the Transmission Assets.

1.1.1.2 The purpose of this technical report is to present the results of water vole *Arvicola amphibius* surveys undertaken between April 2023 and June 2024 to inform Volume 3 Chapter 3: Onshore ecology and nature conservation of the ES.

1.1.1.3 The surveys undertaken include inspection of suitable and accessible waterbodies to assess potential presence of water vole. This report details the results of the surveys undertaken to inform the ES.

1.1.2 Study area

1.1.2.1 The study area is intended to cover the area within which an impact can be reasonably expected and describes the geographical extent subject to desk-based research.

1.1.2.2 The study area comprises the Onshore Order Limits and a 2 kilometre (km) buffer (hereafter referred to as the 'the study area'), which was considered sufficient to capture contextual information about bat populations in the local area.

1.1.2.3 The location and geographic extent of the water vole study area is presented in **Figure 1.1** of this technical report.

1.1.3 Survey area

1.1.3.1 The survey area is defined as the area within which each survey has been undertaken and is based on species or site-specific guidance on the extent of survey required. The survey area for water vole (hereafter referred to as the 'survey area') is defined as the water courses present within the Onshore Order Limits and a 50 m buffer, as shown in **Figure 1.1**.

1.1.3.2 As most of the construction works are of short duration and temporary, direct impacts on watercourses have been avoided, and water voles tend to use only immediate terrestrial habitat around water courses, it was considered that a 50m buffer was suitable when considering potential direct and indirect impacts on water vole from the proposed scheme.

1.1.3.3 Adopting a survey area that is greater in extent than the Onshore Order Limits ensures that the ES is accurately informed with data from within the Onshore Order Limits (i.e. that may be subject to direct impacts) and data

from outside the Onshore Order Limits (i.e. that may be subject to indirect impacts).

1.1.4 Contextual data

1.1.4.1 Owing to the iterative design process of the Transmission Assets, some surveys were undertaken further than 50 m from the Onshore Order Limits. These surveys may have been located within, or within the buffer of, previous iterations of the Onshore Order Limits. Nevertheless, information from these surveys have been included in this technical report because they provide context regarding the ecological sensitivity of the wider area and to inform Volume 3, Chapter 3: Onshore ecology and nature conservation of the ES (where relevant). Any contextual information (based on survey data collected from outside the survey area) is clearly marked throughout this annex and is shown on **Figure 1.10** to **Figure 1.17**.

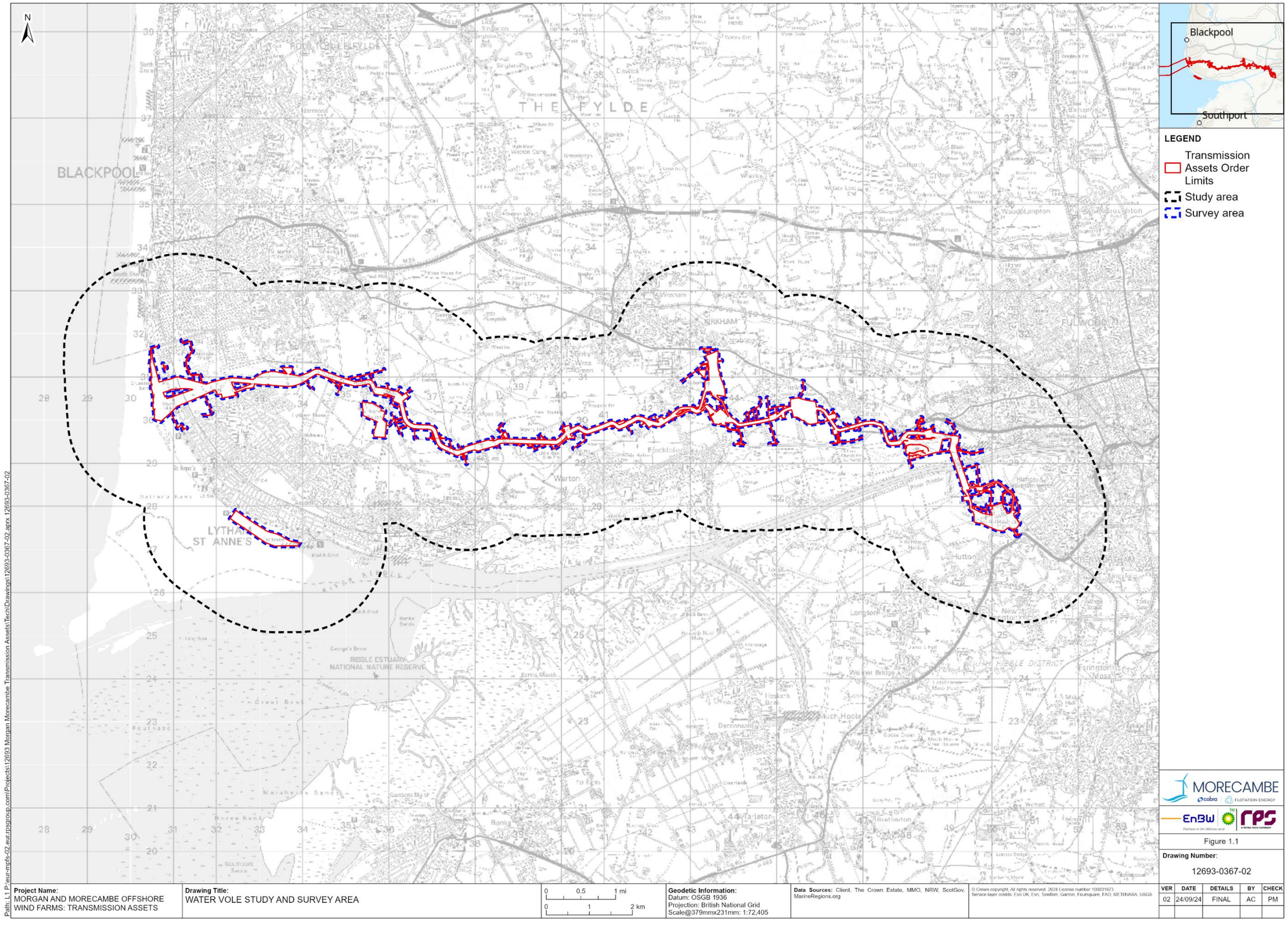

Figure 1.1: Water vole study and survey area

1.1.5 Relevant legislation

1.1.5.1 Two key pieces of legislation are relevant for water vole under English law: the Wildlife and Countryside Act 1981 (, and the Natural Environment and Rural Communities Act 2006, .

1.1.5.2 Water vole are listed in Schedule 5 of the Wildlife and Countryside Act 1981 . As such, under Section 9 of this Act it is an offence to:

- intentionally kill, injure or take a water vole;
- possess or control any live or dead specimen or anything derived from a water vole;
- intentionally or recklessly damage, destroy or obstruct any structure or place used for shelter or protection by a water vole; or
- intentionally or recklessly disturb a water vole while occupying a structure or place which it uses for that purpose.

1.1.5.3 Water vole are in the list published by the Secretary of State, as is required by Section 41 of the Natural Environment and Rural Communities Act 2006. As such, it is a species of principal importance (first identified as priority habitats and species in the UK Biodiversity Action Plan).

1.1.5.4 Schedule 9 of The Wildlife and Countryside Act, 1981 makes it illegal to distribute allow the release of American mink *Neogale vison* into the wild. American mink are described as a voracious predator of water vole.

1.1.6 Consultation

1.1.6.1 In October 2022, the Applicants submitted an EIA Scoping Report to the Planning Inspectorate, which described the scope and methodology for the technical studies being undertaken to provide an assessment of any likely significant effects for the construction, operation and maintenance and decommissioning phases of the Transmission Assets.

1.1.6.2 The scope, methodology and findings of the water vole surveys were discussed and agreed with stakeholders via regular onshore Ecology Expert Working Group (EWG) meetings. Further details regarding consultation were undertaken with respect to onshore ecology, including water vole surveys, which can be found in Volume 3, Chapter 3: Onshore ecology and nature conservation of the ES.

1.2 Methodology

1.2.1 Overview

1.2.1.1 In order to establish a baseline of potential water vole receptors within the survey area, a combination of desk studies and site-specific surveys were undertaken in 2023 and 2024.

1.2.1.2 The results of the desk studies are described in Volume 3, Annex 3.1: Onshore ecology desk study technical report of the ES and summarised in **Table 1.1** below.

1.2.2 Desk study

1.2.2.1 Water vole data was collected from existing desk studies and datasets. These are summarised in **Table 1.1** below and are shown in Volume 3, Annex 3.1: Onshore ecology desk study technical report of the ES.

Table 1.1: Summary of key desk sources

Title	Source	Year	Author
Lancashire Environmental Records Network (LERN).	LERN data share site.	2024	LERN
Multi Agency Geographic Information for the Countryside (MAGIC).	Department for Environment, Food and Rural Affairs (Defra).	2024	Defra
UK Protected Area Joint Nature Conservation Committee (JNCC).	JNCC website.	2024	JNCC

1.2.3 Site-specific surveys

Scoping survey

1.2.3.1 An initial habitat assessment was undertaken as part of the extended Phase 1 survey (see Volume 3, Annex 3.3: Phase 1 habitat, national vegetation classification and hedgerow technical report of the ES) and an understanding of where the greatest impacts would occur (based on the Onshore Order Limits and the Intertidal Infrastructure Area at the time of the survey), were used to inform the location of water vole surveys within the survey area.

1.2.3.2 Waterbodies, watercourses, minor ditches, or their adjacent habitat, identified as unsuitable for water vole (based on Dean *et al* (2016)) were scoped out during this process, with no further surveys required. Suitability was based on known preferences of the species, including factors like flow, depth, presence of banks they could dig holes in, degree of shade and presence of plants for

foraging. As set out in **section 1.1.6**, the methodology and findings of the were discussed and agreed with stakeholders via regular EWG meetings.

1.2.4 Water vole surveys

1.2.4.1 The proposed approach followed the methods set out in the Water Vole mitigation handbook (Dean *et al*., 2016).

1.2.4.2 The surveys covered the Onshore Order Limits, including temporary works, as well as 50 m buffer upstream and downstream from the affected areas.

1.2.4.3 Field signs were searched for wherever water vole were likely to be present, including the banks of the watercourses extending 1 m from the water's edge and a further 1 m up the embankment, where appropriate.

1.2.4.4 Surveys were carried out from within the edge of the embankments to allow for a close search for signs of water vole, however some surveys required wading within the watercourse or along the edge of the watercourse.

1.2.4.5 During each survey visit, the banks of each watercourse/waterbody (up to 2 m from the edge of the water) were inspected for field signs and evidence of water vole activity including:

- the presence of latrines, runs, footprints and feeding remains;
- the presence of burrows (both active and inactive);
- individual droppings; and
- sightings and/or sounds (characteristic sound entering the water) of individuals.

