



Volume 3, Appendix 21.3: Important Hedgerows Survey

Outer Dowsing Offshore Wind Environmental Statement

GoBe Consultants Ltd

Prepared by:

SLR Consulting Limited

7 Wornal Park, Menmarsh Road, Worminghall, Aylesbury, HP18 9PH

SLR Project No.: 410.V05356.00013

1 March 2024

Revision: V1.0

Revision Record to be removed prior to submission

Revision	Date	Prepared By	Checked By	Authorised By
V1.0	1 March 2024	SLR Consulting Ltd	GoBe	Outer Dowsing Offshore Wind

Basis of Report

This document has been prepared by SLR Consulting Limited (SLR) with reasonable skill, care and diligence, and taking account of the timescales and resources devoted to it by agreement with GoBe Consultants Ltd (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.

i



Table of Contents

Basi	s of Report	İ
Acro	onyms and Terminology	iv
21.0	Important Hedgerow Survey	1
21.1	Introduction	1
21.2	The Project	1
21.3	Purpose of this Report	2
21.4	Legislation	3
21.5	Methodology	6
21.5.	.1 Survey Area	6
21.5.	.2 Initial mapping	6
21.5.	.3 2023 Mapping	6
21.5.	.4 Important Hedgerow Assessment	6
21.5.	.5 Limitations	8
21.6	Results	9
21.6.	.1 Hedgerow 168 – ECC 3: Marsh Lane to A158 – Skegness Road	. 10
21.6.	.2 Hedgerow 546 – ECC 5: Low Road to Steeping River	. 12
21.6.	.3 Hedgerow 1036 – ECC7: Fodder Dike Bank/Fen Bank to Broadgate	. 14
21.6.	.4 Hedgerow 1926 – ECC: Fodder Dike Bank/Fen Bank to Broadgate	. 16
21.6.	.5 Hedgerow 1928 – ECC12: Marsh Road to Fosdyke Bridge	. 18
21.6.	.6 Hedgerow 1948 – ECC 6: Steeping River to Fodder Dike Bank/Fen Bank	. 20
21.7	Conclusion	. 22
21.8	References	. 23
Tak	ole of Figures	
	re 21.3.1: Hedgerow Location Plan	24
. igui	10 2 1 10 11 1 10 ago 10 w 200 at 10 11 11 11 11 11 11 11 11 11 11 11 11	
	oles in Text	
	e 21.1: Onshore Segment Names	
	e 21.2 Hedgerow 168 Habitat Regulations Assessment	
	e 21.3 Hedgerow 546 Habitat Regulations Assessment	
	e 21.4 Hedgerow 1036 Habitat Regulations Assessment	
	e 21.5 - Hedgerow 1926 Habitat Regulations Assessment	
	e 21.6 - Hedgerow 1926 Habitat Regulations Assessment	
Table	e 21.7 Hedgerow 1948 Habitat Regulations Assessment	21



Plates in Text

Plate 21.1: Hedgerow 168	11
Plate 21.2: Hedgerow 546	13
Plate 21.3: Hedgerow 1036	15
Plate 21.4: Hedgerow 1926	17
Plate 21.5: Hedgerow 1928	20

Appendices

Annex A. Table of Hedgerows



Acronyms and Terminology

Acronyms

Acronyms and Abbreviations	Description
DCO	Development Consent Order
ECC	Export Cable Corridor (offshore ECC or indicative onshore ECC)
EIA	Environmental Impact Assessment
ES	Environmental Statement
ETG	Expert Topic Group
NGSS	National grid Sub-station
NSIP	Nationally Significant Infrastructure Project
ODOW	Outer Dowsing Offshore Wind (The Project)
OnSS	Onshore Substation
PEIR	Preliminary Environmental Information Report
UK Habs	UK Habitat Classification

Terminology

Term	Definition
400kV cables	High voltage cables linking the OnSS to the NGSS.
400kV cable corridor	The 400kV cable corridor is the area within which the 400kV cables connecting the onshore substation to the NGSS will be situated.
The Applicant	GT R4 Ltd. The Applicant making the application for a DCO.
	The Applicant is GT R4 Limited (a joint venture between Corio Generation, Total Energies and Gulf Energy Development (GULF)), trading as Outer Dowsing Offshore Wind. The Project is being developed by Corio Generation (a wholly owned Green Investment Group portfolio company), Total Energies and GULF.
Baseline	The status of the environment at the time of assessment without the development in place.
Connection Area	An indicative search area for the NGSS.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP).
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact with the sensitivity of the receptor, in accordance with defined significance criteria.
Environmental Impact Assessment (EIA)	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Regulations, including the publication of an Environmental Statement (ES).
Environmental Statement (ES)	The suite of documents that detail the processes and results of the EIA.



Export cables	High voltage cables which transmit power from the Offshore Substations (OSS) to the Onshore Substation (OnSS) via an Offshore Reactive Compensation Platform (ORCP) if required, which may include one or more auxiliary cables (normally fibre optic cables).
Impact	An impact to the receiving environment is defined as any change to its baseline condition, either adverse or beneficial.
Landfall	The location at the land-sea interface where the offshore export cables and fibre optic cables will come ashore.
Mitigation	Mitigation measures are commitments made by the Project to reduce and/or eliminate the potential for significant effects to arise as a result of the Project. Mitigation measures can be embedded (part of the project design) or secondarily added to reduce impacts in the case of potentially significant effects.
Onshore Export Cable Corridor (ECC)	The Onshore Export Cable Corridor (Onshore ECC) is the area within which, the export cables running from the landfall to the onshore substation will be situated.
Onshore Infrastructure	The combined name for all onshore infrastructure associated with the Project from landfall to grid connection.
Onshore substation (OnSS)	The Project's onshore HVAC substation, containing electrical equipment, control buildings, lightning protection masts, communications masts, access, fencing and other associated equipment, structures or buildings; to enable connection to the National Grid.
Order Limits	The area subject to the application for development consent, the limits shown on the works plans within which the Project may be carried out.
Outer Dowsing Offshore Wind (ODOW)	The Project.
The Planning Inspectorate	The agency responsible for operating the planning process for Nationally Significant Infrastructure Projects (NSIPs).
Preliminary Environmental Information Report (PEIR)	The PEIR was written in the style of a draft Environmental Statement (ES)
The Project	Outer Dowsing Offshore Wind, an offshore wind generating station together with associated onshore and offshore infrastructure.
Receptor	A distinct part of the environment on which effects could occur and can be the subject of specific assessments. Examples of receptors include species (or groups) of animals or plants, people (often categorised further such as 'residential' or those using areas for amenity or recreation), watercourses etc.
Study Area	Area(s) within which environmental impact may occur – to be defined on a receptor-by-receptor basis by the relevant technical specialist.



21.0 Important Hedgerow Survey

21.1 Introduction

- Outer Dowsing Offshore Wind (ODOW) is a Nationally Significant Infrastructure Project (NSIP). An Environmental Impact Assessment (EIA) has been undertaken, the findings of which are presented within an Environmental Statement (ES), which accompanies the Development Consent Order (DCO) application under the Planning Act 2008.
- 2. SLR Consulting was commissioned by GoBe Consultants, whom has been instructed by GT R4 Limited (trading as Outer Dowsing Offshore Wind) (the Applicant), to undertake a suite of ecological surveys of those relevant parts of the project site that may be affected by the construction and operation of the onshore aspects of the Project.
- 3. This report presents the findings of the ecologically important hedgerow surveys undertaken in 2023 and supports the findings of Volume 1, Chapter 21: Onshore Ecology (document reference 6.1.21) of the ES.

21.2 The Project

- 4. The Project will include both offshore and onshore infrastructure including an offshore generating station (windfarm) located approximately 54km from the Lincolnshire coastline, export cables to landfall, onshore cables, an onshore substation, connection to the electricity transmission network, and ancillary and associated development (see Volume 1, Chapter 3: Project Description 6.1.3 for full details).
- 5. The ES references the Project's 'Order Limits' which comprises the extent of the land for which the DCO application has been made. Onshore it reflects the landfall, an approximate 80m wide corridor around a centre line approximately 70km in length in reference to the footprint of the Onshore Export Cable Corridor (ECC), a location for the Onshore substation (OnSS), and a 400kV cable corridor to the National Grid Connection area.
- 6. Due to the linear footprint of the Project the survey area for some receptors is relatively large-scale. Therefore, to assist with the interpretation and explanation of associated data, the Order Limits has been split into segments. The extent of these segments



has been aligned with key geographical features such as roads or rivers which cross the route.

7. The onshore segment names are shown in Table 21.1.

Table 21.1: Onshore Segment Names

Segment Name		
ECC 1: Landfall to A52 – Hogsthorpe		
ECC 2: A52 – Hogsthorpe to Marsh Lane		
ECC 3: Marsh Lane to A158 - Skegness Road		
ECC 4: A158 – Skegness Road to Low Road		
ECC 5: Low Road to Steeping River		
ECC 6: Steeping River to Fodder Dike Bank/Fen Bank		
ECC 7: Fodder Dike Bank/Fen Bank to Broadgate		
ECC 8: Broadgate to Ings Drove		
ECC 9: Ings Drove to Church End Lane		
ECC 10: Church End Lane to The Haven		
ECC 11: The Haven to Marsh Road		
ECC 12: Marsh Road to Fosdyke Bridge		
ECC 13: Fosdyke to Surfleet Marsh OnSS/Marsh Drove		
ECC 14: Surfleet Marsh OnSS/Marsh Drove to the Connection Area		

21.3 Purpose of this Report

- 8. This report details the methodologies employed and the results of the hedgerow surveys undertaken in 2023. The aim of this report is to assess the 'importance' of hedgerows within the survey area in line with the definition provided within the Hedgerow Regulations 1997. It is intended that this baseline data will inform the assessment of impacts and development of mitigation and, if necessary, compensation measures for the Project. The assessment of impacts and development of mitigation and compensation measures is beyond the scope of this report. The impacts will be addressed separately within Chapter 21 (document reference 6.1.21) of the ES.
- 9. It should be noted that native hedgerows, irrespective of whether they meet the definition of 'important' within the Hedgerow Regulations 1997, are categorised as Section 41 habitats of principal importance in England and protected under Section 40 of the Natural Environment and Rural Communities Act 2006. This places a duty on



public authorities to have regard to the purpose of conserving biodiversity in the exercise of their functions.

21.4 Legislation

- 10. For the purpose of the assessment, the Hedgerow Regulations 1997 apply, as set out in Section 3(1) to:
 - any hedgerow growing in, or adjacent to, any common land, protected land, or land used for agriculture, forestry or the breeding or keeping of horses, ponies, or donkeys, if
 - o it has a continuous length of, or exceeding, 20 metres; or
 - it has a continuous length of less than 20 metres and, at each end, meets
 (whether by intersection or junction) another hedgerow.
- 11. 'Important' hedgerows defined under Section 4 of the Hedgerows Regulations 1997) must be at least 30 years old and satisfy at least one of the criteria listed in Part II of Schedule 1::
 - Contains Schedule 1 birds, Schedule 5 animals or Schedule 8 plants species listed in the Wildlife and Countryside Act 1981 (as amended); or,
 - Contains endangered, extinct, rare or vulnerable species, as listed in the British Red Data Books; or,
 - Includes (on average, per 30m section) at least:
 - seven woody species (as defined within the Hedgerow Regulations 1997);
 or
 - six woody species and three features in paragraph 7, sub-paragraph (4),
 Part II, Schedule 1 of the Hedgerow Regulations 1997. These features are listed in paragraph 10 of this appendix; or



- six woody species, including one of black-poplar (*Populus nigra ssp betulifolia*), large-leaved lime (*Tilia platyphyllos*), small-leaved lime (*Tilia cordata*) or wild service-tree (*Sorbus torminalis*); or
- at least five woody species, and has associated with it at least four of the features specified in paragraph 7, sub-paragraph (4) of Part II of Schedule 1 of the Hedgerow Regulations; or
- at least four woody species, at least two features in paragraph 7, subparagraph (4) of Part II of Schedule 1 of the Hedgerow Regulations and is adjacent to a bridleway or footpath, a road used as a public path, or a byway open to all traffic.
- 12. The features referred to in paragraph 7, sub-paragraph (4) of Part II of Schedule 1 of the Hedgerow Regulations are:
 - a bank or wall which supports the hedgerow along at least one half of its length;
 - gaps which in aggregate do not exceed 10% of the length of the hedgerow;
 - where the length of the hedgerow does not exceed 50m, at least one standard tree;
 - where the length of the hedgerow exceeds 50m but does not exceed 100m, at least two standard trees;
 - where the length of the hedgerow exceeds 100m, such number of standard trees (within any part of its length) as would when averaged over its total length amount to at least one for each 50m;
 - at least three woodland species within one metre, in any direction, of the outermost edges of the hedgerow;
 - a ditch along at least one half of the length of the hedgerow;



- connections scoring four points or more (a connection with another hedgerow scores one point and a connection with a pond or a woodland in which the majority of trees are broad-leaved trees scores two points); and
- a parallel hedge within 15m of the hedgerow.
- 13. The criteria set out in the legislation form the basis of the 'important' hedgerow assessment.



21.5 Methodology

14. The requirement for an important hedgerows survey was outlined in the EIA Scoping Report (ODOW, 2022). No comments specifically relating to the survey methodology for important hedgerows were received in the Scoping Opinion (Case Reference EN010130, The Planning Inspectorate 2022) or in the subsequent S42 consultations and Onshore Expert Topic Group (ETG) discussions. The expected standard for important hedgerow assessment set out in the Hedgerow Survey Handbook (Defra, 2007) was therefore adopted.

21.5.1 Survey Area

15. The important hedgerow survey was undertaken for all accessible hedgerows within the Order Limits as shown in Figure 21.3.1.

21.5.2 Initial mapping

16. Initial identification and classification of areas of similar habitat (i.e. habitat polygons, linear features) was undertaken primarily via interpretation of aerial imagery in 2022, with additional ground-truthing of sample areas as reported in the Preliminary Environmental Information Report (PEIR).

21.5.3 2023 Mapping

17. Once access was gained to the survey area, each of the polygons or linear features identified from aerial interpretation were visited and classified using the UK Habitat Classification (UK Habs) method, as reported in Volume 3, Appendix 21.1 UK Habitat Classification Survey Report.

21.5.4 Important Hedgerow Assessment

- 18. In order to target site surveys more effectively, hedgerows under 30 years of age and those with less than four woody species were removed from the survey schedule as hedgerows not meeting these two criteria could not be classified as important.
- 19. Hedgerow age was determined though use of Google Earth Pro. For some hedgerows it was possible to look at imagery as far back as 1999, for others imagery was only available from 2003. Although neither covers the whole 30-year period, where hedgerows were not present on the images it was possible to say that they were less than 30 years old. In all other cases it was presumed that the hedgerow was more than 30 years old.



- 20. During the UK Habitat Classification survey, summary notes were made about each hedgerow including the species present. These species lists were used to establish the number of species in a hedgerow. If there were less than four species in the entire hedgerow, then it was possible to know that the average number of species after completing an important hedgerow survey would be no more than four.
- 21. All hedgerows within the Order Limits, which were over 30 years of age and were recorded as supporting at least four woody species (in their entire length), were subject to further survey to determine if they were 'important' under Schedule 1 Part II (6) of the Hedgerow Regulations 1997 (i.e., for wildlife and landscape reasons rather than archaeological or historical reasons). A total of five hedgerows were subject to a hedgerow regulations assessment and are identified on Figure 21.3.1.
- 22. The important hedgerow survey involved recording the number of woody species along 30m sections of hedgerow as well as with other information such as height, width, standard trees, ditches, banks and ground flora. For lengths of hedgerow between 0-50m, the number of woody species present in the central stretch of 30m were recorded. For hedgerows between 50-100m the number of woody species present in the central stretch of 30m within each half of the hedgerow were recorded and for hedgerow exceeding 100m the number of woody species present in the central stretch of 30m within each third of the hedgerow were recorded. The number of woody species were then given as an average across the entire hedgerow in order to work out the average species richness. If the hedgerow had less than four species (on average) within each 30m section or was less than 30 years old, then the hedgerow did not meet the criteria for an 'important' hedgerow and no further investigation was undertaken. For hedgerows with over four woody species the further criteria detailed in the legislation were considered.
- 23. Several linear features were mapped using UK Hab as hedgerows, but which were less than 20m long. According to the Hedgerow Regulations 1997, features of less than 20m in length do not classify as a hedgerow, unless intersecting or having a junction with another hedgerow. Applying this criteria, one hedgerow (Hedgerow 1677) was deleted from this assessment. All other hedgerows measured to be less than 20m in length had a junction with another hedgerow and were therefore retained. These include hedgerows where the junction (i.e., distance between two hedgerows) measured less than 20m.



- 24. Hedgerow 1175 was also removed from the assessment as this was a defunct hedgerow with gaps up to 21m, accounting for >50% of its length.
- 25. An assessment of hedgerows has also been carried out under the historic criteria of the Hedgerow Regulations. A list of those hedgerows classified as important under the historic criteria of the Hedgerow Regulations is provided in Annex 2 of the Heritage Statement (Volume 3, Appendix 20.2: Heritage Statement). Where hedgerows are assessed to be both of ecological and historical importance, this has been outlined in Section 21.6 – Results below.

21.5.5 Limitations

- 26. Part of the important hedgerow survey was carried out in winter which would be considered a sub-optimal time of year for conducting surveys for woodland flora, with the optimal time being spring. Though some species of ground flora may have been missed, it is considered that due to winter tree and twig distinguishing characteristics, enough information has been collected to be able to classify the woody species of the hedgerows on site. In addition, all hedgerows assessed as not being 'important' were classified as such based on the low number of woody species, removing them from consideration before requiring consideration of ground flora present as an assessment tool.
- 27. Sufficient field surveys were undertaken to inform hedgerow data in the majority of instances. For a small number of hedgerows (Hedgerows 1505, 1506, 1507, 1823 and 1836), an assessment of their importance cannot be provided as a full data set was not obtained.
- 28. Following changes to the Order Limits after the closure of the survey season, 26 additional hedgerows potentially impacted by the works were identified. Most of these hedgerows were only subject to a desk-based survey which included the evaluation of aerial imagery, street views and historical maps. These hedgerows will need to be surveyed to assess their importance, prior to the commencement of construction.
- 29. Where insufficient data to complete a hedgerow regulations assessment was available, a precautionary approach has been adopted.