1.2.4.6 Information and results were recorded on ArcGIS Field Maps, including:

- a waterbody reference;
- signs of water vole;
- a count of signs;
- a location; and
- photographs including a site plan showing the location of any of the field signs listed above.

1.2.4.7 The location of any use of habitats by non-target species e.g., bank vole *Myodes glareolus,* brown rat *Rattus norvegicus* etc., were recorded within the notes section on ArcGIS Field Maps.

1.2.4.8 Where there was any uncertainty over water vole droppings and it was found that droppings cannot be definitively identified in the field, a small sample (considered to represent droppings from a single species) would be collected and sealed in a plastic bag marked with the:

- date sample collected (day/month/year);
- survey location (parcel code);
- GPS co-ordinates;
- suspected species; and

- surveyor name.

1.2.4.9 The sample would be stored in a cool, dry place until the completion of the survey in that area. DNA analysis was undertaken if considered appropriate, where the survey has found no other definitive evidence of the presence of water vole within the respective survey area in order to help determine presence/absence. As no droppings have been found in surveys to inform the ES this process has not been used.

1.2.4.10 Following completion of field sign data collection, where evidence of water vole presence was found, the population size of the water voles was calculated . This was based on the standard recognised method for calculating the population size, namely Morris *et. al*. (1998).

1.2.4.11 Where possible, two survey visits were conducted over the course of the breeding season, one 'early season' during the period mid-April to the end of June, and the second 'late season' during the period between July to September. Survey visits were spaced at least two months apart.

1.2.4.12 A second visit was scoped out if during the first visit, likely absence was confirmed, or due to poor habitat quality and/or significant barriers to dispersal being identified.

1.2.4.13 Surveys aimed to avoid following periods of heavy rainfall, as field signs can be washed away. In general, where possible, survey visits were timed to avoid survey when water levels are high, or when any management works have recently taken place.

Limitations

1.2.4.14 Every attempt was made to enter every watercourse throughout the survey area. However, some areas were overgrown with bramble and hawthorn, had steep banks, and/or with barbed wire fences, so were deemed unsafe to enter.

1.2.4.15 Limited access resulted in some waterbodies receiving no surveys, with others having incomplete survey data due to the timing or withdrawal of access. The extent of areas where no access was granted can be seen on **Figure 1.2** to **Figure 1.9** of this technical report below. Notwithstanding, the overall coverage of the water vole surveys was considered extensive enough that access issues are not considered to present a limitation to the survey data.

1.2.4.16 Surveys undertaken in June 2023 followed an extended period of dry weather with hot temperatures where most field ditches were dry. This means evidence of water voles, including signs of use by water voles were less likely to be recorded during this period.

1.2.4.17 Some of the surveys undertaken in April 2024 followed periods of heavy rainfall. This means that access was at times difficult and water vole evidence could have been washed away. Further 'late season' water vole surveys are ongoing at the time of DCO submission, which will be undertaken in suitable weather conditions, where evidence is more likely to be recorded following the breeding season.

1.3 Survey results

1.3.1 Desk study results

1.3.1.1 The desk study data provided by LERN contained five records for water vole between 2014 and 2020 within 2 km of the Onshore Order Limits. The records are located towards the western end of Onshore Order Limits, with two associated with Lytham Moss Biological Heritage Site (BHS) and three to the north of Lodge Lane, east of Saltcotes.

1.3.1.2 Two small sections of the Ribble Estuary Site of Special Scientific Importance (SSSI) and National Nature Reserve (NNR) are located within the Onshore Order Limits. The description associated with the desk study record for these designated sites states that the Ribble Estuary Site SSSI and NNR are a stronghold for water vole.

1.3.1.3 Refer to Volume 3, Annex 3.1: Ecology desk study technical report of the ES for more details and locations.

1.3.2 Site survey results

1.3.2.1 Waterbodies where further water vole surveys were scoped out, following the Phase 1 habitat survey, habitat suitability assessment or proximity to the Transmission Assets, are shown on **Figure 1.2** to **Figure 1.9**.

1.3.2.2 As a result of the scoping surveys, 91 watercourses and 39 waterbodies were considered as requiring further water vole surveys. A total of nine waterbodies and watercourses were not subject to any scoping surveys for water vole due to access permissions not being granted.

1.3.2.3 The River Ribble, the largest river associated with the scheme, was scoped out mainly due to its high flow rate, susceptibility to flooding, having a high tidal range, and likely presence of predator species, including but not limited to, otter and pike.

1.3.2.4 Waterbodies where surveys were undertaken, and the number of surveys undertaken per watercourse and waterbody to date, are shown on **Figure 1.10** to **Figure 1.17**.

1.3.2.5 **Appendix A**: Water vole survey raw data of this technical report shows the number of surveys undertaken to date for each identified waterbody and watercourse across the Onshore Order Limits and survey area and associated survey timings. In these tables V1 refers to ‘early season’ surveys undertaken between mid-April and June, with V2 referring to ‘late season’ surveys undertaken between July and September.