21.6 Results

- 30. A total of 73 hedgerows lie within the Order Limits. These hedgerows total 6.39km in length. Figure 21.3.1 illustrates the locations of these hedgerows with Annex 1 presenting a tabulated summary of all hedgerows, including hedgerow number, date of survey, details on whether it is 30 years old, has more than four woody species and whether a further hedgerow regulations assessment was required.
- 31. A desk-based review of UK Habs field data found that six of the 73 hedgerows within the Order Limits required a hedgerow regulations assessment survey. Details on whether they meet the minimum requirements as important hedgerows are contained within Annex 1.
- 32. Of the 73 hedgerows within the Order Limits, 50 were assessed to be species poor, with the majority of these being dominated by hawthorn. Other woody species found within species poor hedgerows were elder, dogrose (Rosa canina), blackthorn, oak sp., pedunculate oak, ash, privet (*Ligustrum* sp.), field maple, hazel, alder (*Alnus* sp.), silver birch, cherry (*Prunus* sp.), rose (*Rosa* sp.), and willow (*Salix sp*). A total of 30 of the species poor hedgerows were found to be exclusively made up of hawthorn with no other woody species present.
- 33. Data was unavailable for 16 hedgerows. Some of these hedgerows are situated along access routes and where land access was restricted. Aerial imagery suggests that these are intensively managed, although further field survey will be required to confirm this. Other hedgerows were not confirmed to be within the boundary until after survey closure, further surveys will be required for these hedgerows before construction is set to begin.
- 34. Of the seven species rich hedgerows recorded, one was planted within the last 30 years (Hedgerow 1931), with the remaining six considered to require a hedgerow regulations assessment. These hedgerows were all assessed as being over 30 years of age and as having four or more woody species.
- 35. Hedgerows meeting the criteria set out in the methodology (i.e. having at least four woody species and being at least 30 years old), triggered the requirement for an important hedgerow regulations assessment. A total of six hedgerows required this more detailed assessment: these were Hedgerows 168, 546, 1036, 1926, 1928, and



1948. Hedgerows 168 and 546 were subject to a hedgerow field survey. Hedgerows 1036, 1926, 1928 and 1948 relied on data collected during the UK Habs field survey, condition assessment and evaluation of aerial and street imagery. The results of each assessment are provided in the paragraphs below.

21.6.1 Hedgerow 168 - ECC 3: Marsh Lane to A158 - Skegness Road

- 36. Hedgerow 168 shown in Plate 21.1is a species rich hedgerow containing: hawthorn (Crataegus monogyna), silver birch (Betula pendula), elder (Sambucus nigra) and blackthorn (Prunus spinosa) along the length of the hedgerow. This hedgerow is situated within segment ECC 3: Marsh Lane to A158 - Skegness Road. However, when subject to further assessment only hawthorn (98%) and blackthorn (2%) were present within the two 30m sections investigated. The hedgerow did not have any gaps of note, and a ditch ran along the whole hedgerow length. The hedgerow was connected to another hedgerow and was within 10m of broadleaved mixed woodland. One side of the hedgerow was arable, and the other cattle grazed grassland; the hedgerow appeared to have been flailed or trimmed in the last 2-10 years. This hedgerow is unlikely to be important, as although only two sections were assessed, even if the third section had all four species listed this would bring the average number of species when rounded to three. This is not a high enough average to be an important hedgerow. Therefore, this is not considered to be an important hedgerow ecologically.
- 37. Table 21.2 shows the details recorded during the further assessment of Hedgerow 168.





Plate 21.1: Hedgerow 168



Table 21.2 Hedgerow 168 Habitat Regulations Assessment

Hedgerow Feature	Criteria	Survey Result
Dimensions	Height (m)	3
	Width (m)	2
	Length (m)	1000
	Number of 30m sections	2
Features Present	Bank or wall present?	No
	% length that comprises a gap	0
	Number of trees in total length	Data not available
	Ditch along at least one-half present?	Yes
	Public Right of Way adjacent?	No (maps)
	Parallel hedge within 15m?	No
Schedule 3 species average	Section 1	2
per 30m section	Section 2	2
	Section 3	Data not available
Schedule 2 species present in entire length of hedgerow		0
Number of connections		3 points in total
		1 hedgerow (1 point) and broadleaved woodland within 10m (2 points)
Signs of notable fauna		None

38. Although not of ecological importance, Hedgerow 168 is listed as meeting the criteria for a historically important hedgerow: being noted on the historical maps from 1810 and 1842 (Volume 3, Appendix 20.2, Annex 2).

21.6.2 Hedgerow 546 – ECC 5: Low Road to Steeping River

39. Hedgerow 546 was a 241m long hedgerow, situated within ECC 5: Low Road to Steeping River. It was a species rich hedgerow, containing multiple standard trees. It is dominated by hawthorn, but also contained beech (*Fagus sylvatica*), elder, elm species (*Ulmus sp.*), wych elm (*Ulmus glabra*), ash (*Fraxinus sp.*), and field maple (*Acer campestre*): these were all recorded in one 30m length Plate 0-2). Only 5% of the hedgerow contained gaps, although some of these were over 5m in length. It is



within 10m of a broadleaved or mixed woodland, with 90% of its length running parallel to a ditch. One end of the hedgerow was connected to one other hedgerow. Running along one side of the hedgerow was a minor road and the other side was bordered by unimproved grassland. The standard trees in the hedgerow were field maple, wych elm and ash. Only one 30m section was investigated, therefore, had the other two sections had seven species (providing the unidentified elm species was other than wych elm) the maximum average species for this hedgerow would be 7. A precautionary approach is, therefore, taken, and Hedgerow 546 is considered to be **important**.

40. Table 21.3 shows the details recorded during the further assessment of Hedgerow 546.



Plate 21.2: Hedgerow 546



Table 21.3 Hedgerow 546 Habitat Regulations Assessment

Hedgerow feature	Criteria	Survey Result
Dimensions	Height (m)	3-6m
	Width (m)	5
	Length (m)	241
	Number of 30m sections	1
Features Present	Bank or wall present?	No
	% length that comprises a gap	5
	Number of trees in total length	Data not available
	Ditch along at least one-half present?	Yes
	Public Right of Way adjacent?	No
	Parallel hedge within 15m?	Yes (though not whole length)
Schedule 3 species average	Section 1	5
per 30m section	Section 2	Data not available
	Section 3	Data not available
Schedule 2 species present in entire length of hedgerow		0
Number of connections		1 point (1 hedgerow)
Signs of notable fauna		None

^{41.} Hedgerow 546 is assessed to be ecologically important, but does not have historical importance (Volume 3, Appendix 20.2, Annex 2).

21.6.3 Hedgerow 1036 – ECC7: Fodder Dike Bank/Fen Bank to Broadgate

42. Hedgerow 1036 is situated in ECC 7: Fodder Dike Bank/Fen Bank to Broadgate. Shown in Plate 21.3, it appeared to be regularly managed, with a height of 2.5m and a width of 2m during summer 2023. A dry ditch ran parallel to the hedgerow for its entire length. Hedgerow 1036 borders an arable field to the south, with Patnam's Lane, a single-track road running parallel to the north. Patnam's Lane is bordered to the east by a ditch, with an arable field beyond. The hedgerow is dominated by hawthorn with small amounts (ca. 10% in total across the entire length) of silver birch (*Betula pendula*), elder (*Sambucus nigra*) and blackthorn (*Prunus spinosa*). Gaps within the hedgerow totalled 20% of its length. The hedgerow was connected (albeit with a 6.5m gap) to another hedgerow running perpendicular. Given that this hedgerow is



dominated by hawthorn and, therefore, species poor, it is **not considered to be an important hedgerow**.

43. Table 21.4shows the details recorded during the further assessment of Hedgerow 1036.



Plate 21.3: Hedgerow 1036



Table 21.4 Hedgerow 1036 Habitat Regulations Assessment

Hedgerow feature	Criteria	Survey Result
Dimensions	Height (m)	2.5
	Width (m)	2
	Length (m)	372
	Number of 30m sections	0
Features Present	Bank or wall present?	No
	% length that comprises a gap	20%
	Number of trees in total length	0
	Ditch along at least one-half present?	Yes
	Public Right of Way adjacent?	Yes
	Parallel hedge within 15m?	No
Schedule 3 species average	Section 1	Data not available
per 30m section	Section 2	Data not available
	Section 3	Data not available
Schedule 2 species present in entire length of hedgerow		0
Number of connections		1 hedgerow (1 point)
Signs of notable fauna		None

44. Although not considered to be an ecologically important hedgerow, Hedgerow 1036 is listed as meeting the criteria for a historically important hedgerow: being noted on the 1840 Tithe map of Friskney (Volume 3, Appendix 20.2, Annex 2).

21.6.4 Hedgerow 1926 - ECC: Fodder Dike Bank/Fen Bank to Broadgate

45. Hedgerow 1926 is situated in ECC 7: Fodder Dike Bank/Fen Bank to Broadgate. It is an established hedgerow, at least 30 years old, which separates two pastoral fields and appears to be subjected to minimal management (Plate 21.4). A dry ditch runs parallel to this hedge which measures 222m in length. It averages 5m in height. Woody species include dog rose, cherry, hawthorn and elder (recorded during the UK Habs survey). A single, mature ash tree is present within the hedgerow, on the north boundary of the Order Limits.



- 46. A full hedgerow regulations assessment was not undertaken for Hedgerow 1926 due to access restrictions. However, given the age of the hedgerow, the presence of five woody species, and the presence of a ditch and two connecting hedgerows, this hedgerow is considered to be important.
- 47. Table 21.5 shows the details recorded during the further assessment of Hedgerow 1926.



Plate 21.4: Hedgerow 1926



Table 21.5 - Hedgerow 1926 Habitat Regulations Assessment

Hedgerow feature	Criteria	Survey Result
Dimensions	Height (m)	5
	Width (m)	4
	Length (m)	222
	Number of 30m sections	0
Features Present	Bank or wall present?	No
	% length that comprises a gap	0%
	Number of trees in total length	1
	Ditch along at least one-half present?	Yes
	Public Right of Way adjacent?	No
	Parallel hedge within 15m?	No
Schedule 3 species average	Section 1	Data not available
per 30m section	Section 2	Data not available
	Section 3	Data not available
Schedule 2 species present in entire length of hedgerow		0
Number of connections		2 hedgerows (2 points)
Signs of notable fauna		None

48. Hedgerow 1926 is assessed to be ecologically important, but does not have historical importance (Volume 3, Appendix 20.2, Annex 2).

21.6.5 Hedgerow 1928 – ECC12: Marsh Road to Fosdyke Bridge

- 49. Hedgerow 1928 is situated in ECC12: Marsh Road to Fosdyke Bridge. It is an established, 121m long hedgerow which forms part of a larger linear woodland and scrubland landscape feature which extends for approximately 840m (Plate 21.5). The hedgerow is dominated by hawthorn but also contains pedunculate oak (*Quercus robur*) blackthorn and wild privet. The hedgerow appears to be unmanaged and is bordered by a public footpath and runs parallel alongside two drainage ditches.
- 50. Given that four woody species are present along its length and given the presence of a ditch, public right of way and connections with adjacent linear woodland, a precautionary approach is taken, and this hedgerow is considered to be important.



51. Table 21.6 shows the details recorded during the further assessment of Hedgerow 1928.

Table 21.6 - Hedgerow 1926 Habitat Regulations Assessment

Hedgerow feature	Criteria	Survey Result
Dimensions	Height (m)	5
	Width (m)	4
	Length (m)	121
	Number of 30m sections	0
Features Present	Bank or wall present?	No
	% length that comprises a gap	0%
	Number of trees in total length	0
	Ditch along at least one-half present?	Yes
	Public Right of Way adjacent?	Yes
	Parallel hedge within 15m?	No
Schedule 3 species average	Section 1	Data not available
per 30m section	Section 2	Data not available
	Section 3	Data not available
Schedule 2 species present in entire length of hedgerow		0
Number of connections		3 woodlands (6 points)
Signs of notable fauna		None





Plate 21.5: Hedgerow 1928

Hedgerow 1928 is assessed to be ecologically important, but does not have historical importance (Volume 3, Appendix 20.2, Annex 2).

21.6.6 Hedgerow 1948 – ECC 6: Steeping River to Fodder Dike Bank/Fen Bank

- 52. Hedgerow 1948 is located in ECC 6: Steeping River to Fodder Dike Bank/Fen Bank no hedgerows present. It is an established 1,154m long hedgerow containing six woody species: Hawthorn, *prunus* sp., elder sp., dogrose, ash, sycamore (*Acer pseudoplatanus*), and poplar (*Populus* sp.) (though not black poplar). The hedgerow appears to be unmanaged with a 240m section running alongside a minor road, the rest borders arable fields.
- 53. Given the presence of six woody species, lack of black poplar or three features from sub paragraph 4 of the hedgerow regulations it is **not considered to be an important hedgerow**.



54. Table 21.7shows the details recorded during the further assessment of Hedgerow 1928.

Table 21.7 Hedgerow 1948 Habitat Regulations Assessment

Hedgerow feature	Criteria	Survey Result
Dimensions	Height (m)	Data not available
	Width (m)	6
	Length (m)	1,154
	Number of 30m sections	0
Features Present	Bank or wall present?	No
	% length that comprises a gap	0.5
	Number of trees in total length	1?
	Ditch along at least one-half present?	No
	Public Right of Way adjacent?	Yes
	Parallel hedge within 15m?	No
Schedule 3 species average per 30m section	Section 1	Data not available
	Section 2	Data not available
	Section 3	Data not available
Schedule 2 species present in entire length of hedgerow		0
Number of connections		0
Signs of notable fauna		0

55. Although not of ecological importance, Hedgerow 1948 is listed as meeting the criteria for a historically important hedgerow: being noted on the 1839 Thithe map of Wainfleet St Mary (Volume 3, Appendix 20.2, Annex 2).



21.7 Conclusion

- 56. There are a total of 73 hedgerows within the Order Limits (see Figure 21.3.1 for the location of each hedgerow). The majority of hedgerows across the Project are species poor and dominated by hawthorn. Many are also intensively managed as arable field boundaries.
- 57. Of the 73 hedgerows present, six were evaluated to be greater than 30 years in age and contain four or more woody species across their entire length. Of these, two were discounted (Hedgerows 168 and 1036) as they lacked species richness. Hedgerow 1948 was also discounted as although it had 6 species in its entire length it did not meet enough of the factors needed in addition to this to be an important hedgerow. The final three hedgerows were evaluated (using a precautionary approach) to be important under the hedgerow regulations assessment. These hedgerows are:
 - Hedgerow 546 in ECC 5: Low Road to Steeping River;
 - Hedgerow 1926; and,
 - Hedgerow 1928 in ECC 12: Marsh Road to Fosdyke Bridge.
- 58. The impact of the Project on these hedgerows is assessed in Chapter 21 Onshore Ecology (document reference 6.1.21).



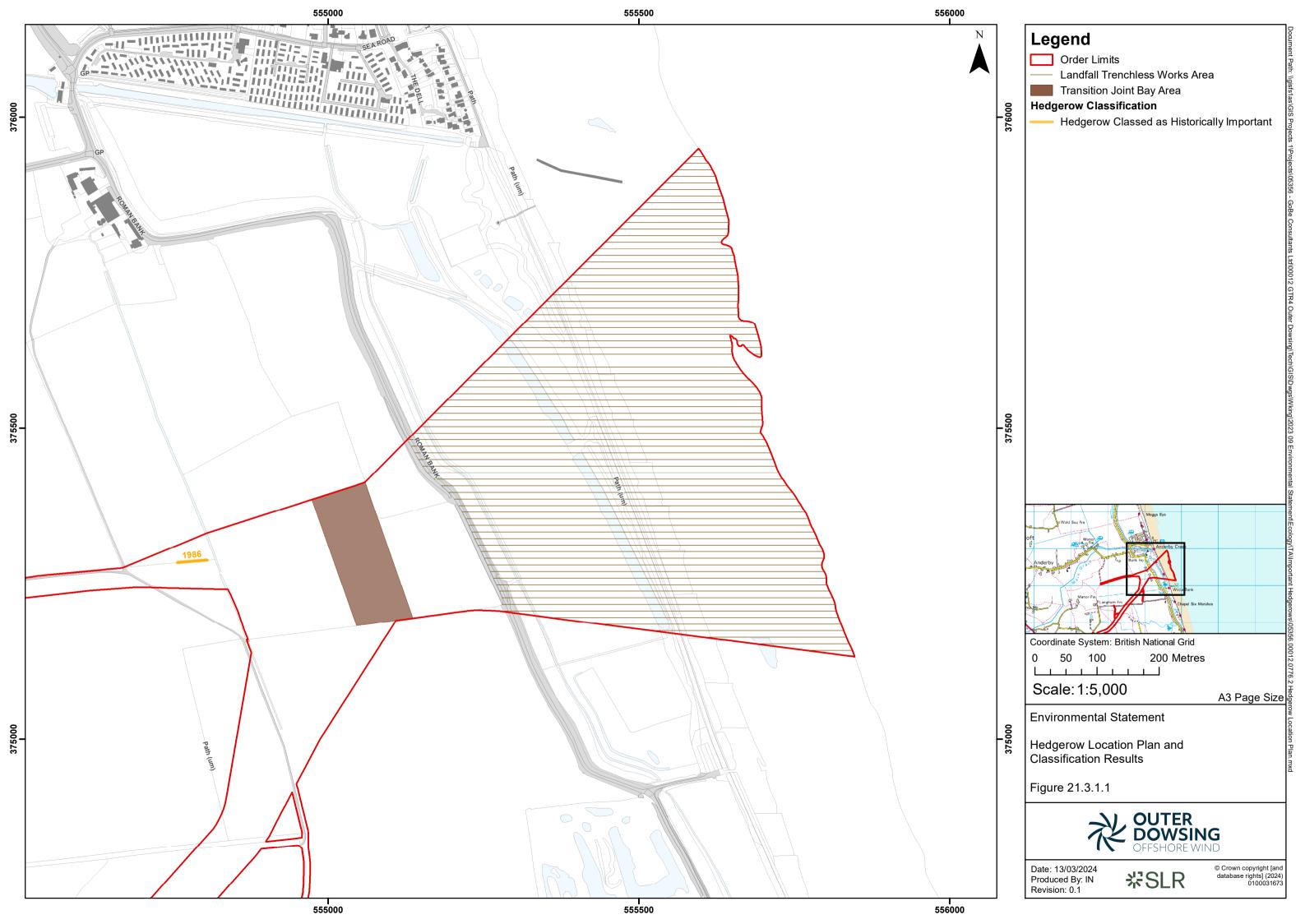
21.8 References

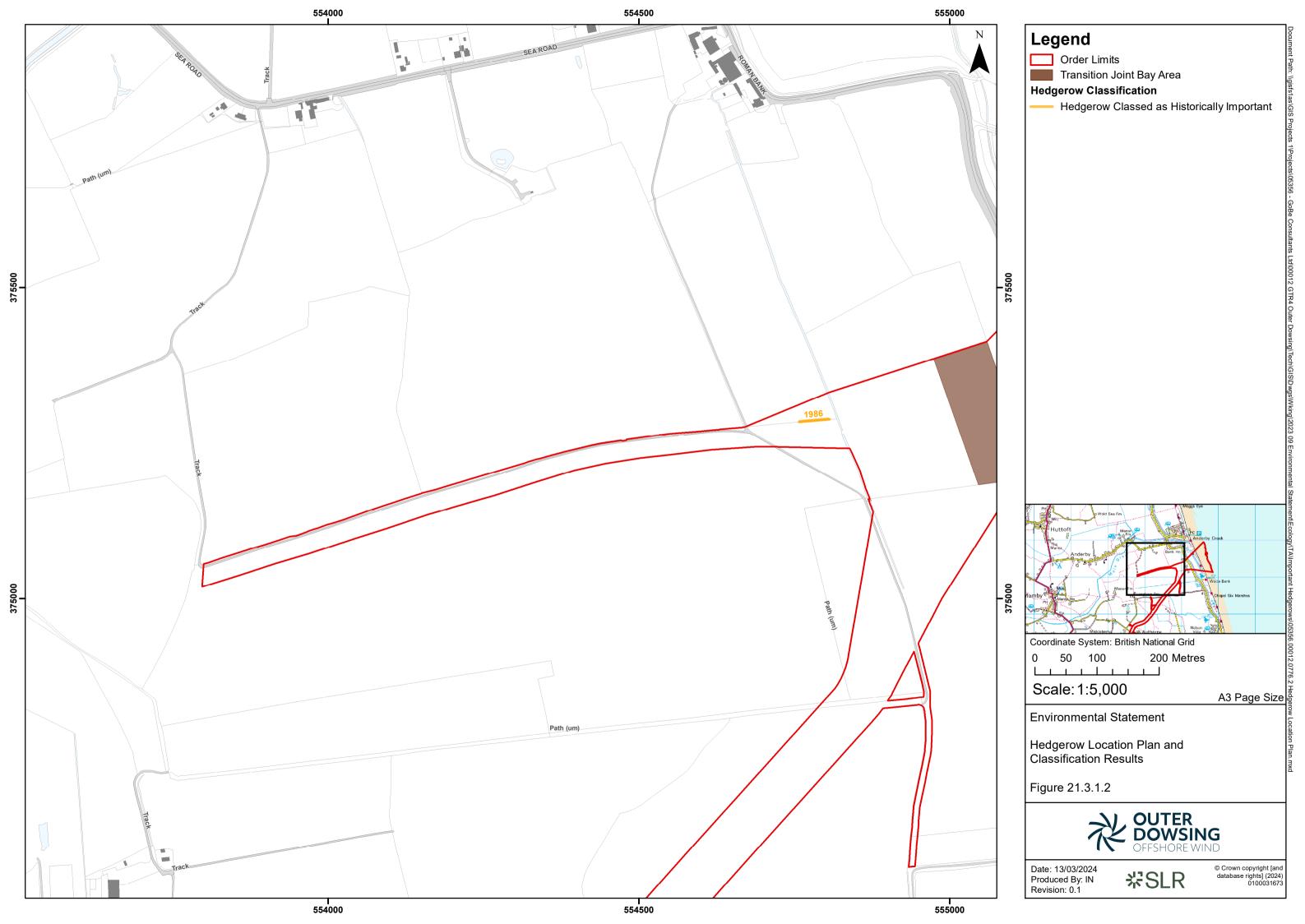
Defra (2007) Hedgerow Survey Handbook. A standard procedure for local surveys in the UK. Defra, London

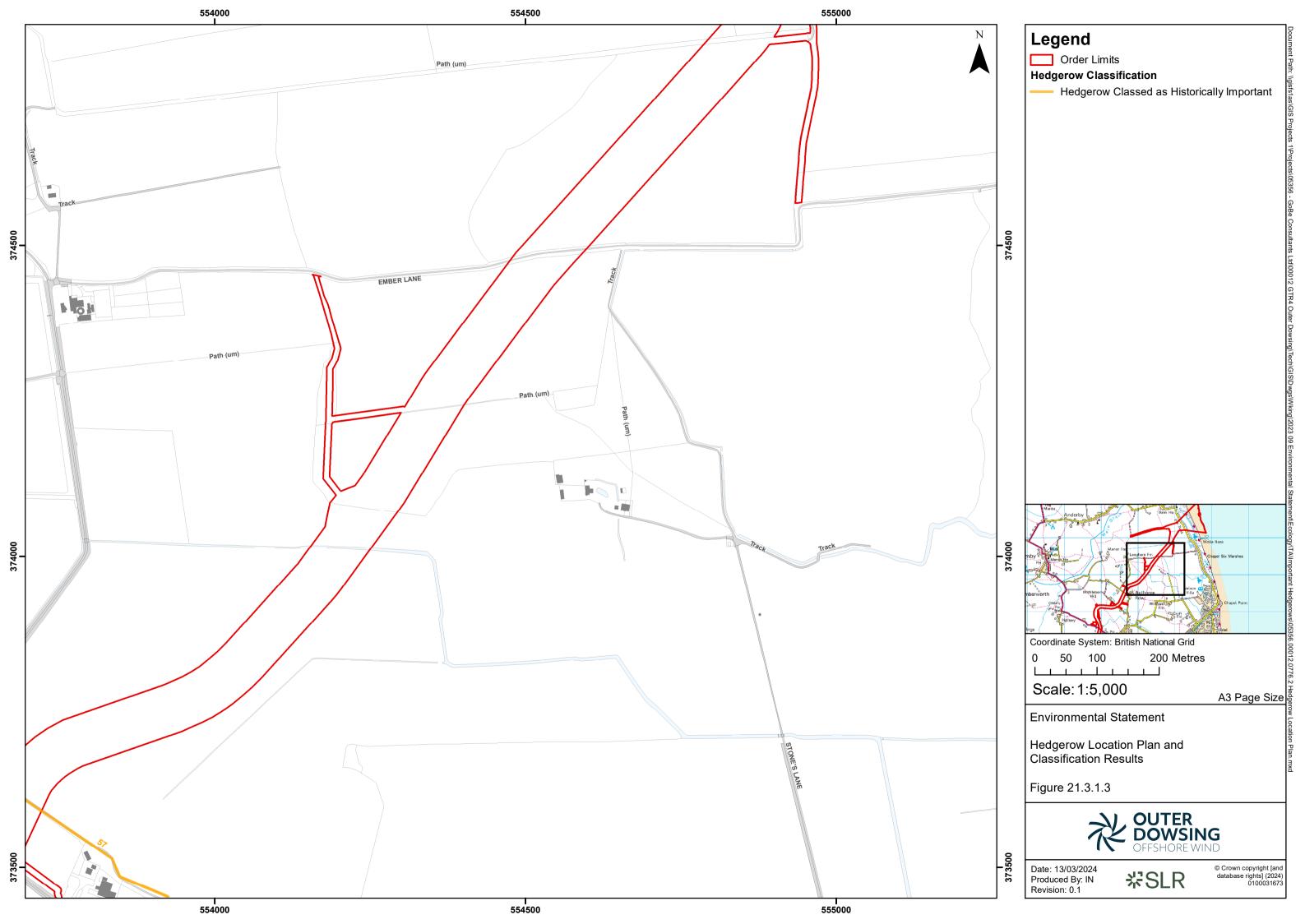
The Hedgerow Regulations, 1997 accessed online at https://www.legislation.gov.uk/uksi/1997/1160/contents/made [30/10/2023]

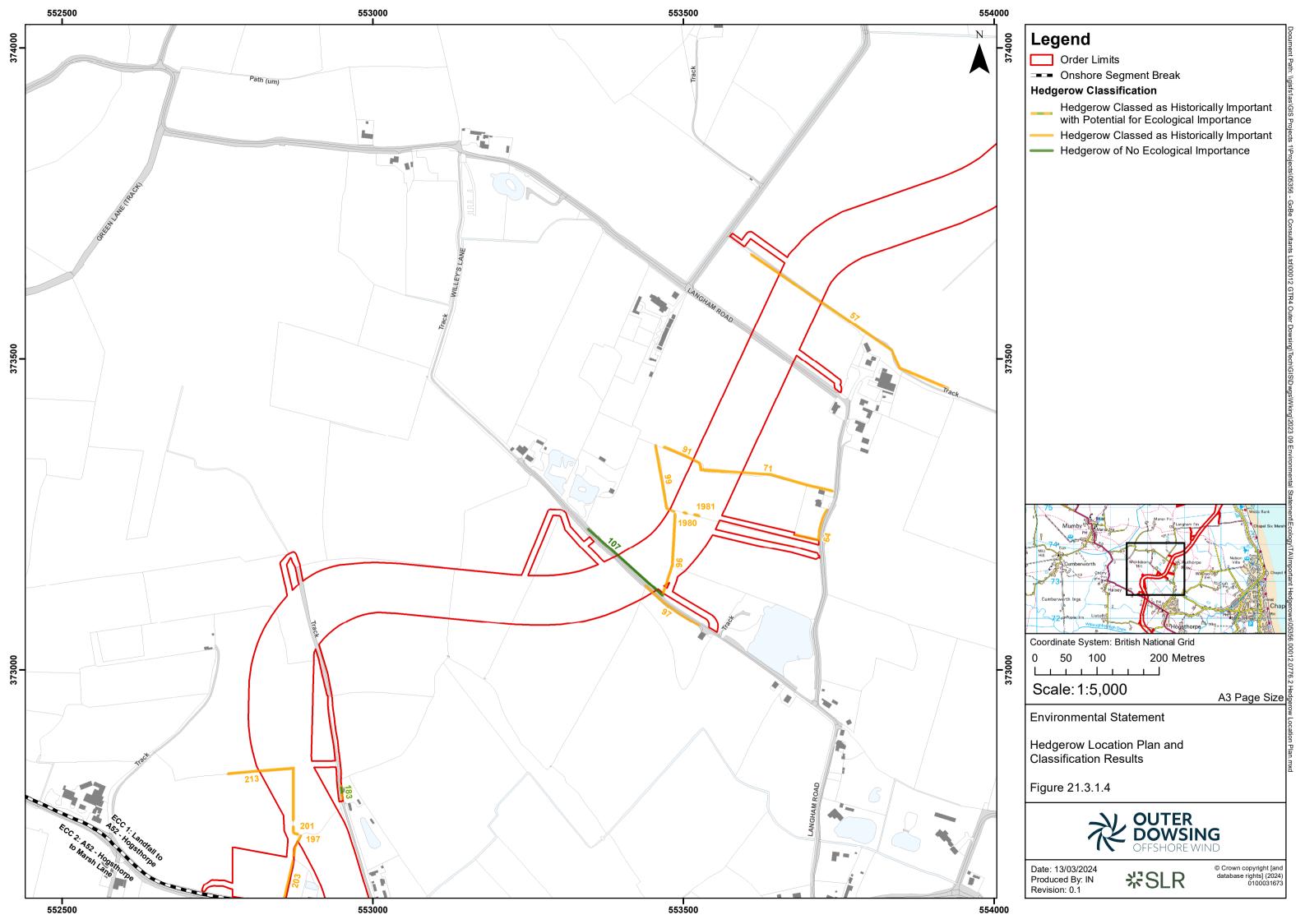
Outer Dowsing Ltd. (2022) Outer Dowsing Offshore Wind Farm Environmental Impact Assessment Scoping Report.