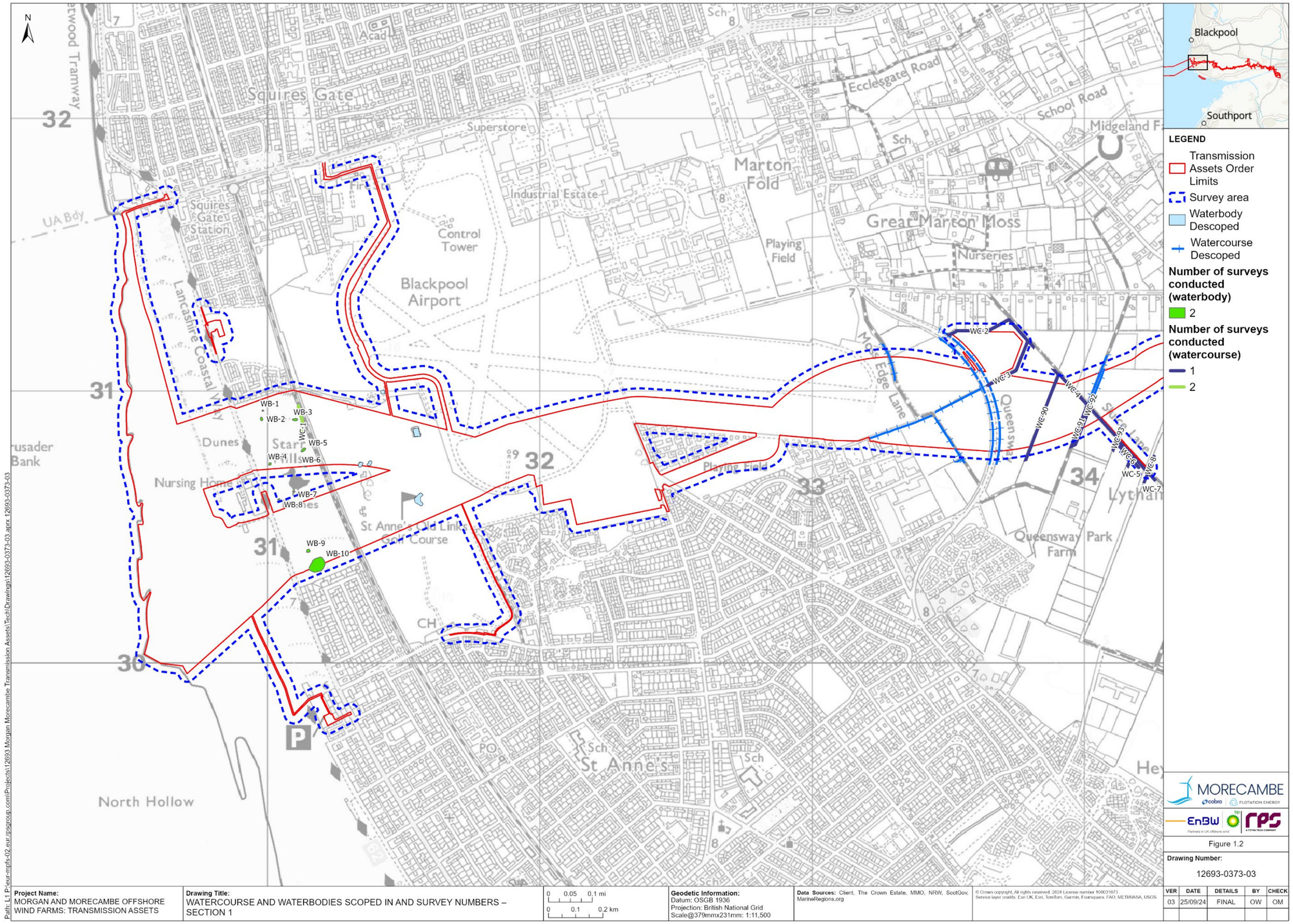

Figure 1.2: Watercourse and waterbodies scoped in and survey numbers – Section 1

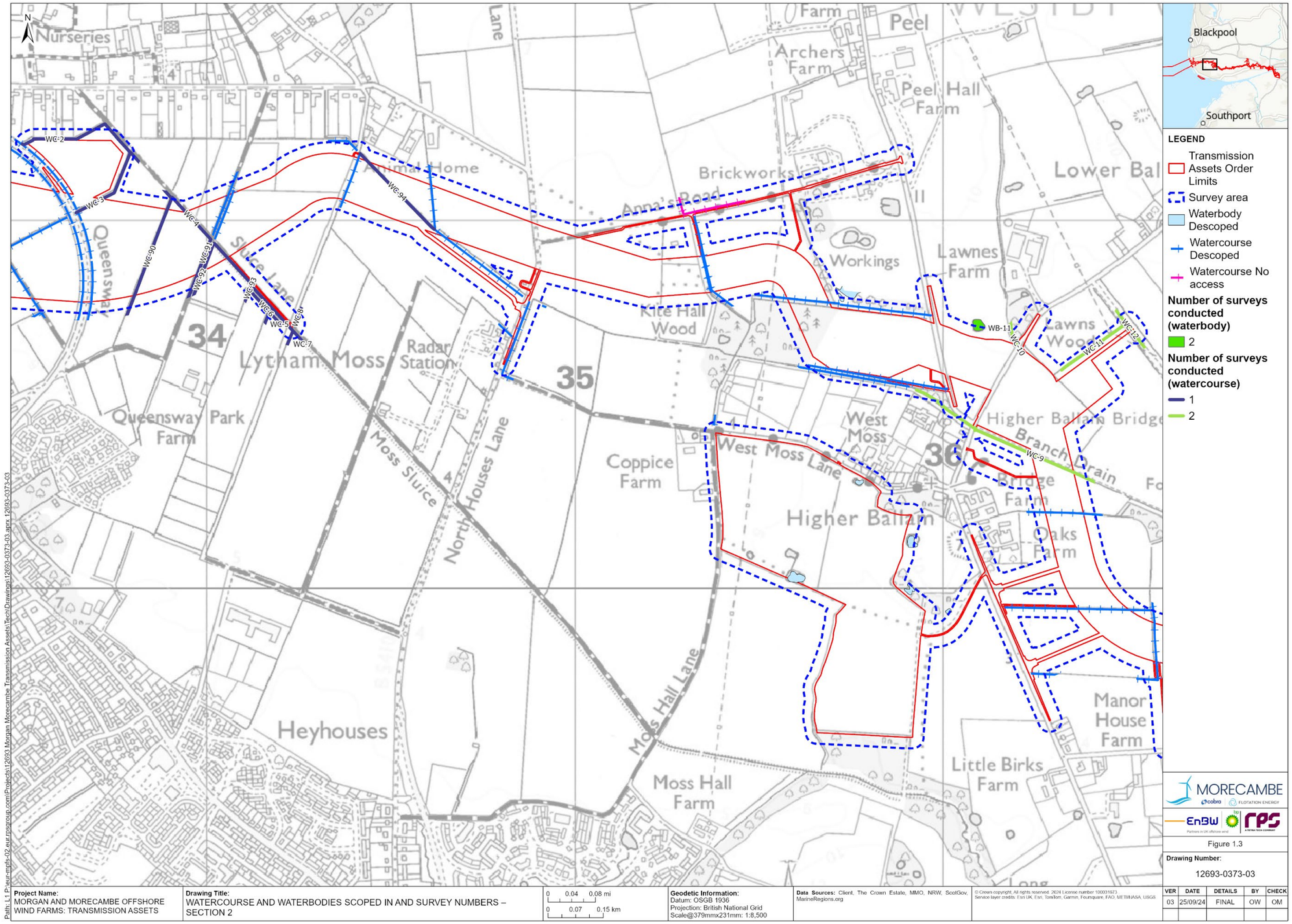

Figure 1.3: Watercourse and waterbodies scoped in and survey numbers – Section 2

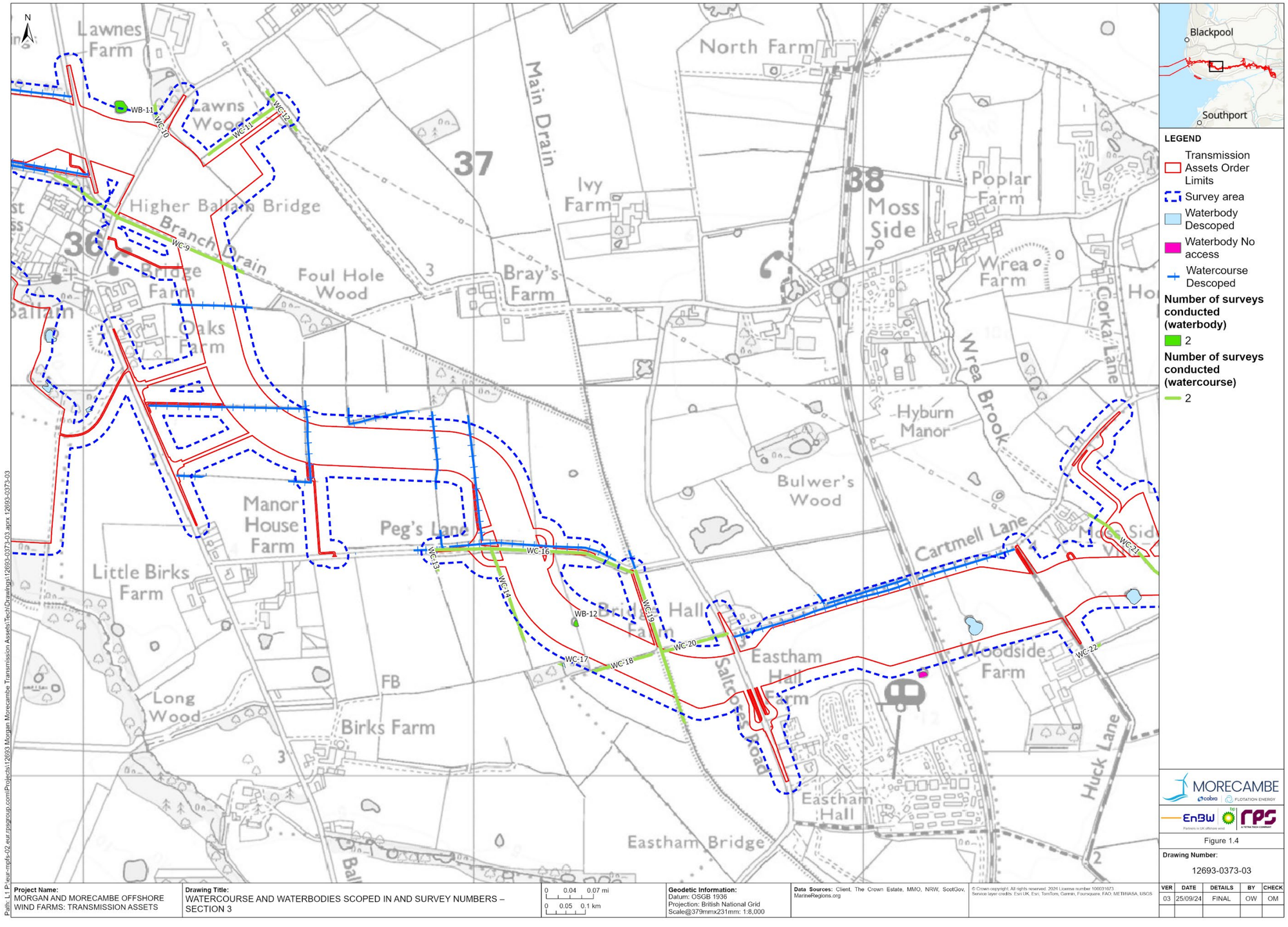

Figure 1.4: Watercourse and waterbodies scoped in and survey numbers – Section 3

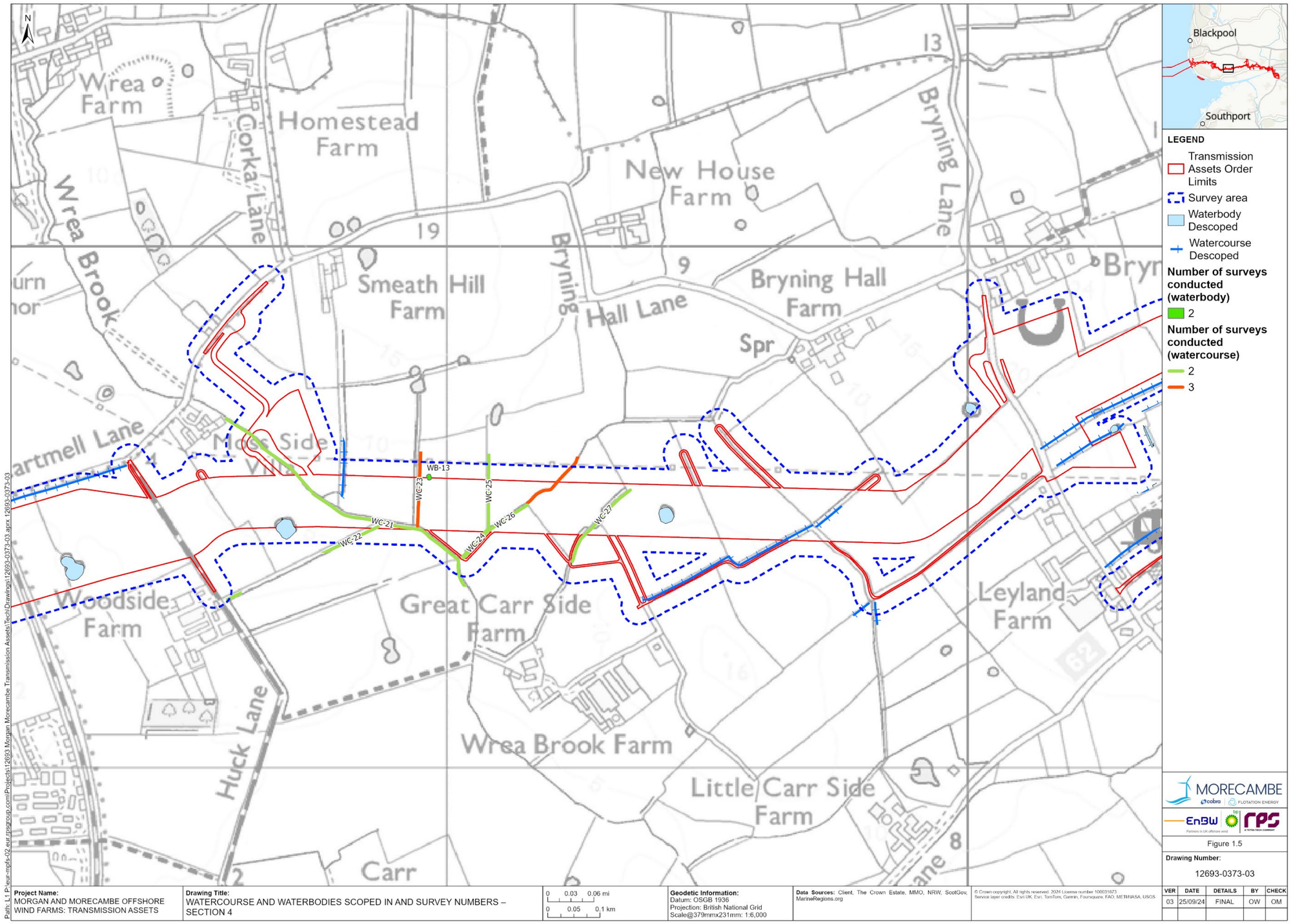