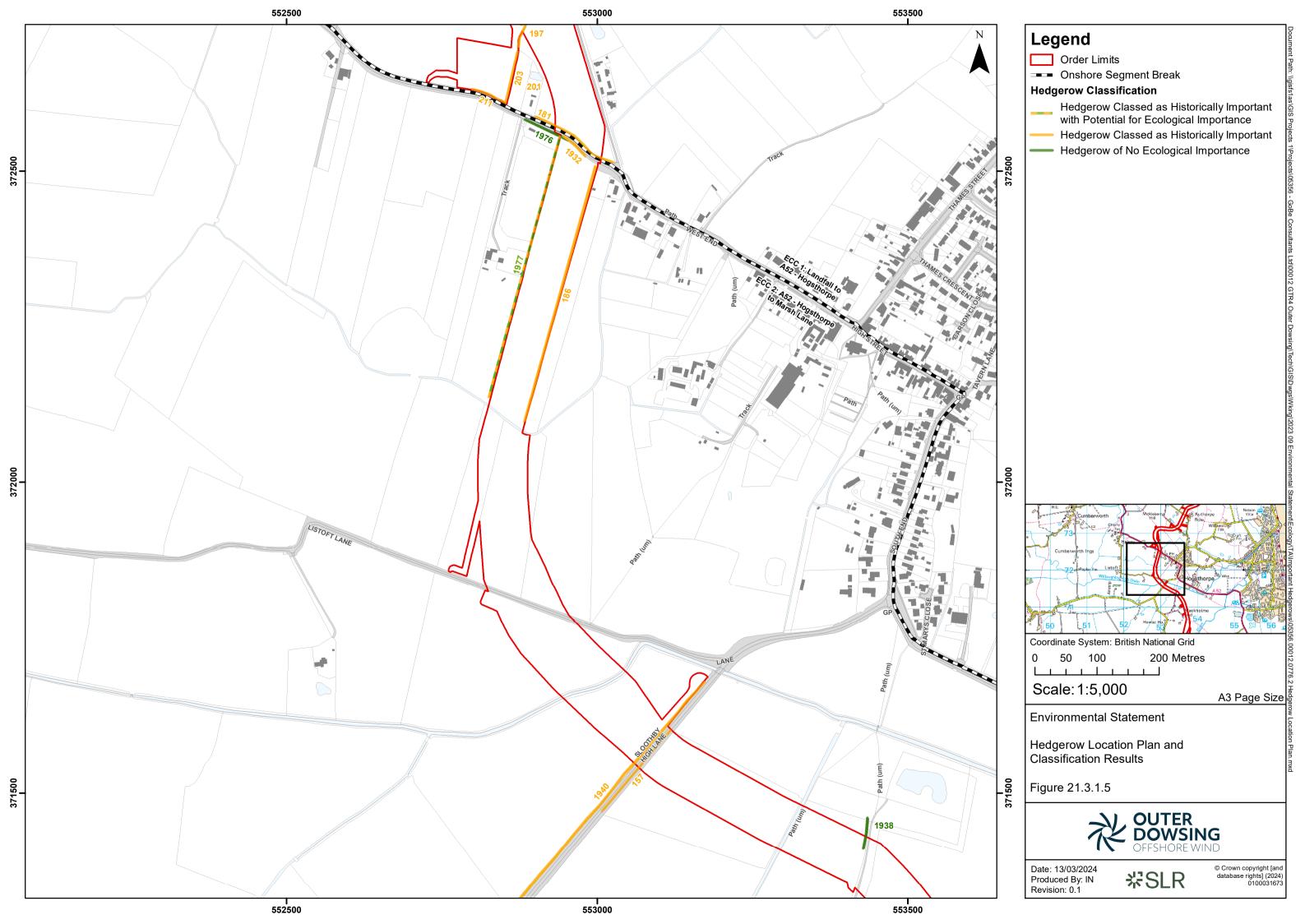


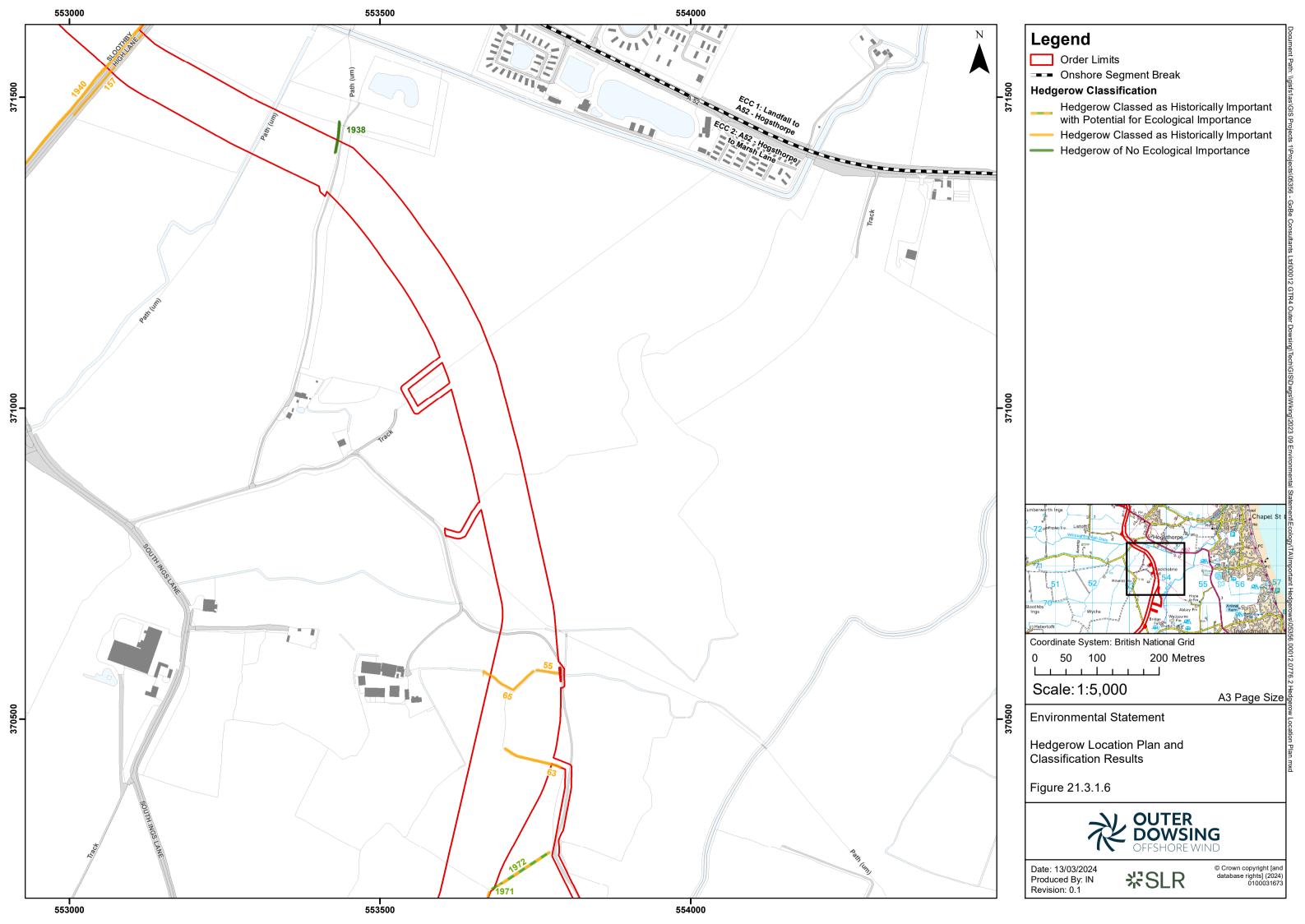


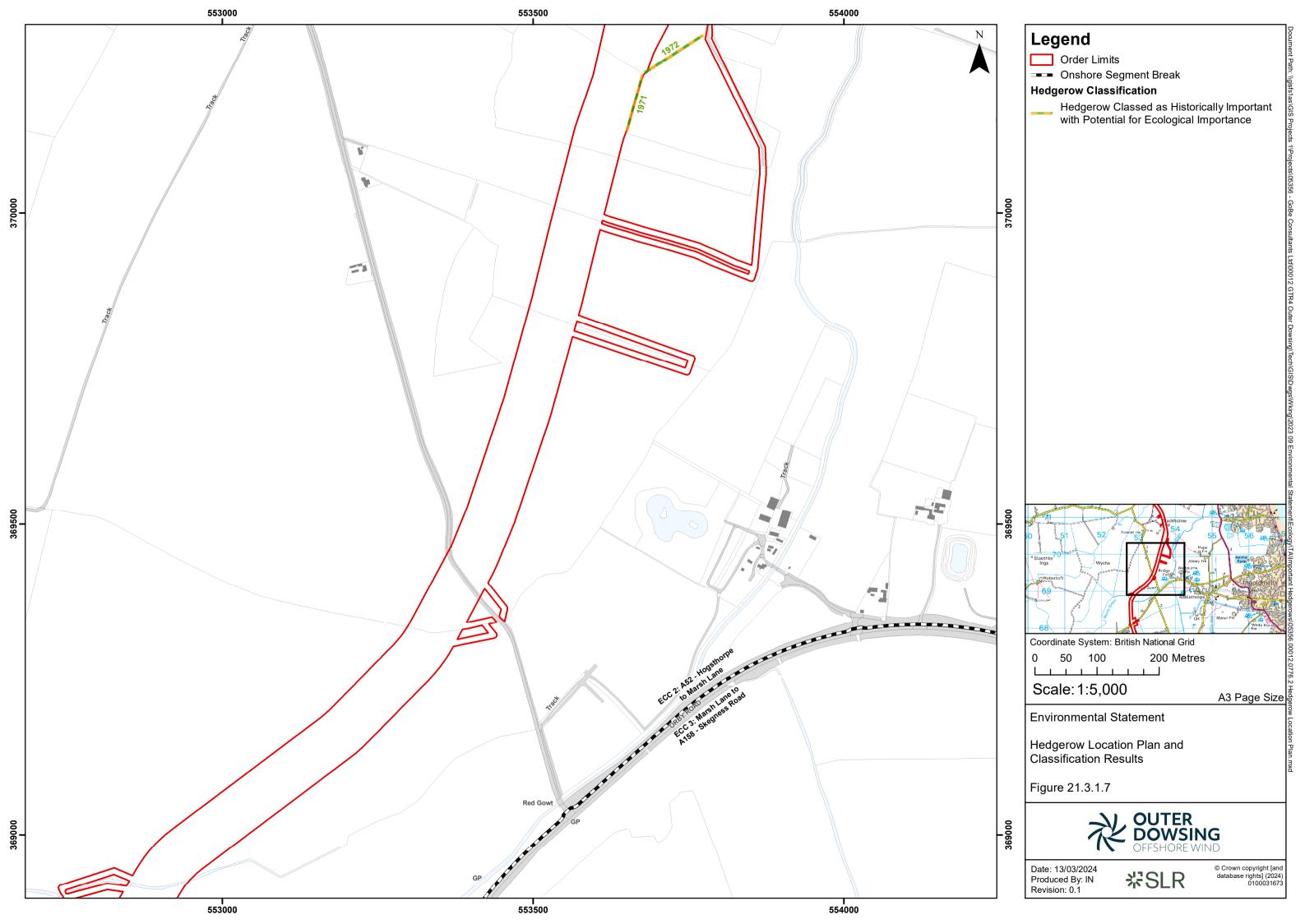


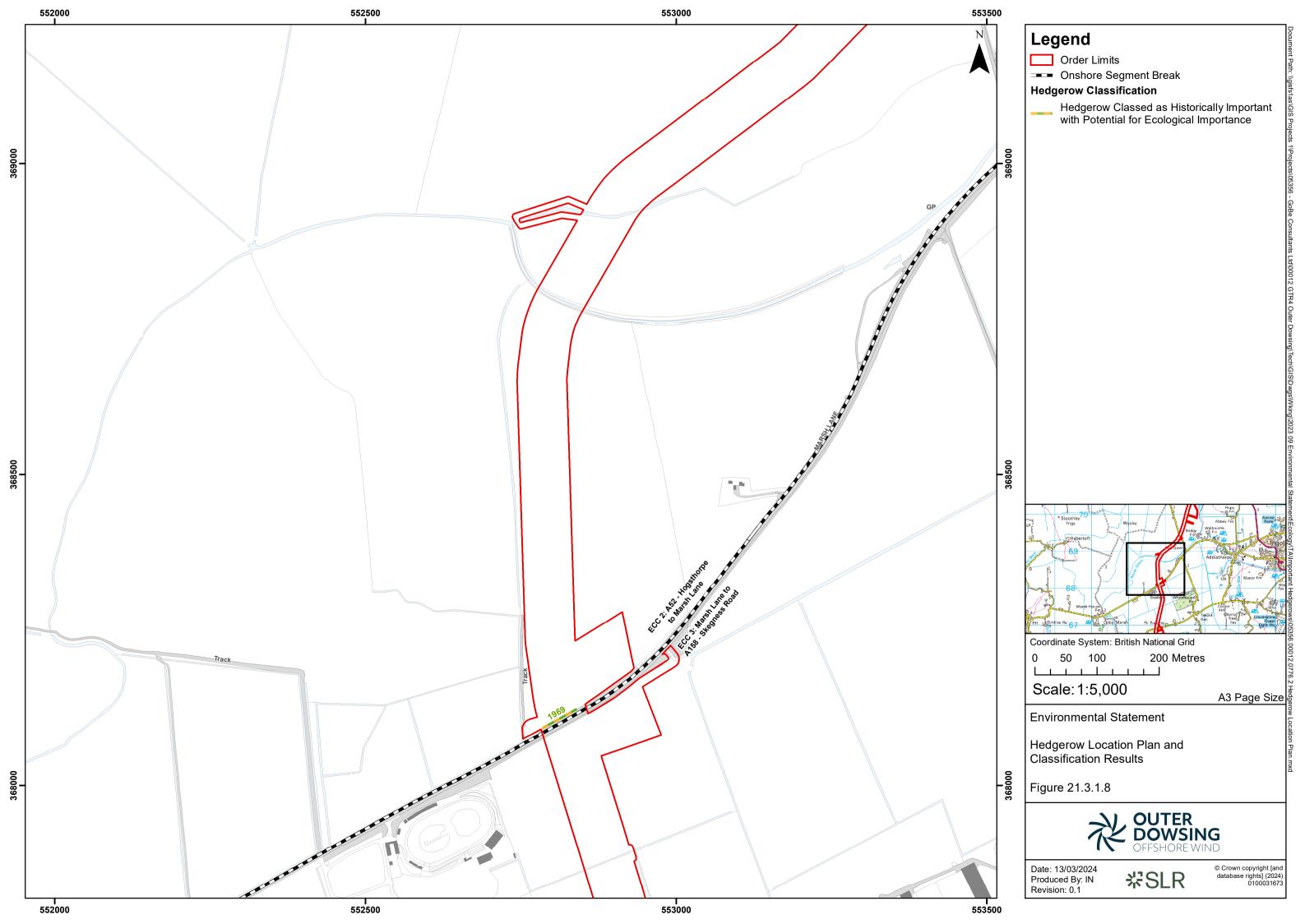


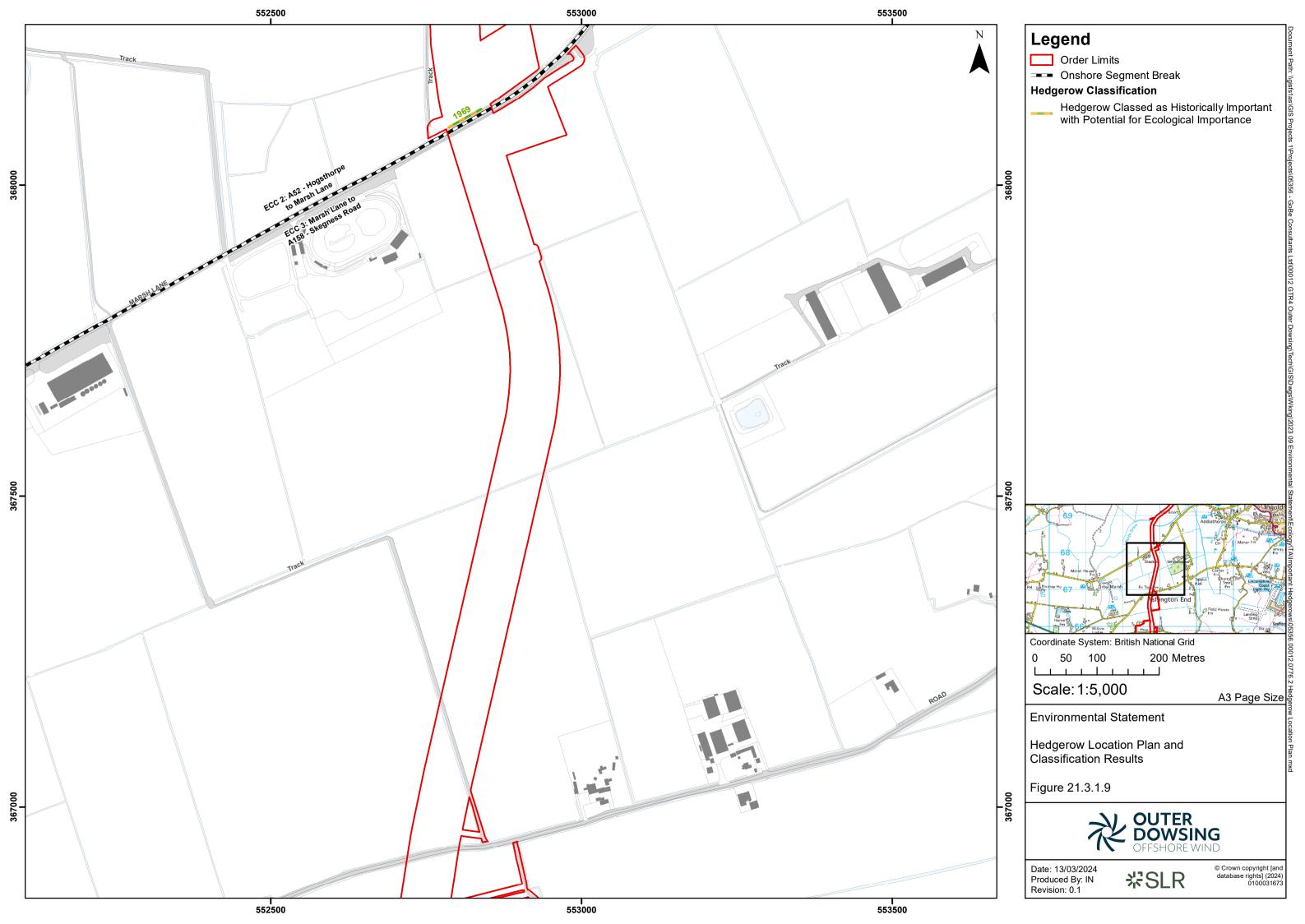


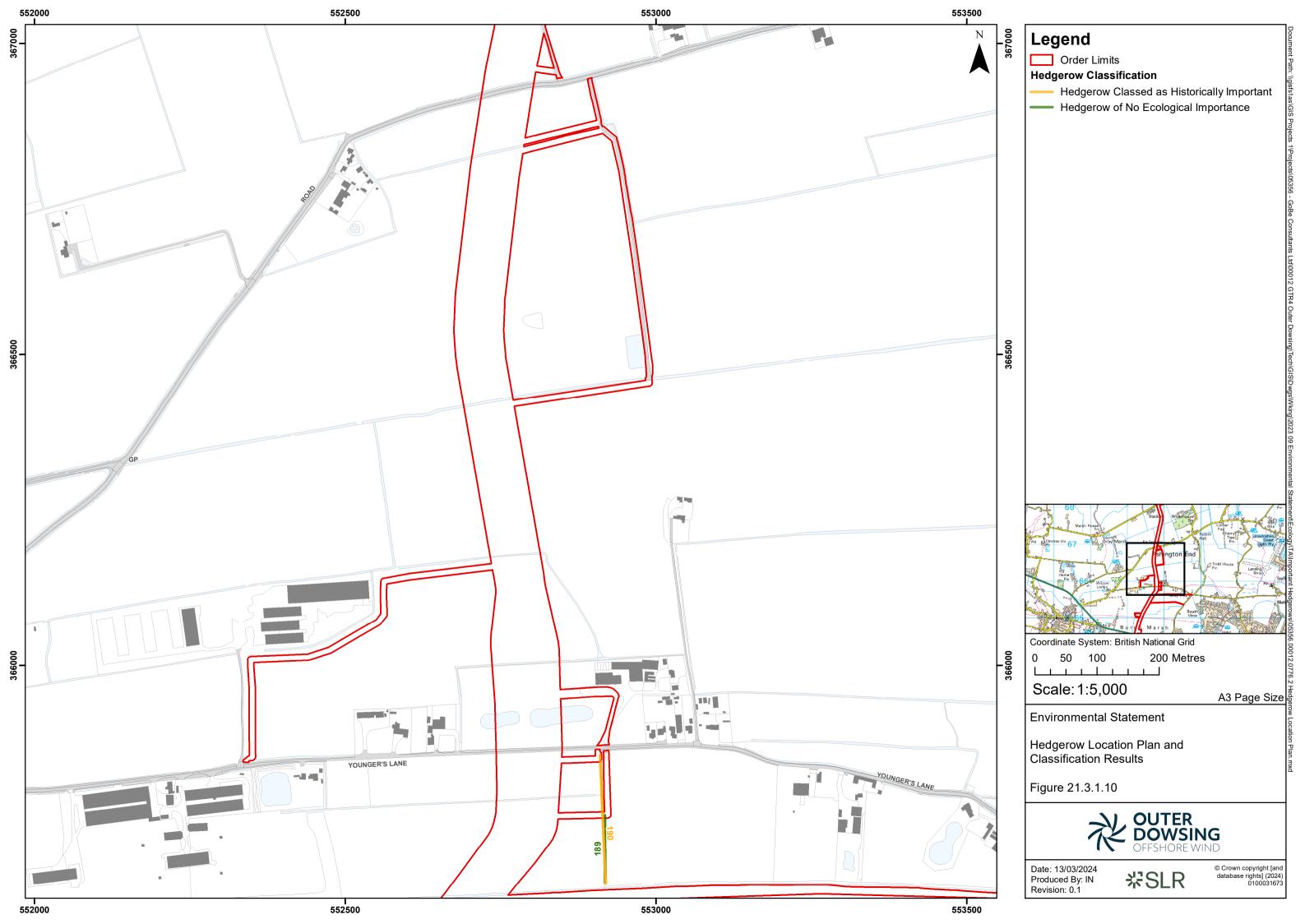


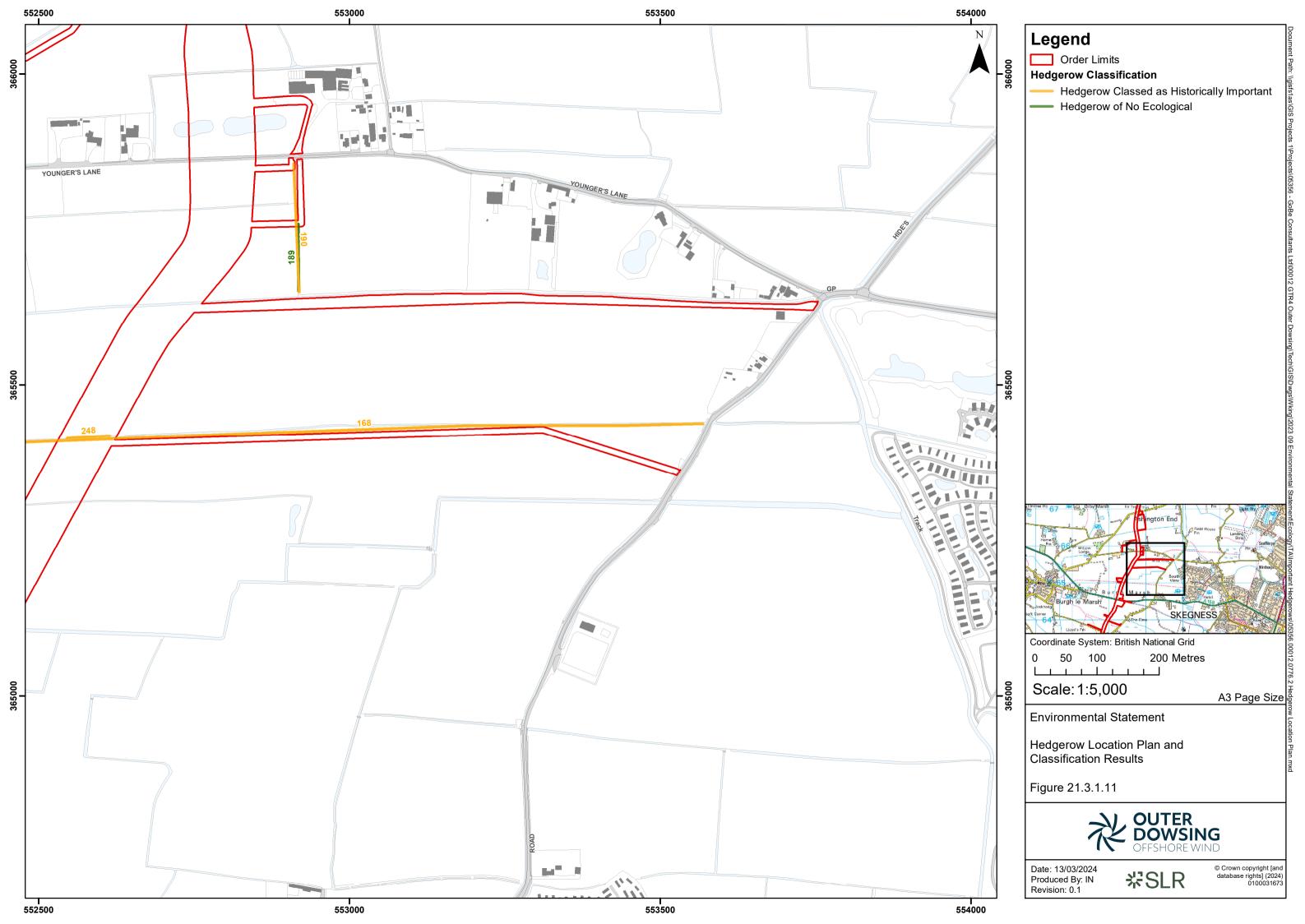


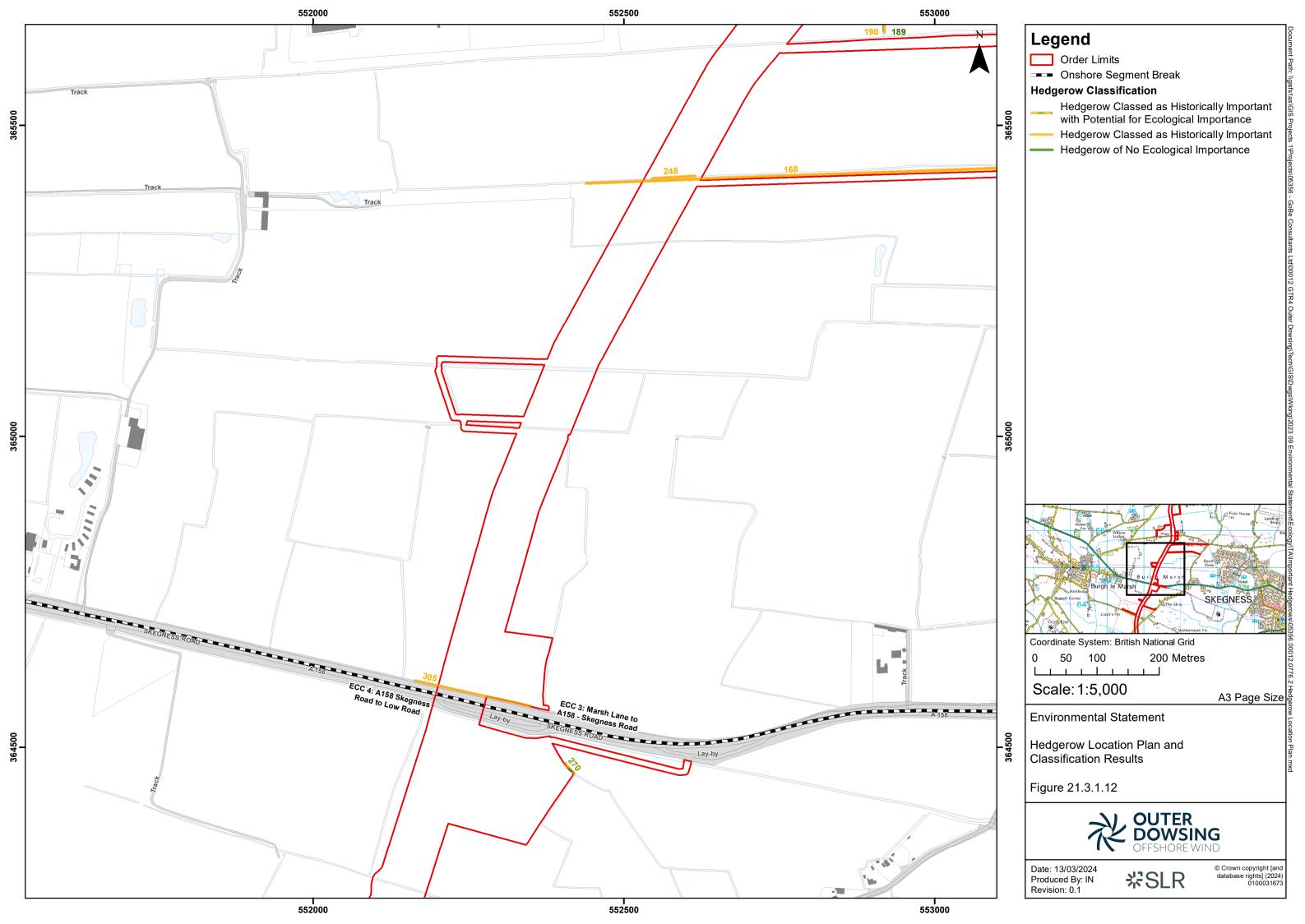


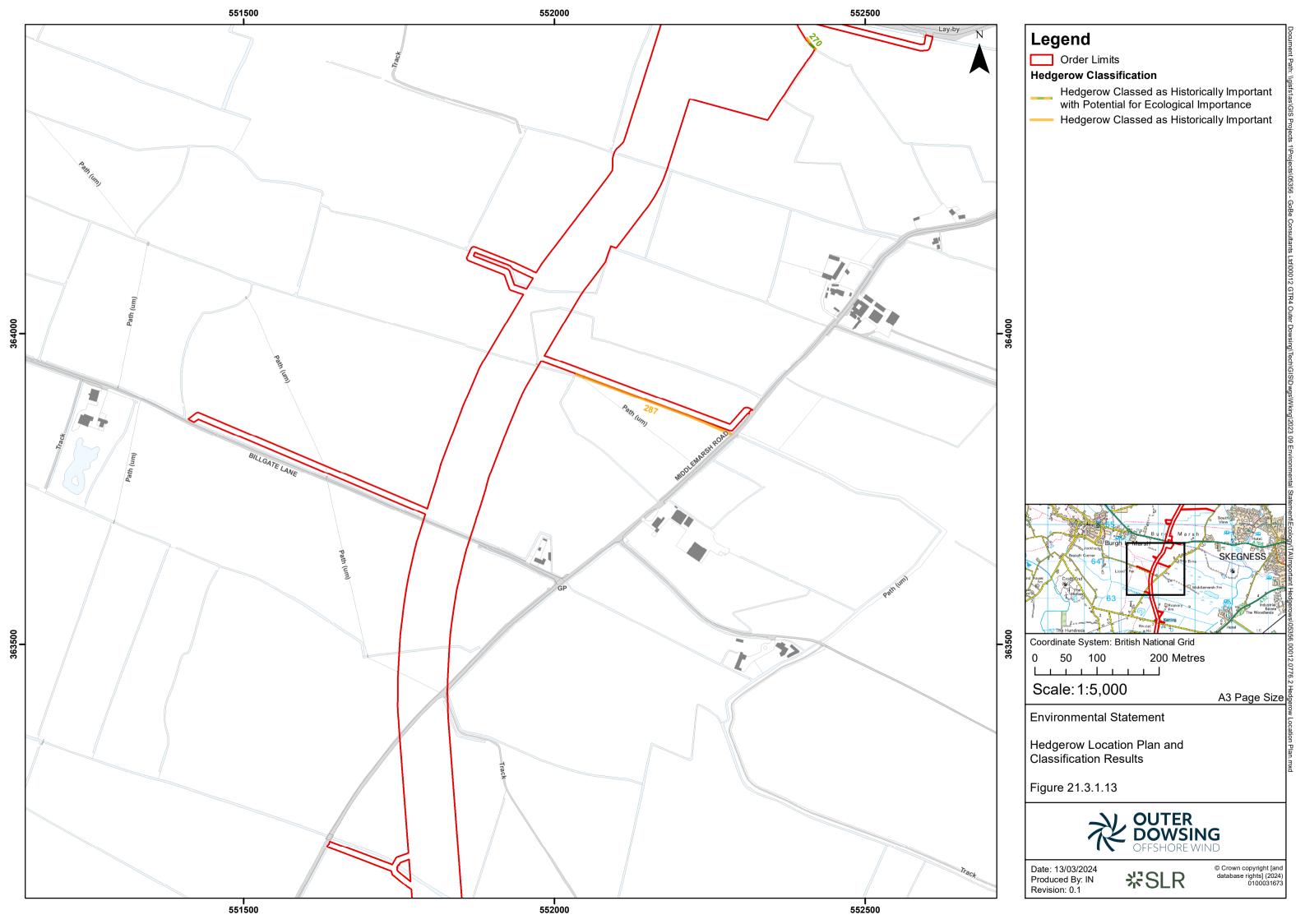


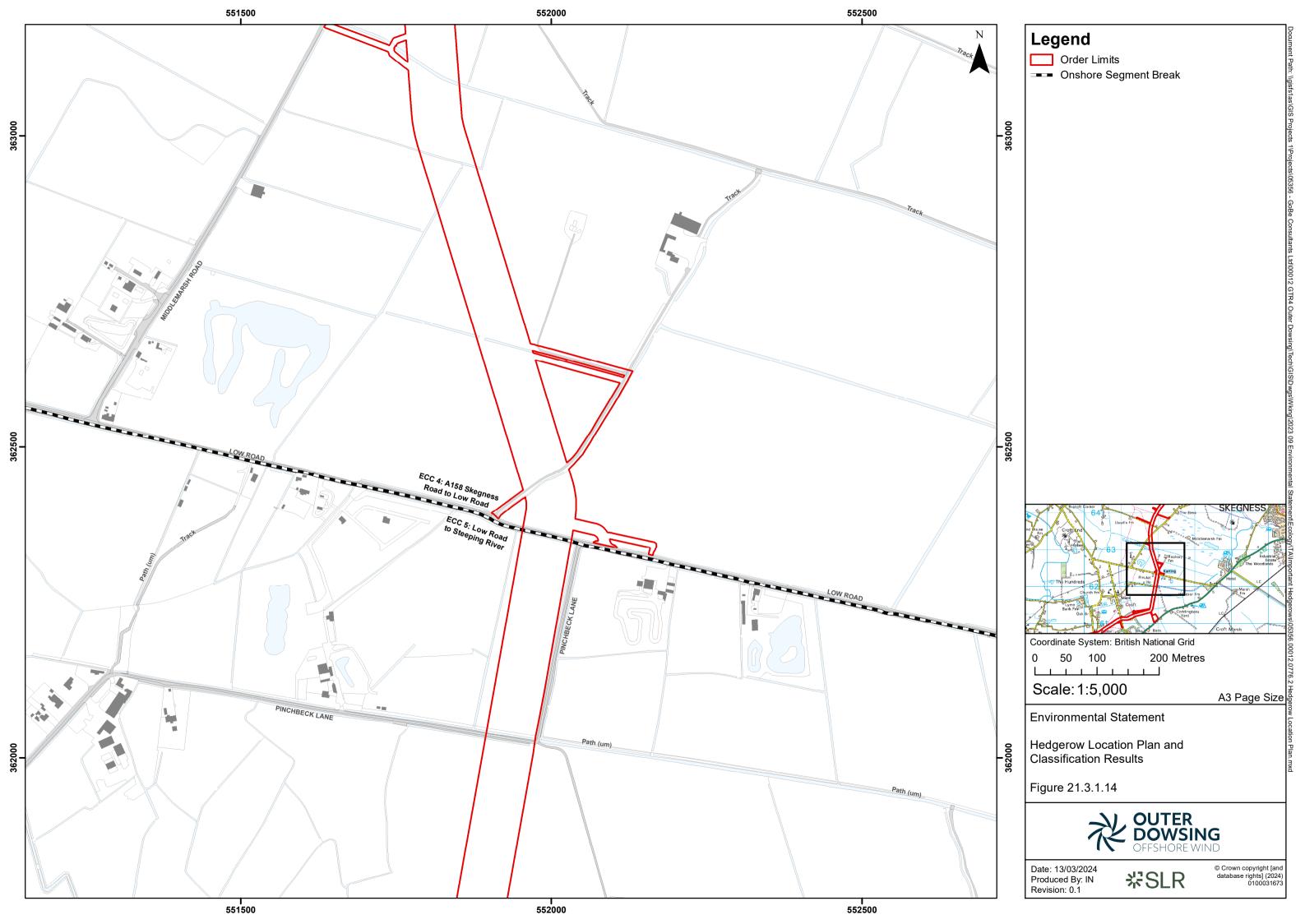


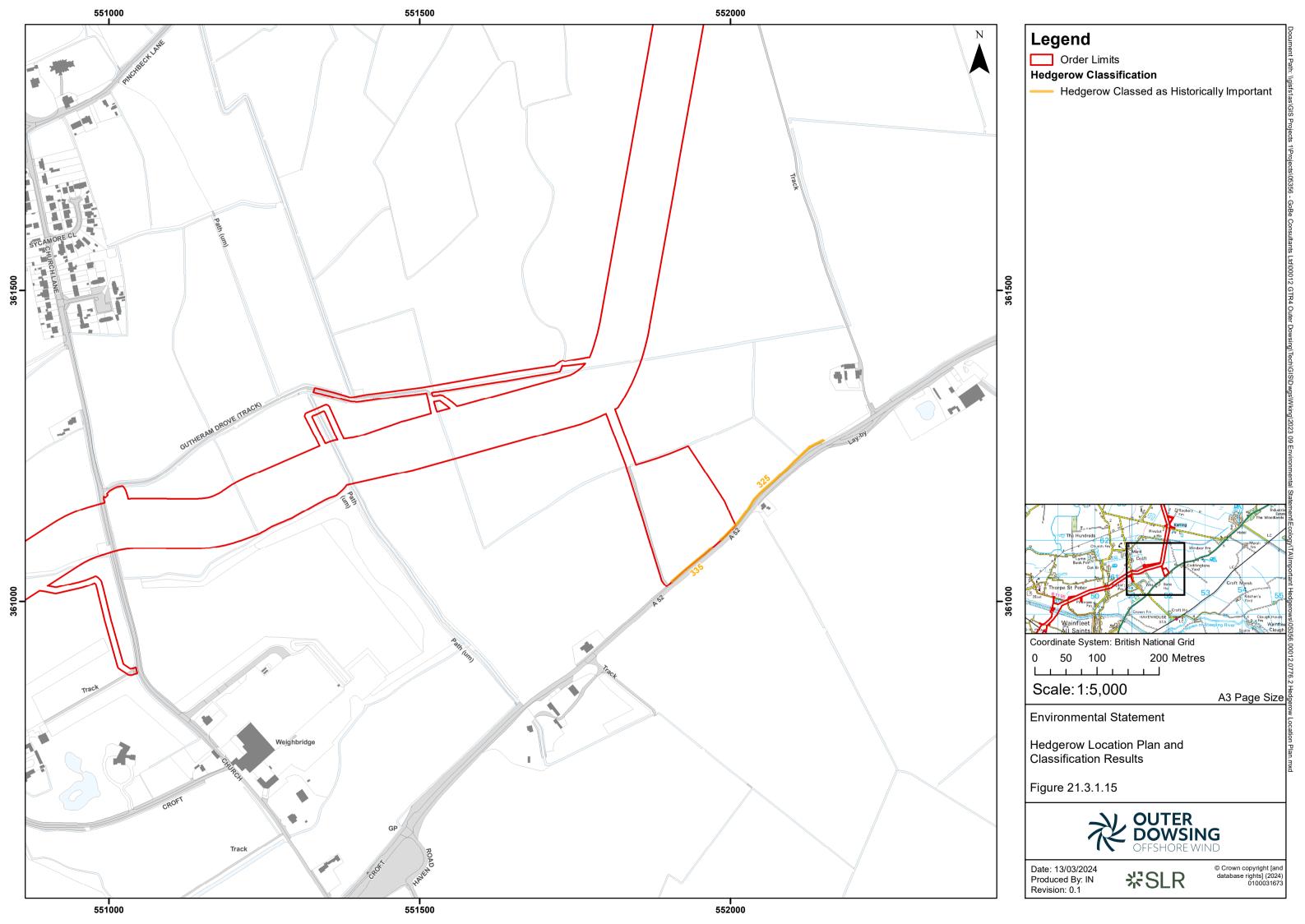