Figure 1.5: Watercourse and waterbodies scoped in and survey numbers – Section 4

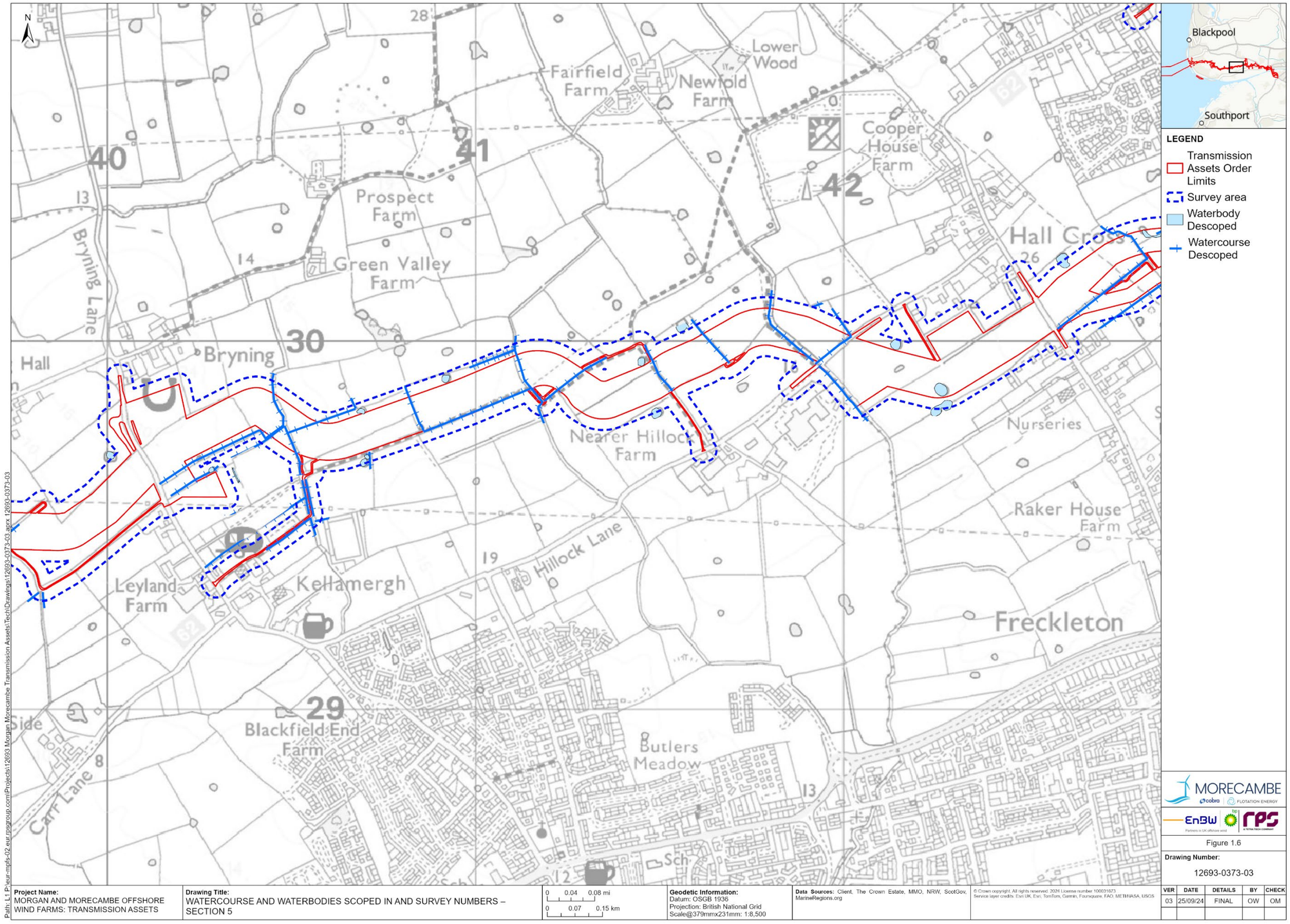

Figure 1.6: Watercourse and waterbodies scoped in and survey numbers – Section 5

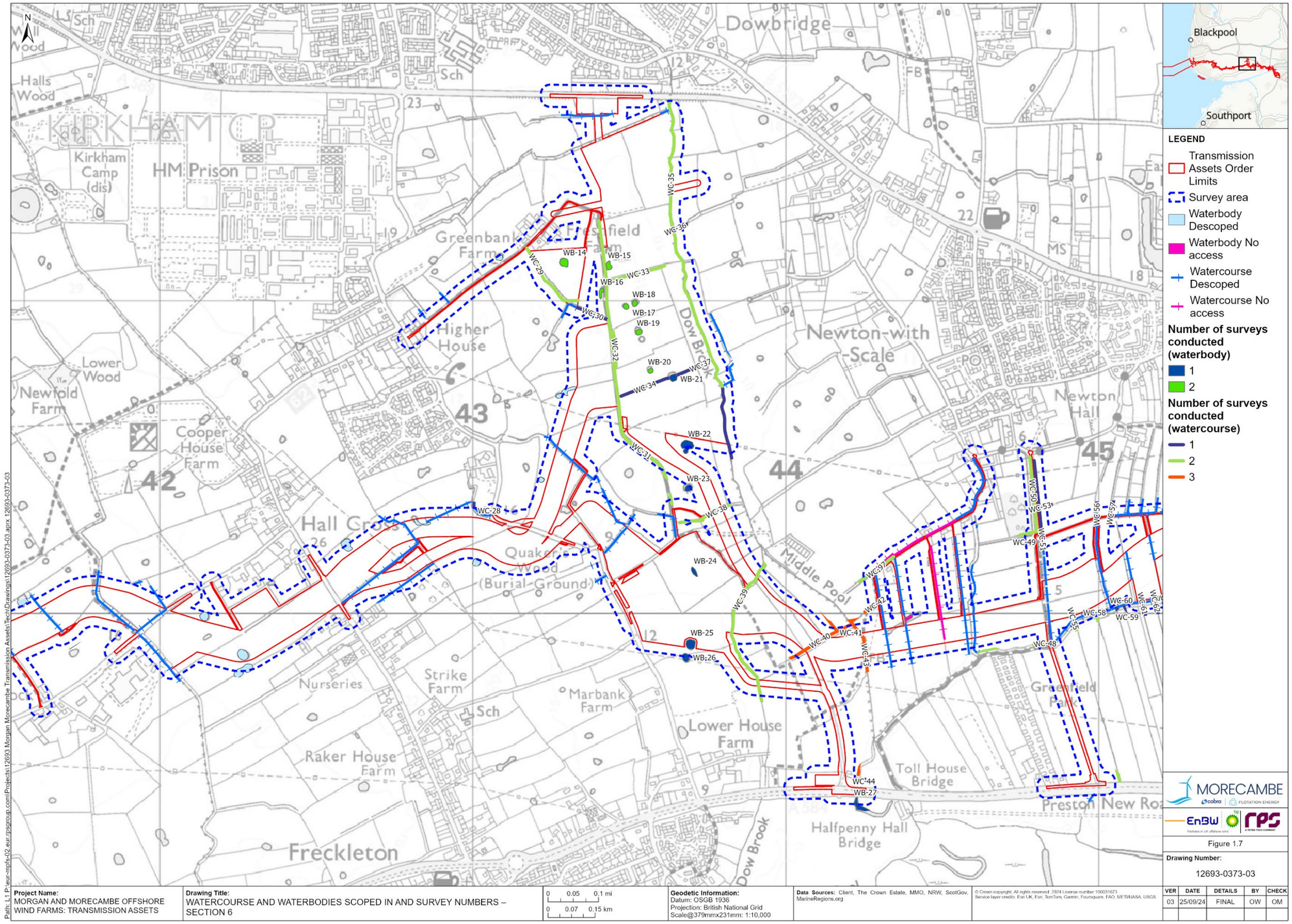

Figure 1.7: Watercourse and waterbodies scoped in and survey numbers – Ssection 6

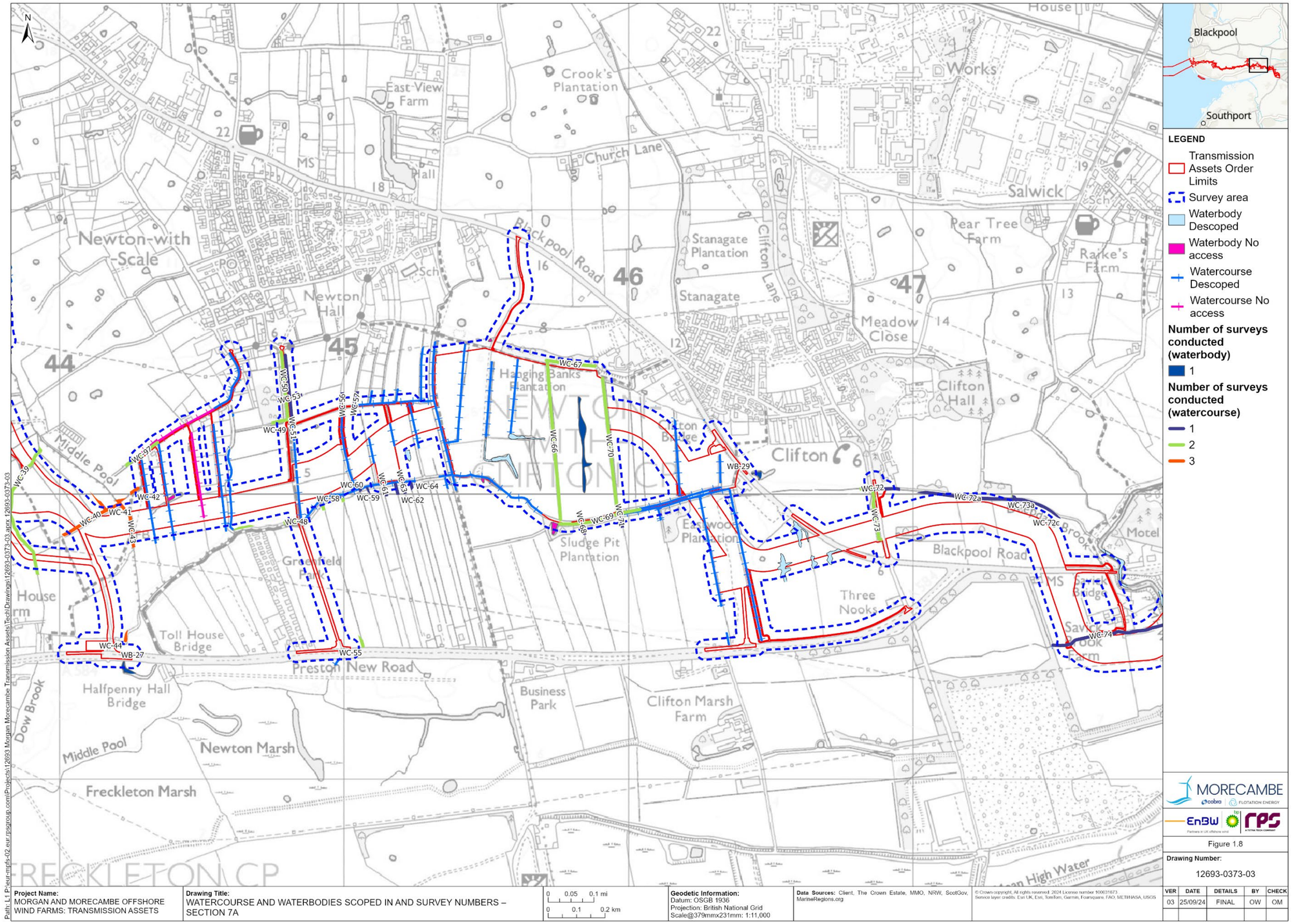

Figure 1.8: Watercourse and waterbodies scoped in and survey numbers – Section 7A

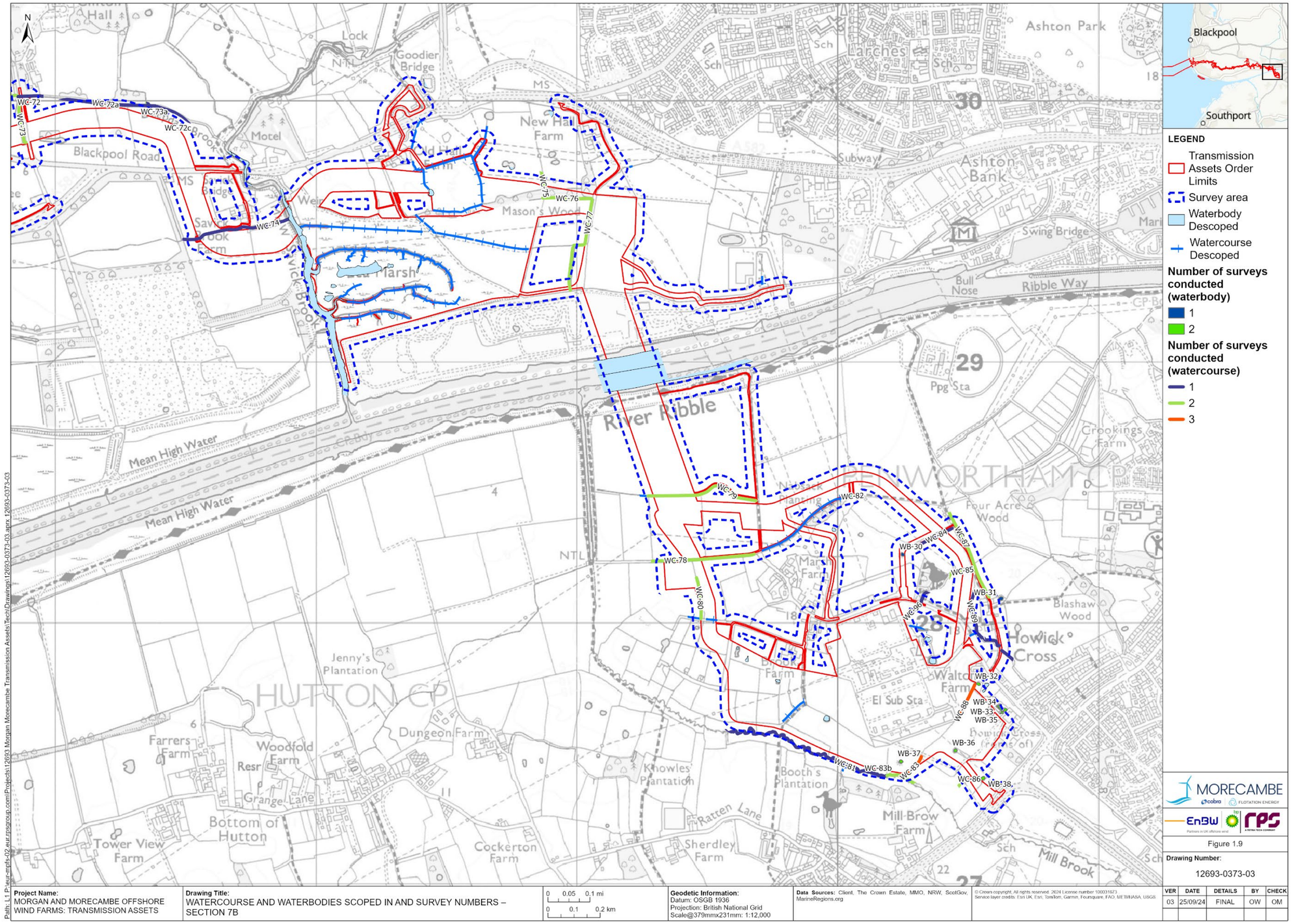

Figure 1.9: Watercourse and waterbodies scoped in and survey numbers – Section 7B

1.3.2.6 A total of 12 potential water vole burrows were recorded within the Onshore Order Limits. Most of these potential burrows (7) were recorded along the branch drain (watercourse 94, **Figure 1.11**) located west of North Houses Lane with others (3) recorded along watercourse 84 **(Figure 1.17**) towards the southern end of Onshore Order Limits. No other signs of water vole were recorded in conjunction with the burrows. However, evidence of American mink *Neogale vison* was recorded within 70 m of the potential burrows located at watercourse 94 (**Figure 1.11**). The American mink is an invasive non-native species listed under Schedule 9 of the Wildlife and Countryside Act 1981 and predator of water vole. Mink predate heavily on water vole and can result in the loss of water vole populations in an area.

1.3.2.7 A total of 21 potential water vole burrows were identified within the 50 m survey buffer. These were recorded along watercourses 4, 9, 30, 72, 81, 89 and 96. Notably, the only potential burrow recorded in association with another water vole field sign was recorded along watercourse 89 (**Figure 1.17)** where three sets of feeding remains (*Juncus* sp.) indicative of water vole (gnawed at 45° angle) were recorded within approximately 50 m of the potential burrow.

1.3.2.8 Evidence of mink was recorded at three locations across the Onshore Order Limits during the surveys. Evidence comprised old scat recorded towards the western side of the Onshore Order Limits associated with a drain which meets watercourse 94 (**Figure 1.11)** in the south, along Dow Brook (watercourse 39, **Figure 1.15**) within the central section of the Onshore Order Limits and recorded at the south eastern end of the Onshore Order Limits (adjacent to watercourse 81, **Figure 1.17**). The locations of the evidence of mink within the Onshore Order Limits correlates with evidence of potential water vole burrows where only the burrow was found and no further evidence such as droppings or feeding signs that would help establish presence in an area.

1.3.2.9 The results of the water vole surveys undertaken in 2023 and 2024 are summarised in **Table 1.2** below and shown on **Figure 1.10** to **Figure 1.17**. It should be noted that potential burrows have been grouped under mapping points therefore one point on the map may represent more than one potential burrow in an area.

Table 1.2: Results of water vole surveys

Watercourse number	Field sign	Number of field signs	
		Within Onshore Order Limits	Within the survey area
4	Potential burrow	1	2
9	Potential burrow	-	6
30	Potential burrow	-	3
72	Potential burrow	-	1
81	Potential burrow	-	3
84	Potential burrow	3	-

Watercourse number	Field sign	Number of field signs	
		Within Onshore Order Limits	Within the survey area
89	Potential burrow	-	2
	Feeding remains	-	3
94	Potential burrow	7	-
96	Potential burrow	-	1
97	Potential burrow	1	-
	Total	**12**	**21**

1.3.2.10 Additionally, 25 field signs for water vole were recorded outside of the survey area. The majority of these were recorded outwith the western end of survey area, with one feeding sign recorded to the south-east of Queensway Park Farm (**Figure 1.10**)..

1.3.2.11 In addition, 24 of the 25 contextual signs recorded were potential burrows, with the remaining sign being a feeding sign. These contextual results are shown on **Figure 1.10** to **Figure 1.17** to provide context for water vole within the study area.

1.3.2.12 Incidental evidence recorded for other mammals, such as brown rat *Rattus norvegicus* recorded during the surveys were recorded but have not been included in this technical report.