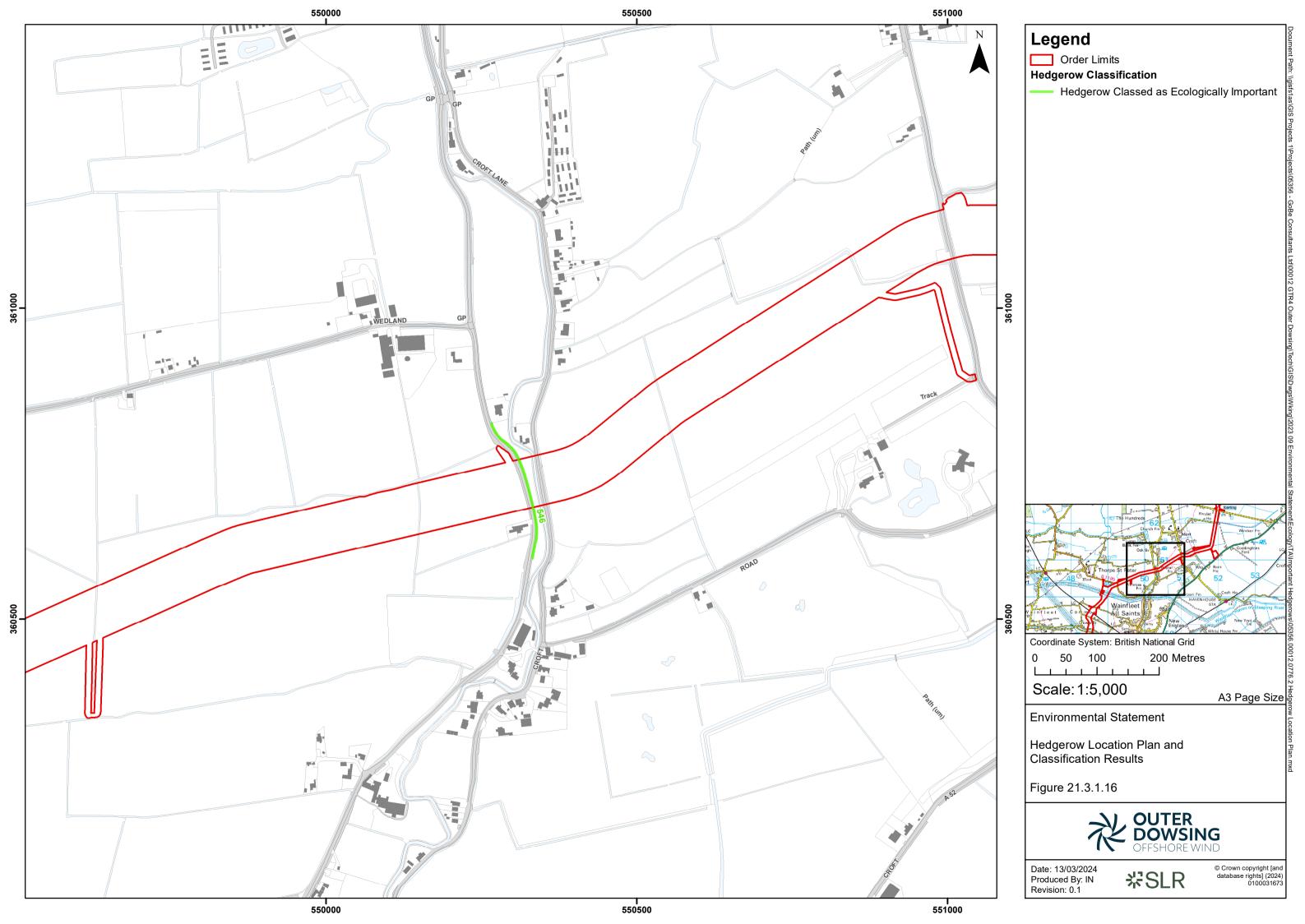


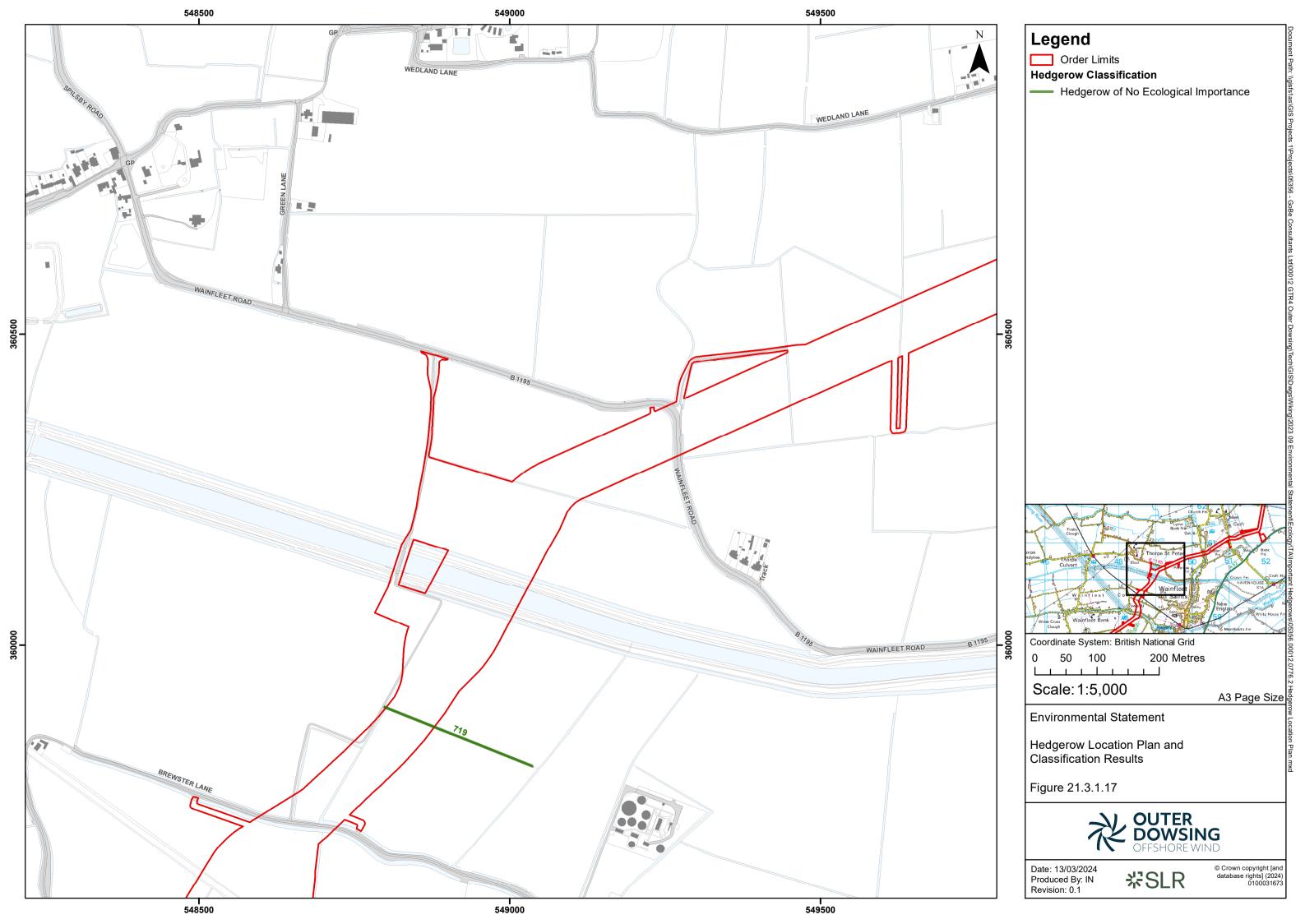


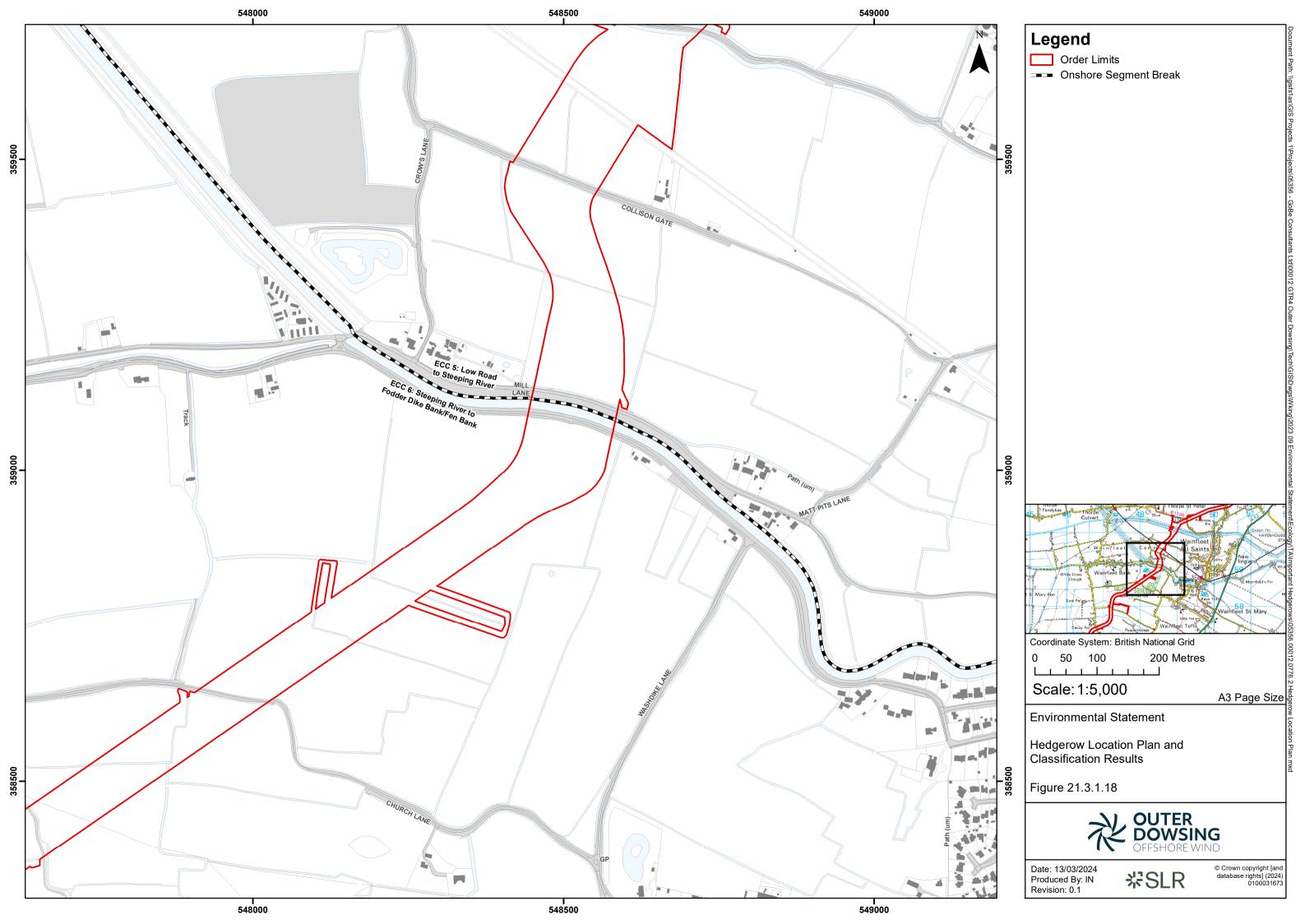


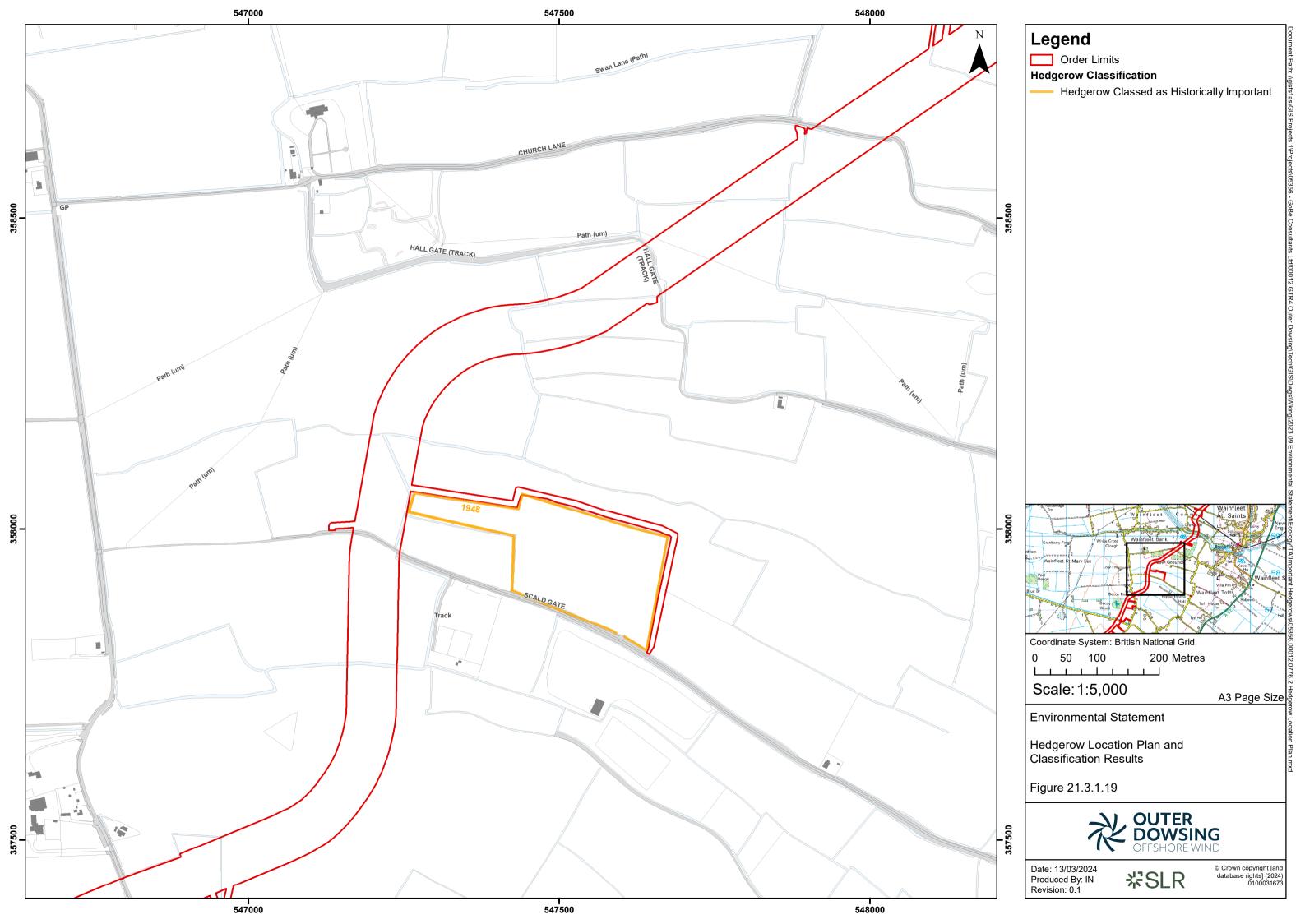


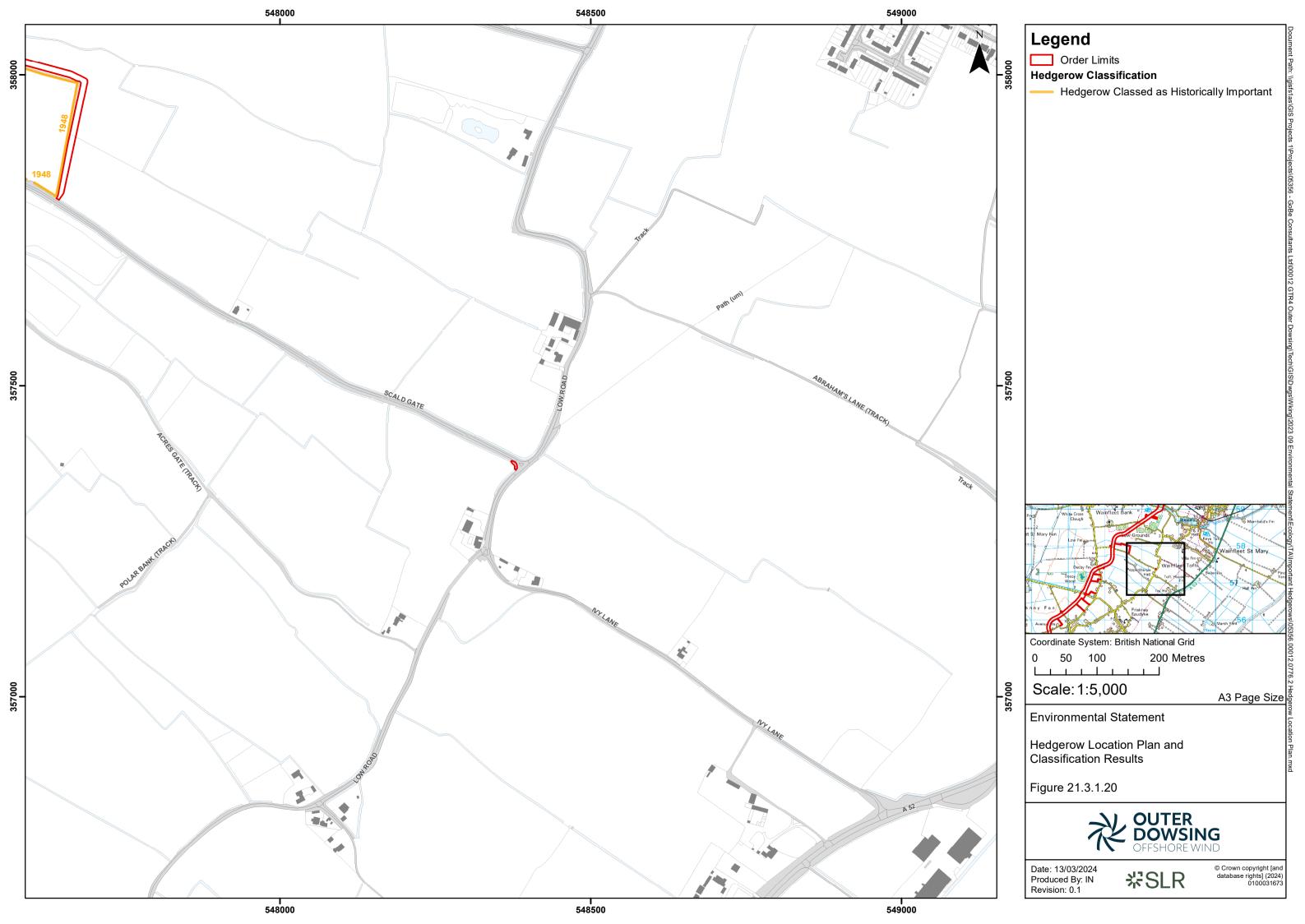