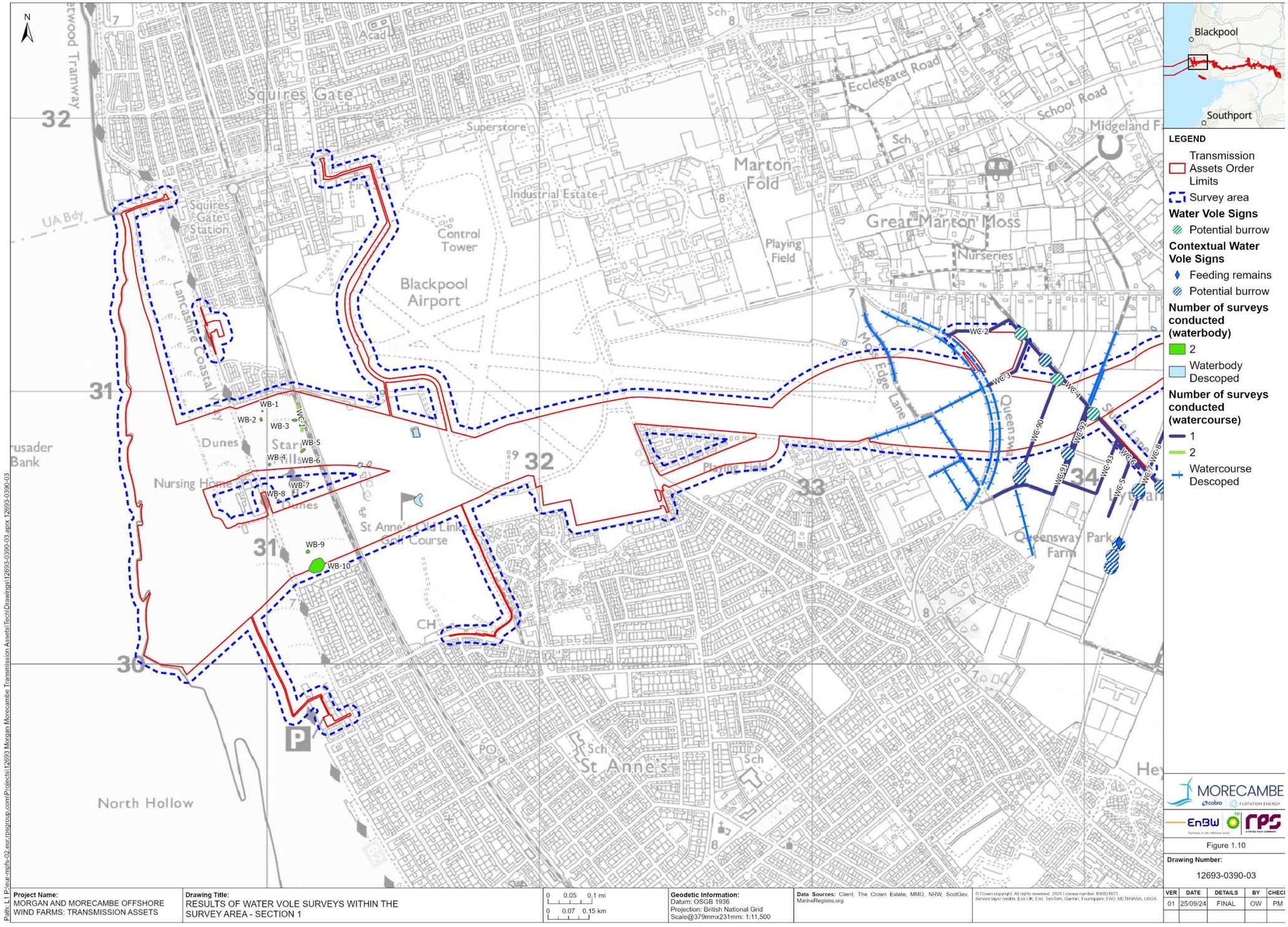

Figure 1.10: Results of Water Vole surveys within the Survey Area - Section 1

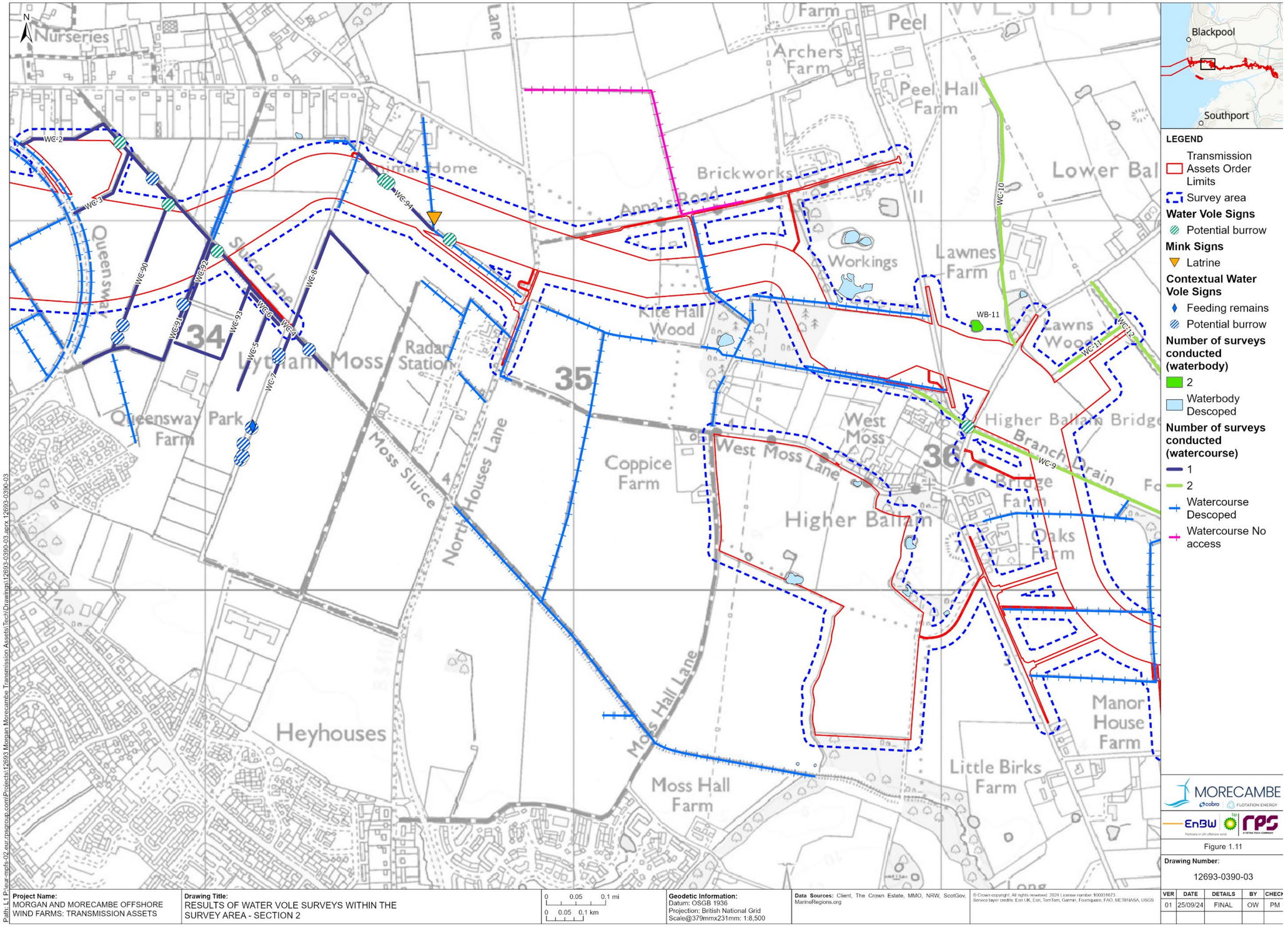

Figure 1.11: Results of Water Vole surveys within the Survey Area - Section 2

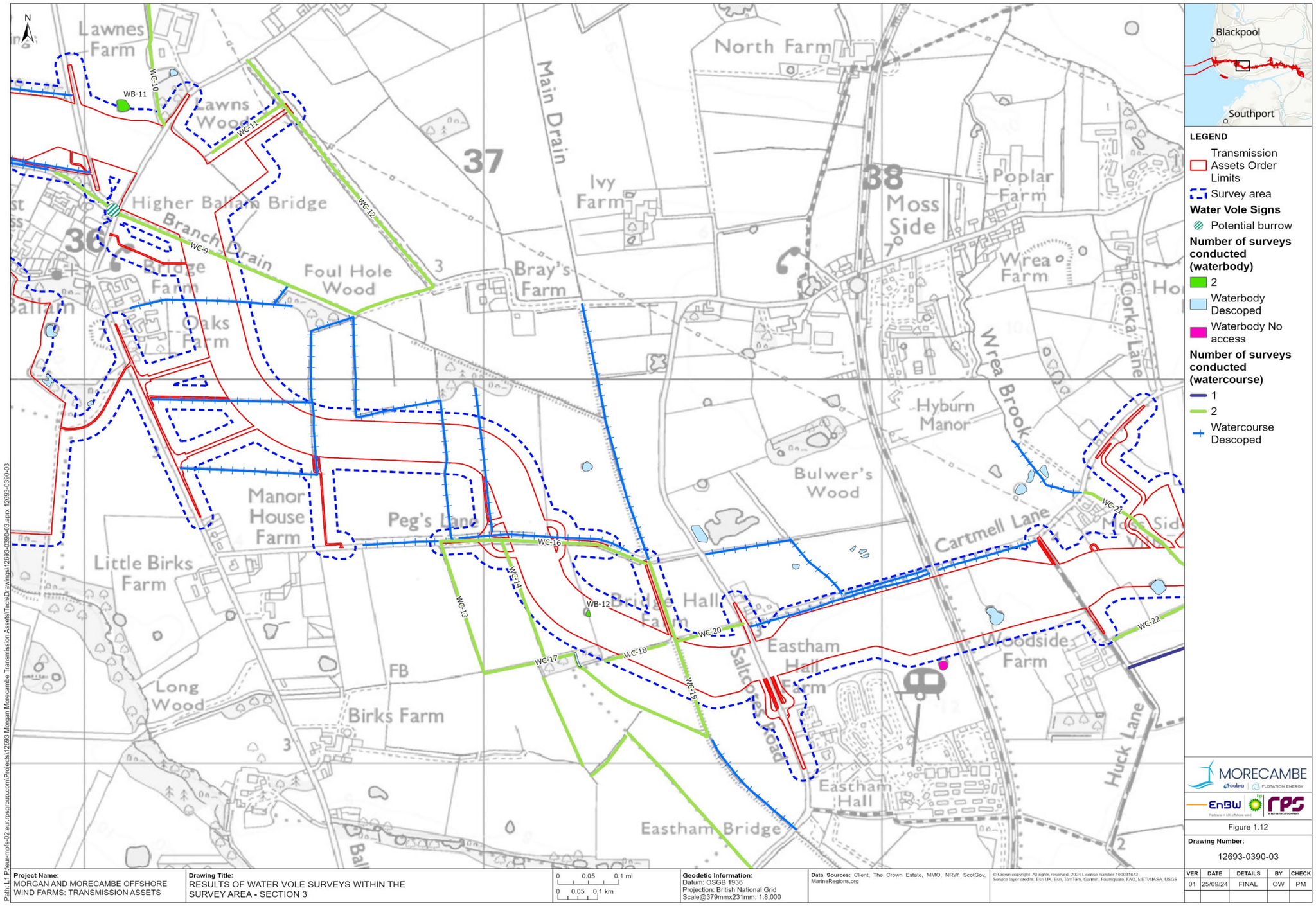

Figure 1.12: Results of Water Vole surveys within the Survey Area - Section 3

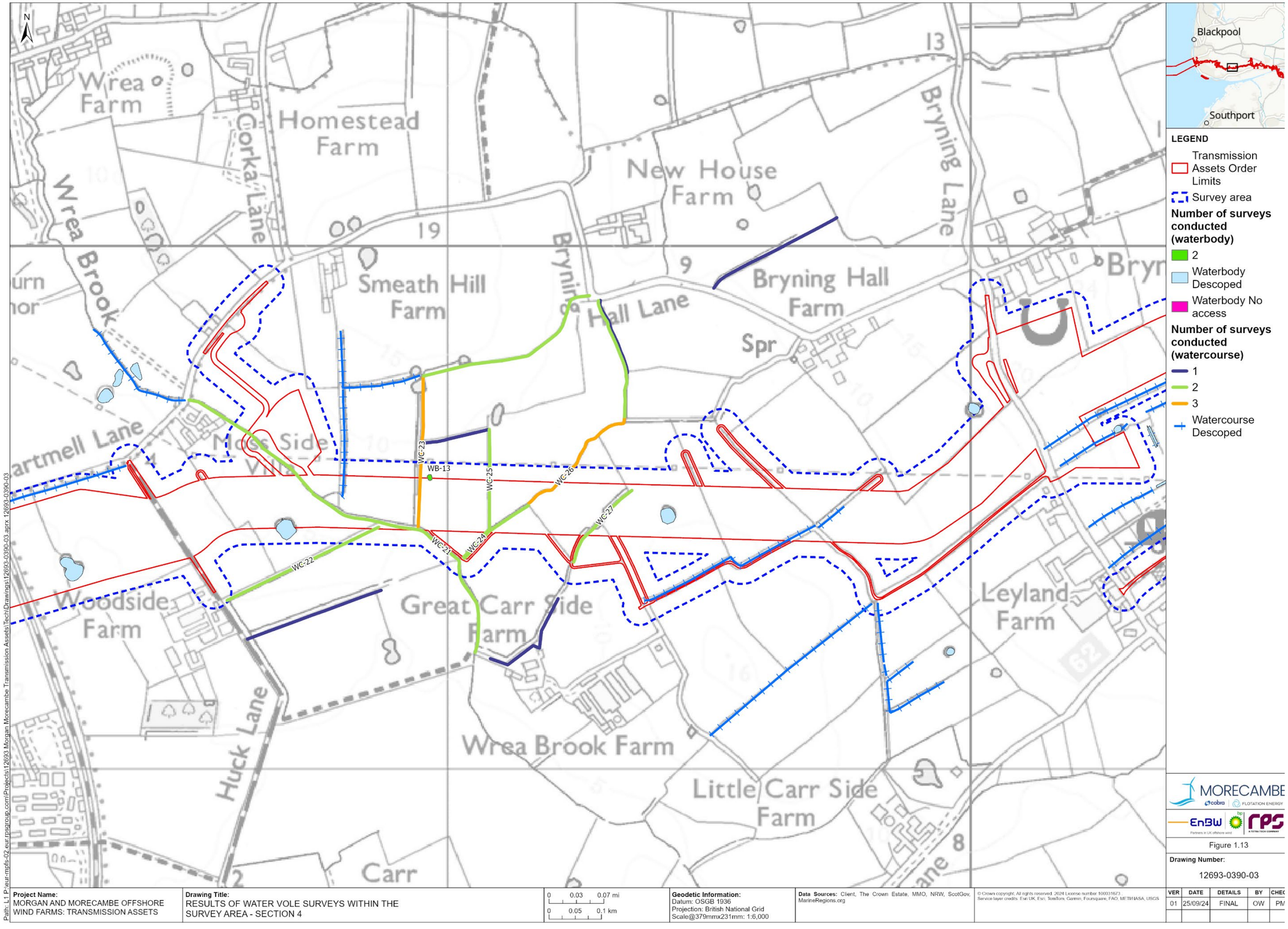

Figure 1.13: Results of Water Vole surveys within the Survey Area - Section 4

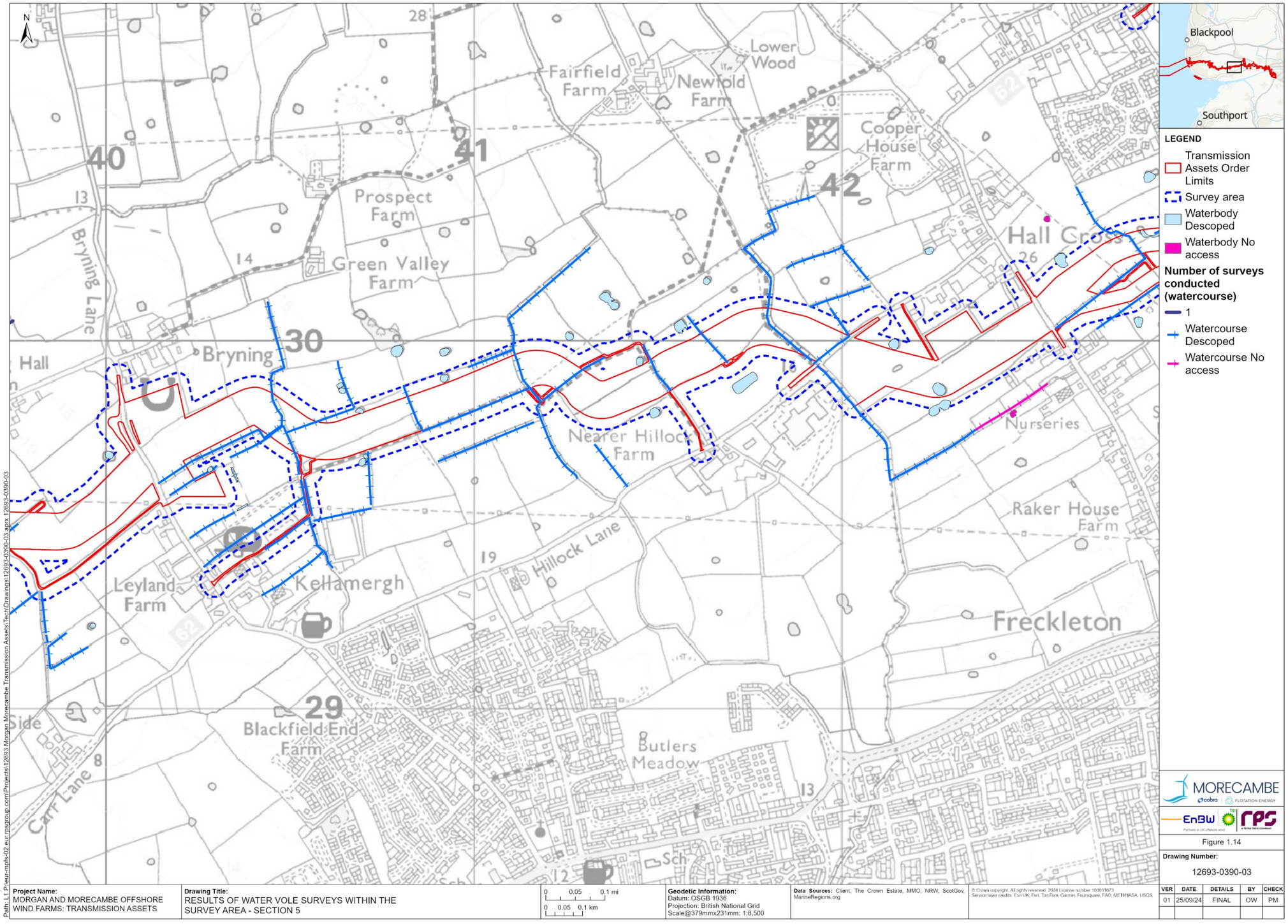

Figure 1.14: Results of Water Vole surveys within the Survey Area - Section 5

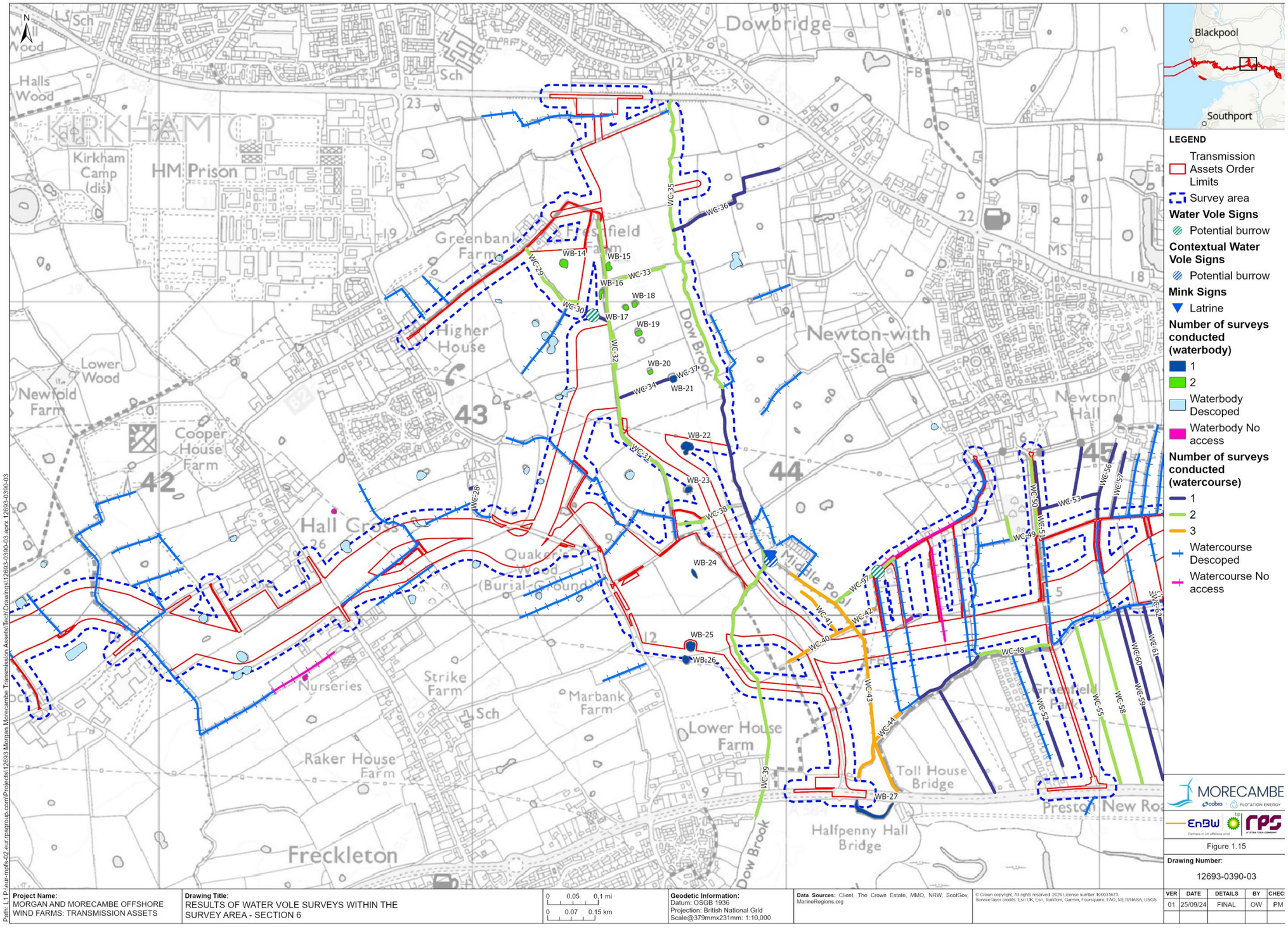

Figure 1.15: Results of Water Vole surveys within the Survey Area - Section 6

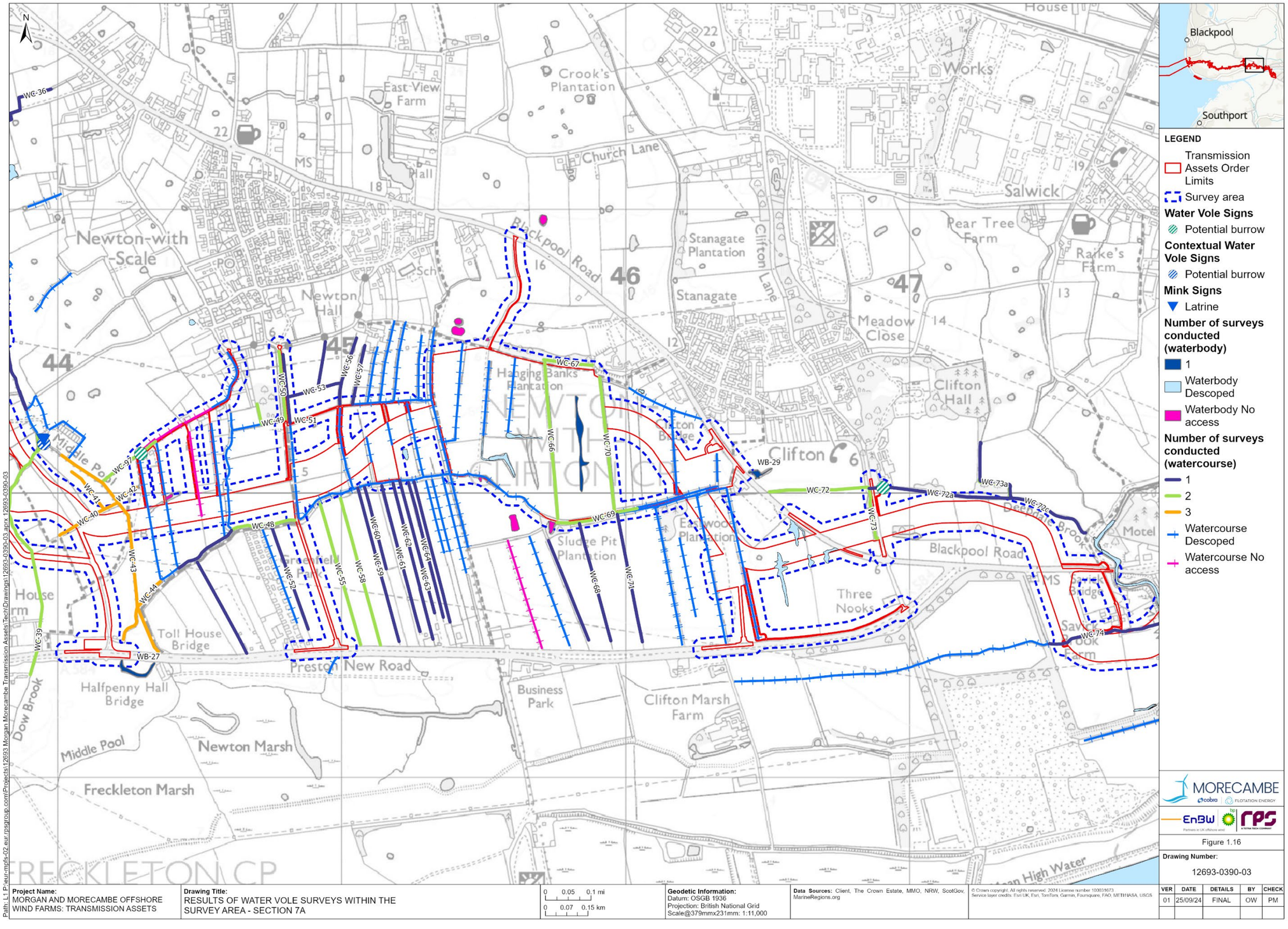

Figure 1.16: Results of Water Vole surveys within the Survey Area - Section 7A

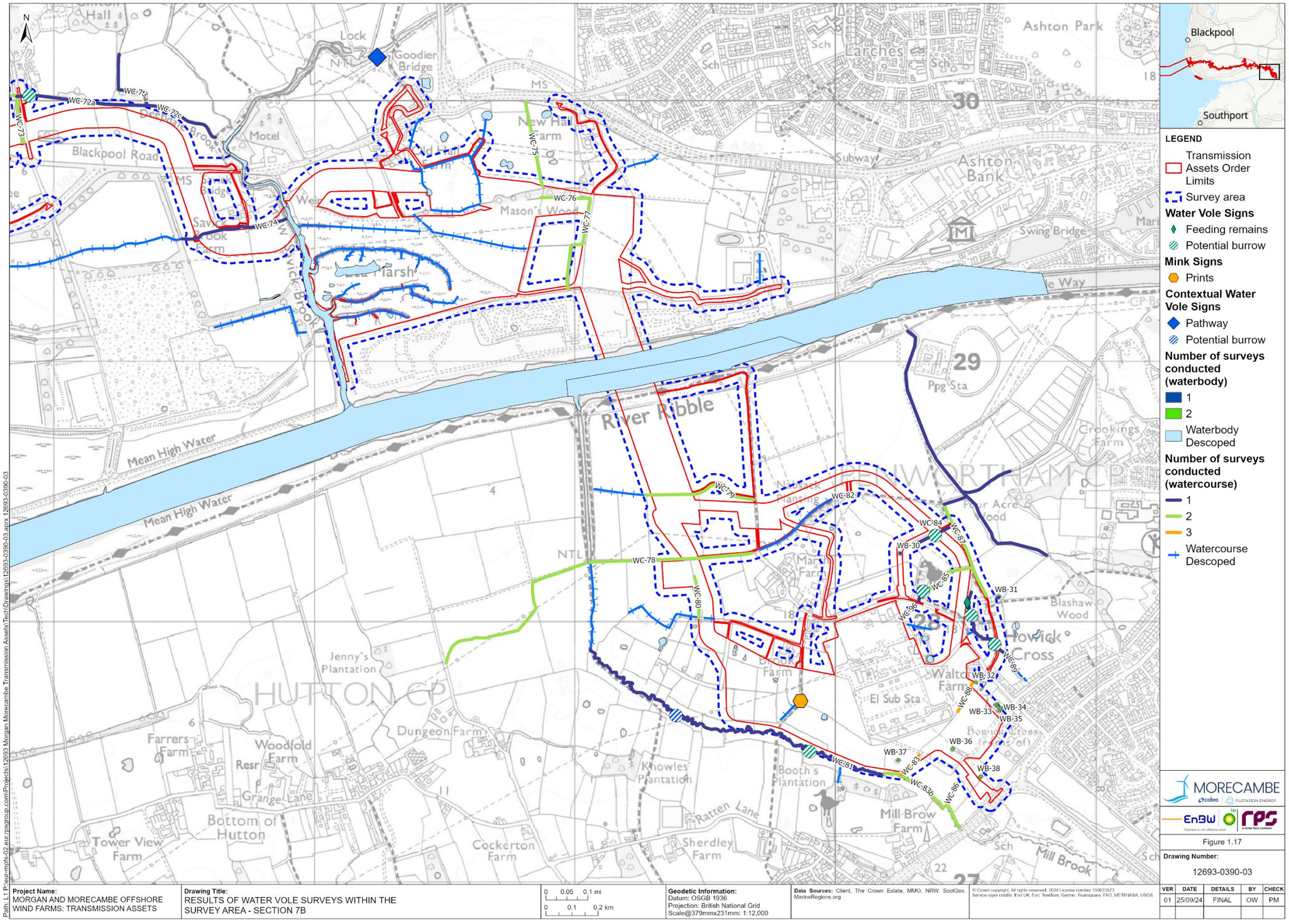

Figure 1.17: Results of Water Vole surveys within the Survey Area - Section 7B

1.4 Summary

1.4.1.1 This technical report presents the results of the water vole desk study and the field surveys undertaken between April 2023 and July 2024 to inform Volume 3, Chapter 3: Onshore ecology and nature conservation of the ES.

1.4.1.2 91 watercourses and 39 waterbodies have been subject to further surveys for water vole. The surveys undertaken to date (June 2024) recorded potential evidence of water vole within the survey and study area.

1.4.1.3 Most of the evidence recorded comprised potential burrows, with instances of feeding remains recorded along a single watercourse. A concentration of potential burrows was recorded within the western side of the Onshore Order Limits along watercourses 4 and 94 with an additional concentration of potential burrows recorded at the southern end of the Onshore Order Limits along watercourses 84, 89 and 96. The remaining potential burrows were sporadically recorded across other sections of the Onshore Order Limits.

1.4.1.4 Although potential burrows have been found during the surveys, very limited additional signs of water vole presence have been found in conjunction with these results. Only one instance of a potential water vole burrow recorded in conjunction with other field signs (feeding remains) was recorded within the survey area.

1.4.1.5 American Mink, a voracious predator of water vole was found to be present at three locations across the scheme; which corelated with presence of potential water vole burrows and lack of any confirmed signs such as water vole prints, droppings or feeding remains.

1.4.1.6 The absence of signs such as droppings, prints and lawns could suggest an absence or very low populations of water voles across the majority of Onshore Order Limits. However, many watercourses have only been subject to one survey to date.

1.5 References

Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series). The Mammal Society, London.

Department for Environment, Food and Rural Affairs (2024) MAGIC. Available at: https://magic.defra.gov.uk (Accessed September 2024)

UK Protected Area Joint Nature Conservation Committee (2024) Available at: https://jncc.gov.uk/ (accessed September 2024)

Appendix A: Water vole survey raw data

Waterbody survey count

Waterbody Number	Surveys complete			
	2023 V1	2023 V2	2024 V1	2024 V2
WB-1	X	X		
WB-2	X	X		
WB-3	X	X		
WB-4	X	X		
WB-5	X	X		
WB-6	X	X		
WB-7	X	X		
WB-8	X	X		
WB-9	X	X		
WB-10	X	X		
WB-11			X	X
WB-12	X	X		
WB-13			X	X
WB-14			X	X
WB-15			X	X
WB-16			X	X
WB-17	X	X		
WB-18	X	X	X	
WB-19	X	X		
WB-20	X	X		
WB-21	X	X		
WB-22			X	
WB-23			X	
WB-24			X	
WB-25			X	
WB-26			X	