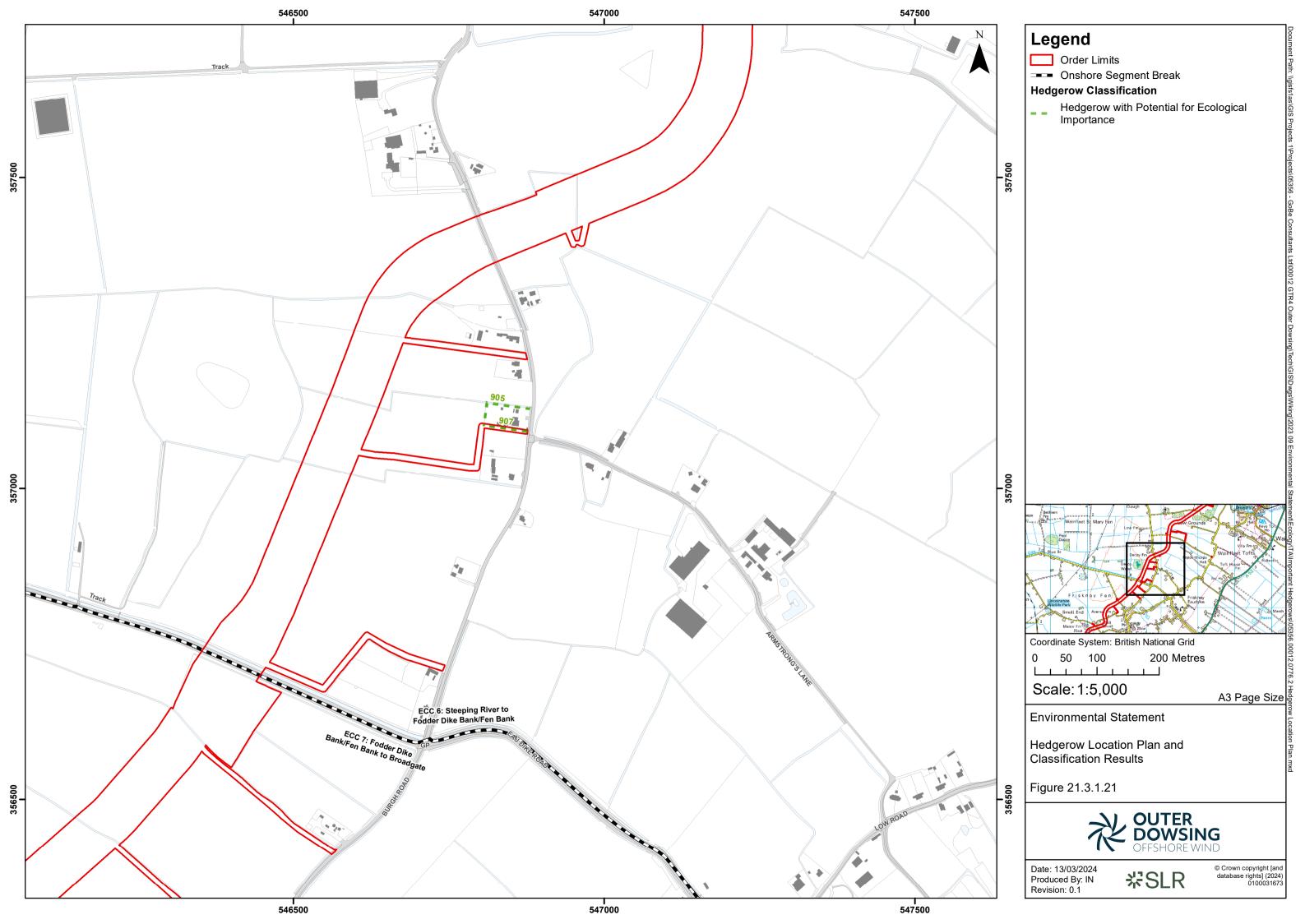


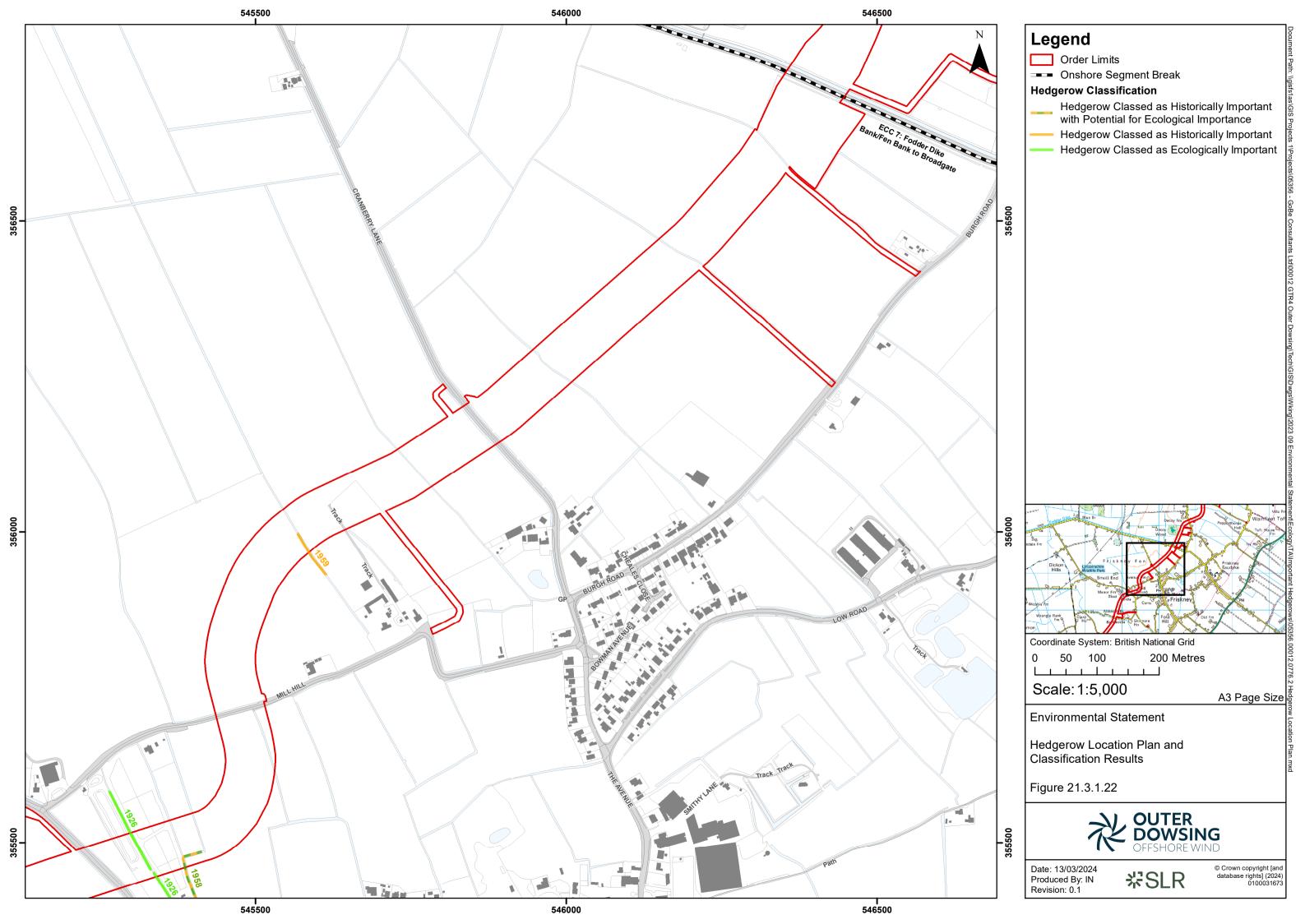


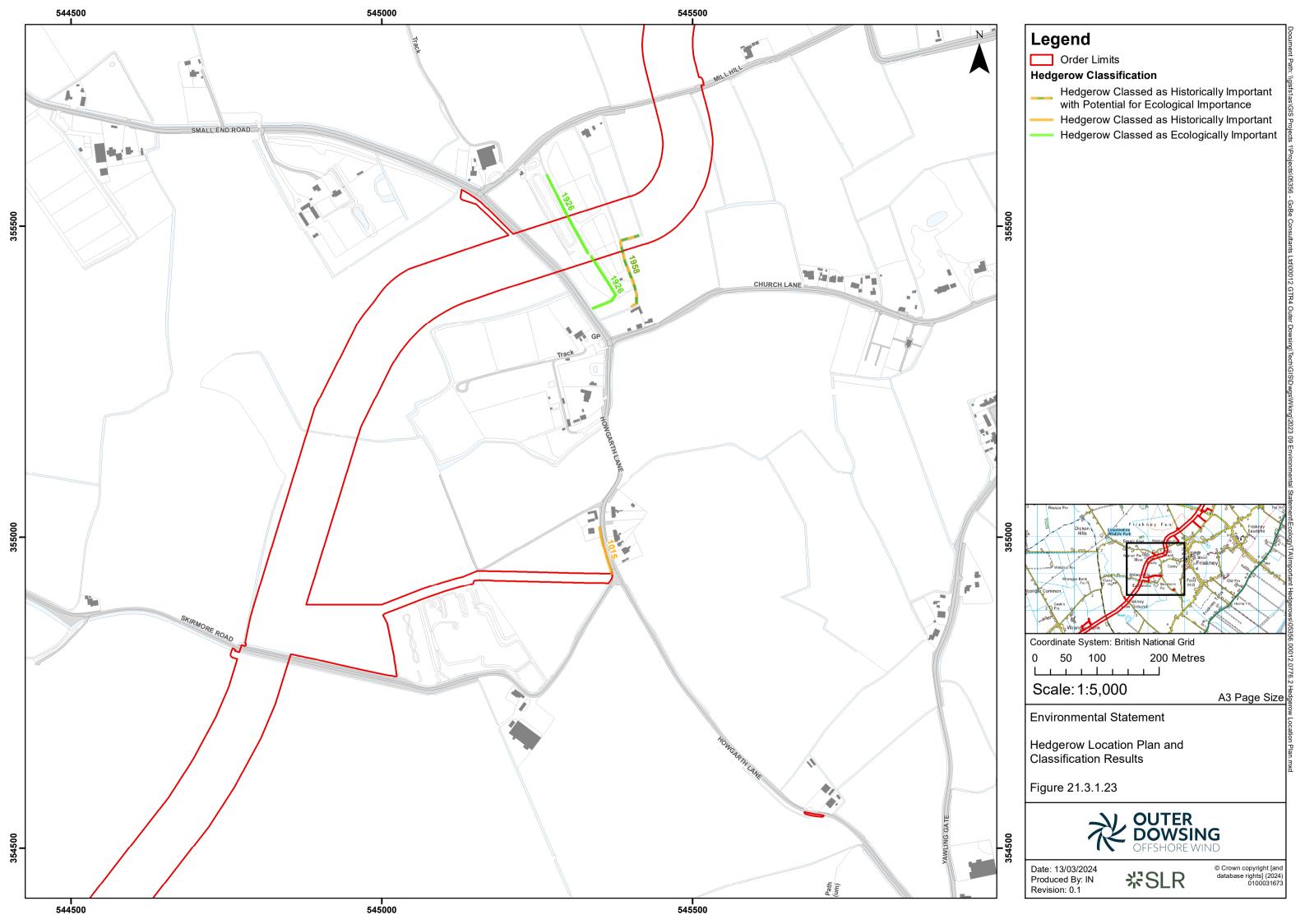


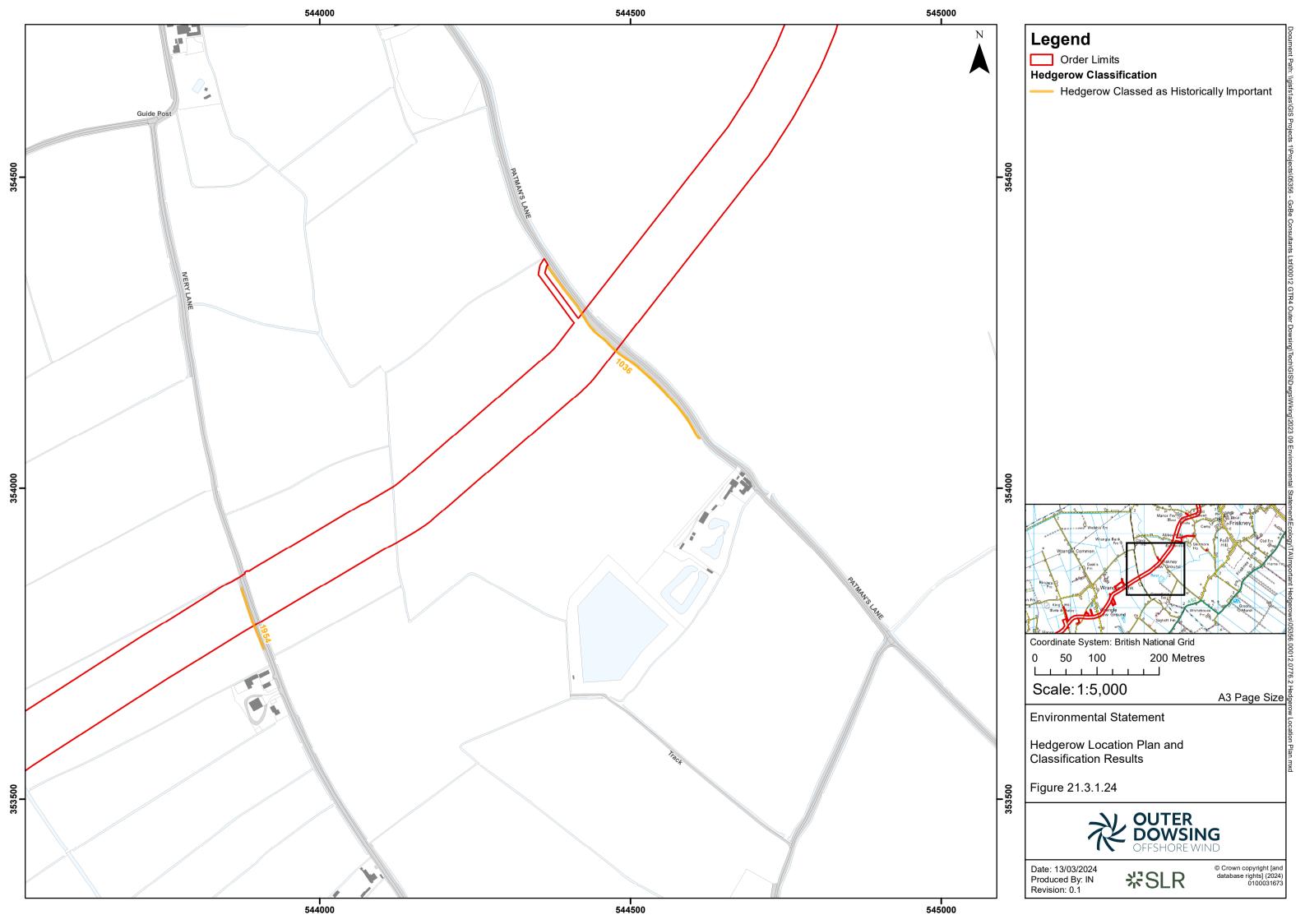


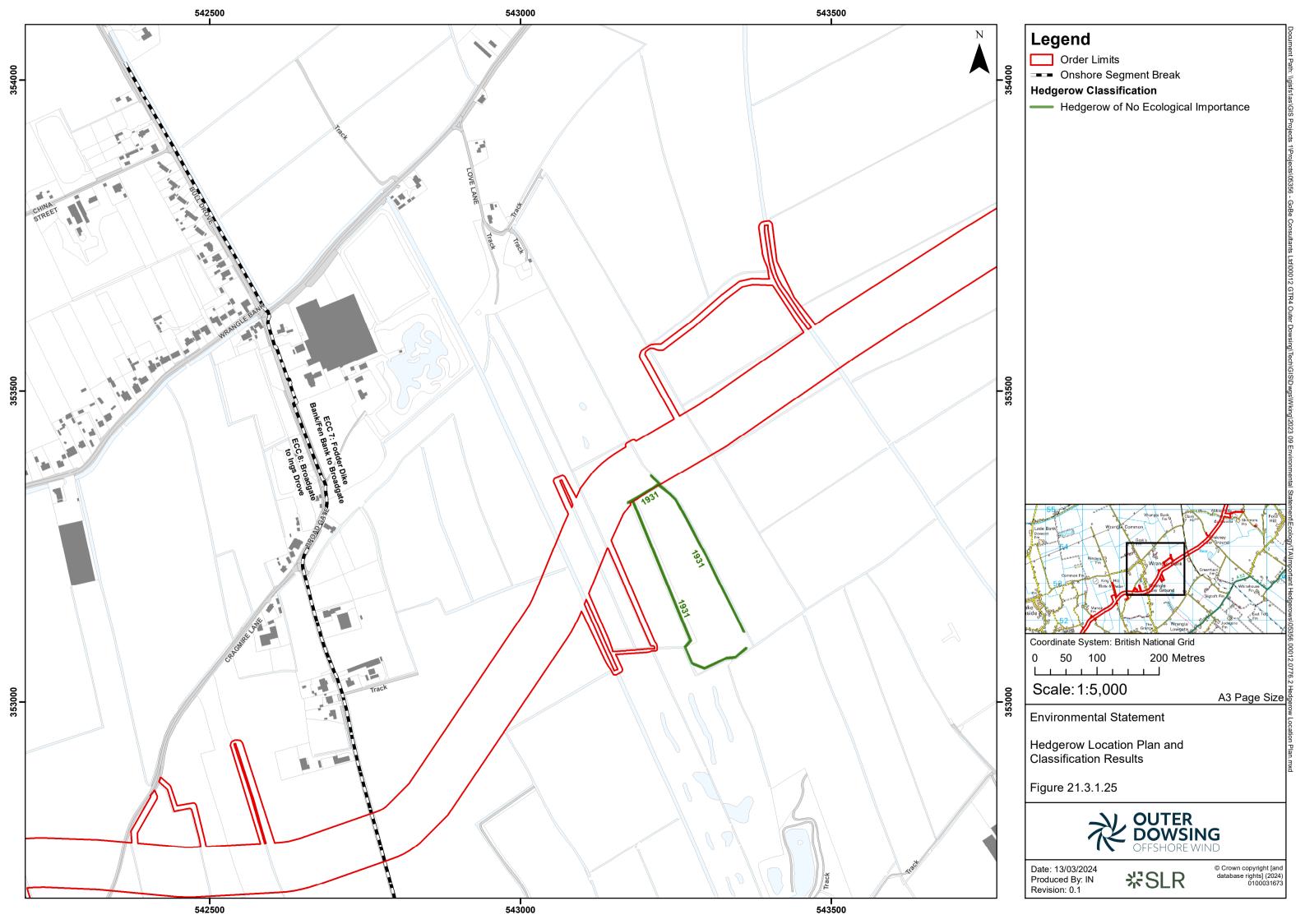


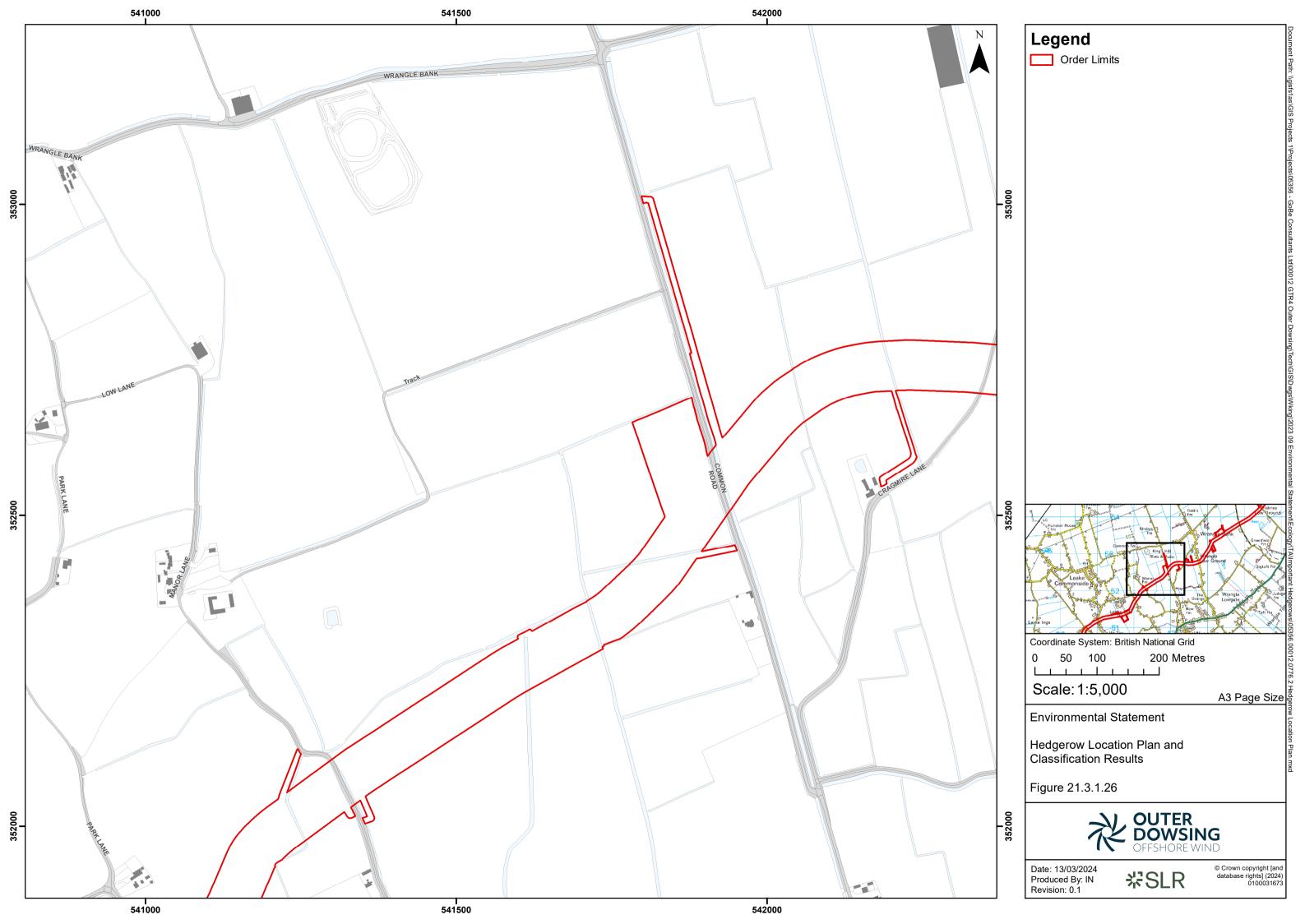