WB-27		X		
WB-28			X	X
WB-29			X	X
WB-30			X	X

Waterbody Number	Surveys complete			
	2023 V1	2023 V2	2024 V1	2024 V2
WB-31			X	X
WB-32	X		X	X
WB-33	X		X	X
WB-34	X		X	X
WB-35	X		X	X
WB-36	X		X	X
WB-37	X		X	X
WB-38	X		X	X
WB-39	X		X	

Watercourse survey count

Watercourse Number	Surveys complete			
	2023 V1	2023 V2	2024 V1	2024 V2
WC-1	X	X		
WC-2			X	
WC-3			X	
WC-4			X	
WC-5			X	
WC-6			X	
WC-7			X	
WC-8			X	
WC-9			X	X
WC-10			X	X
WC-11			X	X
WC-12			X	X
WC-13	X	X		
WC-14	X	X		
WC-15				
WC-16	X	X		
WC-17	X	X		
WC-18	X	X		
WC-19	X	X		
WC-20	X	X		

Watercourse Number	Surveys complete			
	2023 V1	2023 V2	2024 V1	2024 V2
WC-21			X	
WC-22			X	X
WC-23	X		X	X
WC-24			X	X
WC-25			X	X
WC-26			X	X
WC-27			X	X
WC-28			X	
WC-29			X	X
WC-30			X	
WC-31			X	X
WC-32	X	X		
WC-33			X	X
WC-34	X	X		
WC-35			X	X
WC-36			X	
WC-37	X	X		
WC-38			X	
WC-39			X	X
WC-40	X		X	X
WC-41	X		X	X
WC-42	X		X	X
WC-43	X		X	X
WC-44	X		X	X
WC-47				
WC-48			X	X
WC-49	X	X		
WC-50	X	X		
WC-51			X	
WC-52				
WC-53			X	
WC-55			X	X

Watercourse Number	Surveys complete			
	2023 V1	2023 V2	2024 V1	2024 V2
WC-56			X	
WC-57			X	
WC-58			X	X
WC-59			X	
WC-60			X	
WC-61	X			
WC-62	X			
WC-63	X			
WC-64	X			
WC-66			X	X
WC-67			X	X
WC-68		X		
WC-69			X	X
WC-70			X	X
WC-71		X		
WC-72			X	X
WC-73			X	X
WC-74		X		
WC-75			X	X
WC-76			X	X
WC-77			X	X
WC-78			X	X
WC-79			X	X
WC-80			X	X
WC-81			X	
WC-82			X	X
WC-83	X		X	X
WC-84			X	
WC-85			X	X
WC-86	X		X	
WC-87			X	X
WC-88	X		X	X

Watercourse Number	Surveys complete			
	2023 V1	2023 V2	2024 V1	2024 V2
WC-89			X	
WC-90			X	
WC-91			X	
WC-92			X	
WC-93			X	
WC-94			X	
WC-96[1]	-	-	X	
WC-97			X	X

[1] Potential burrow recorded on WC-96. However, the data was collected in February 2024 outside of the optimal survey period. As such, not considered as a complete water vole survey.