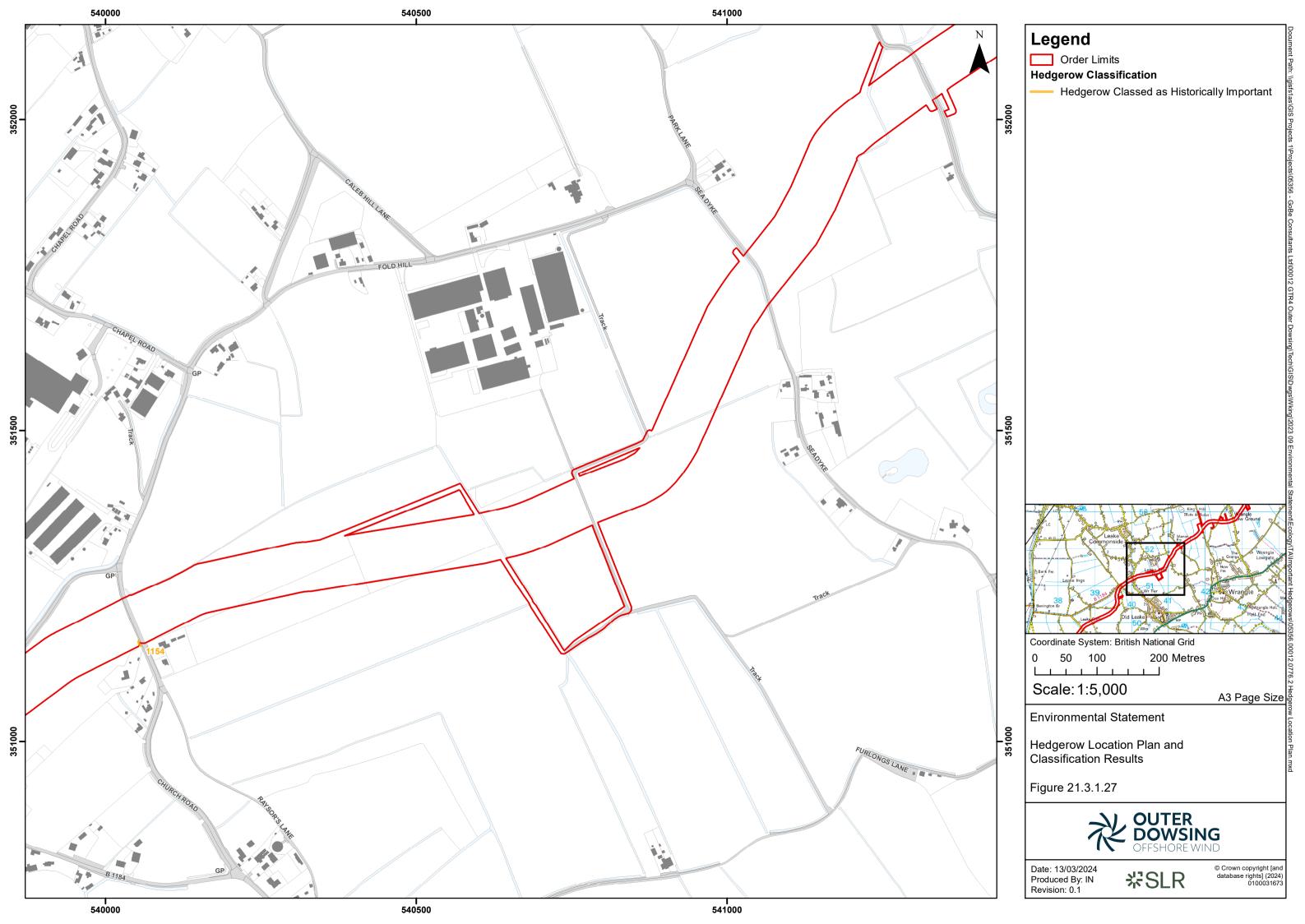


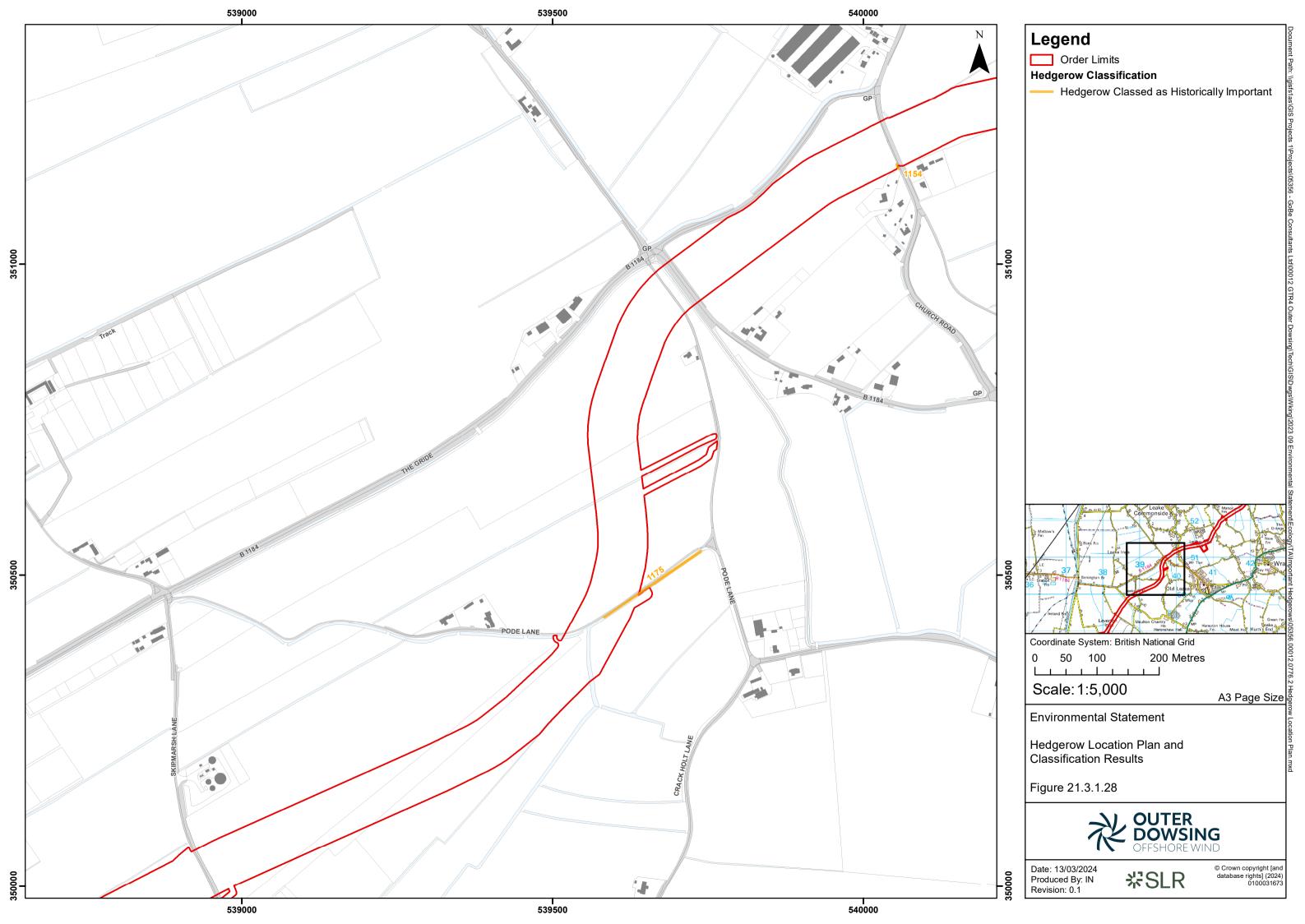


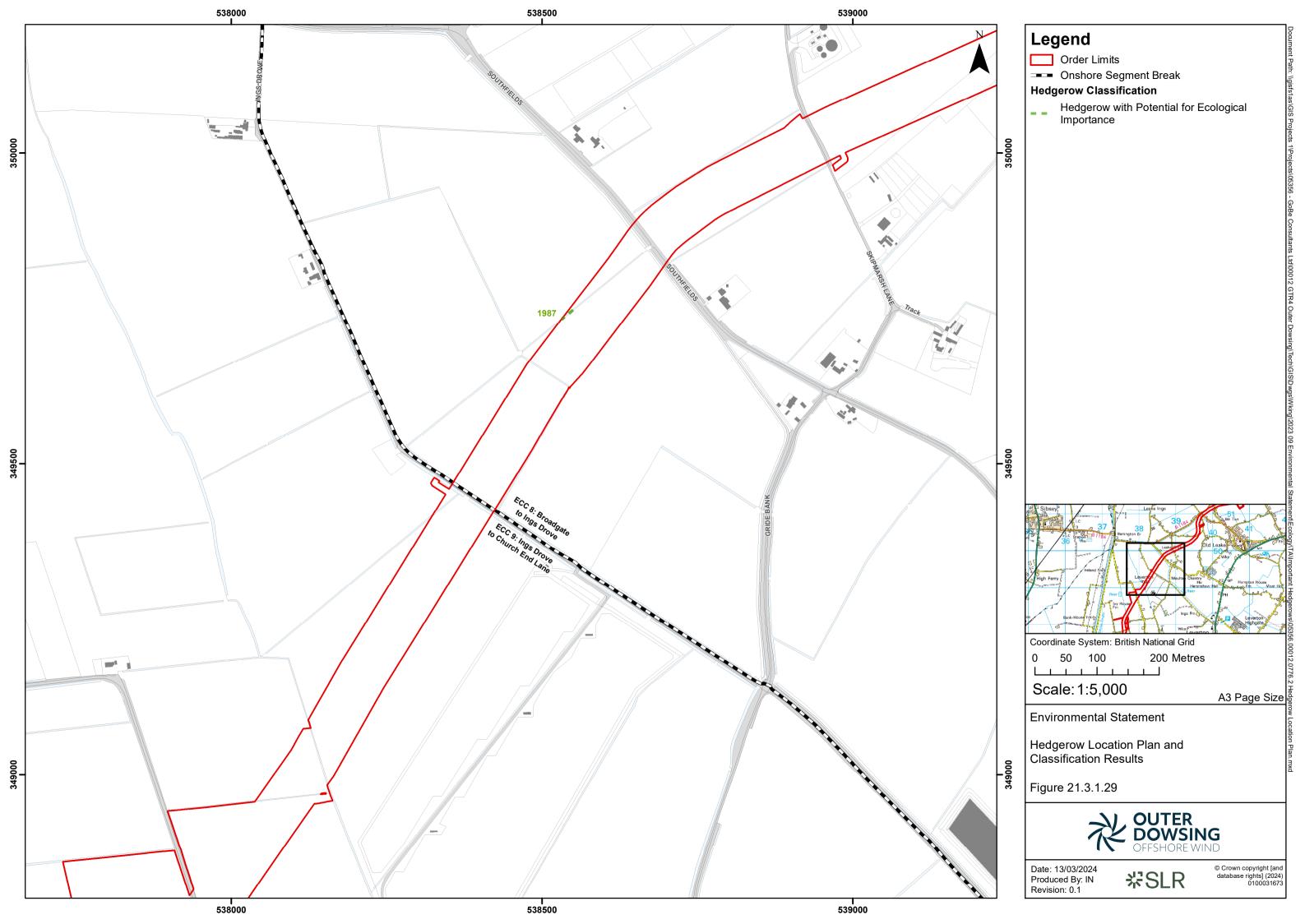


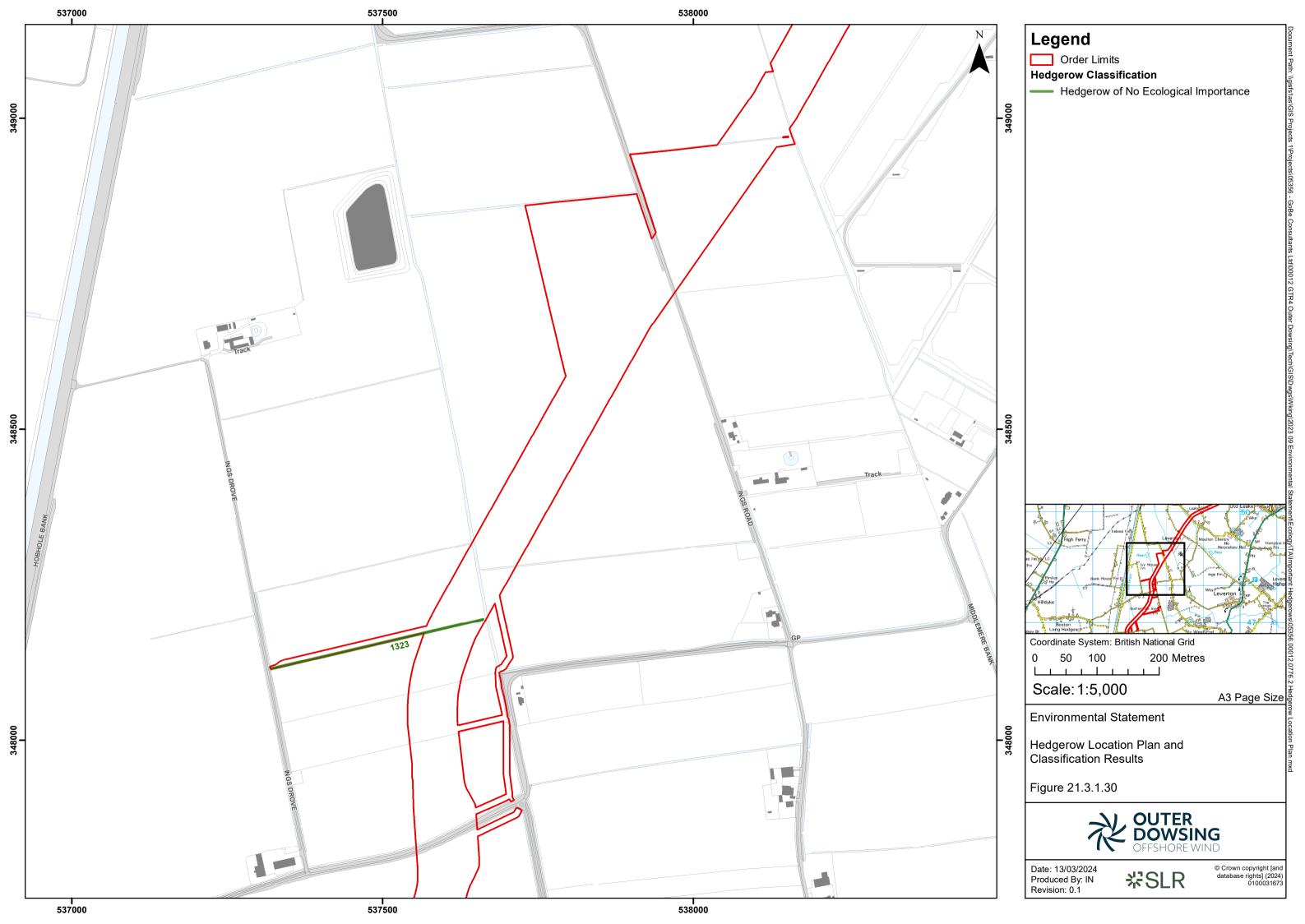


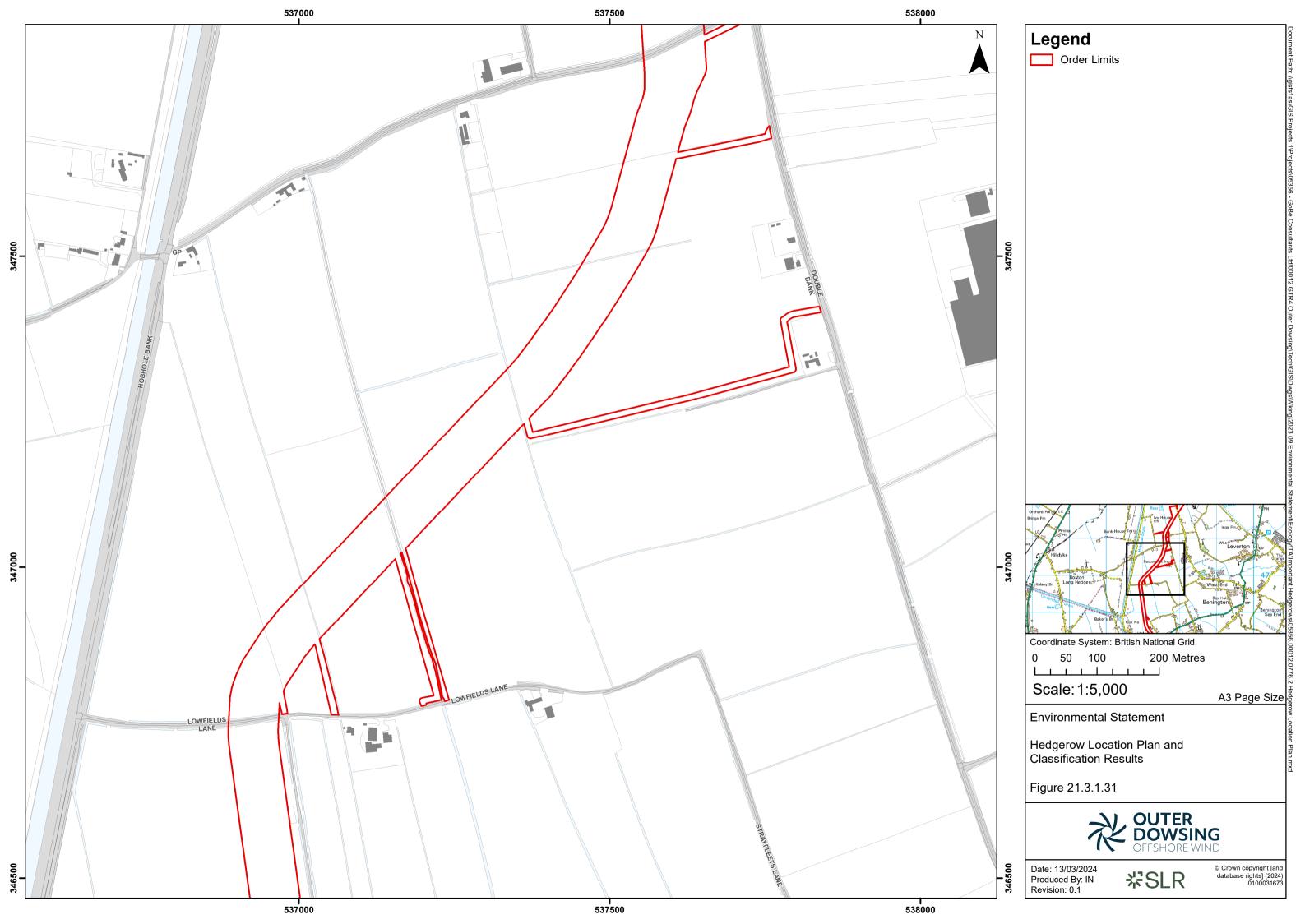


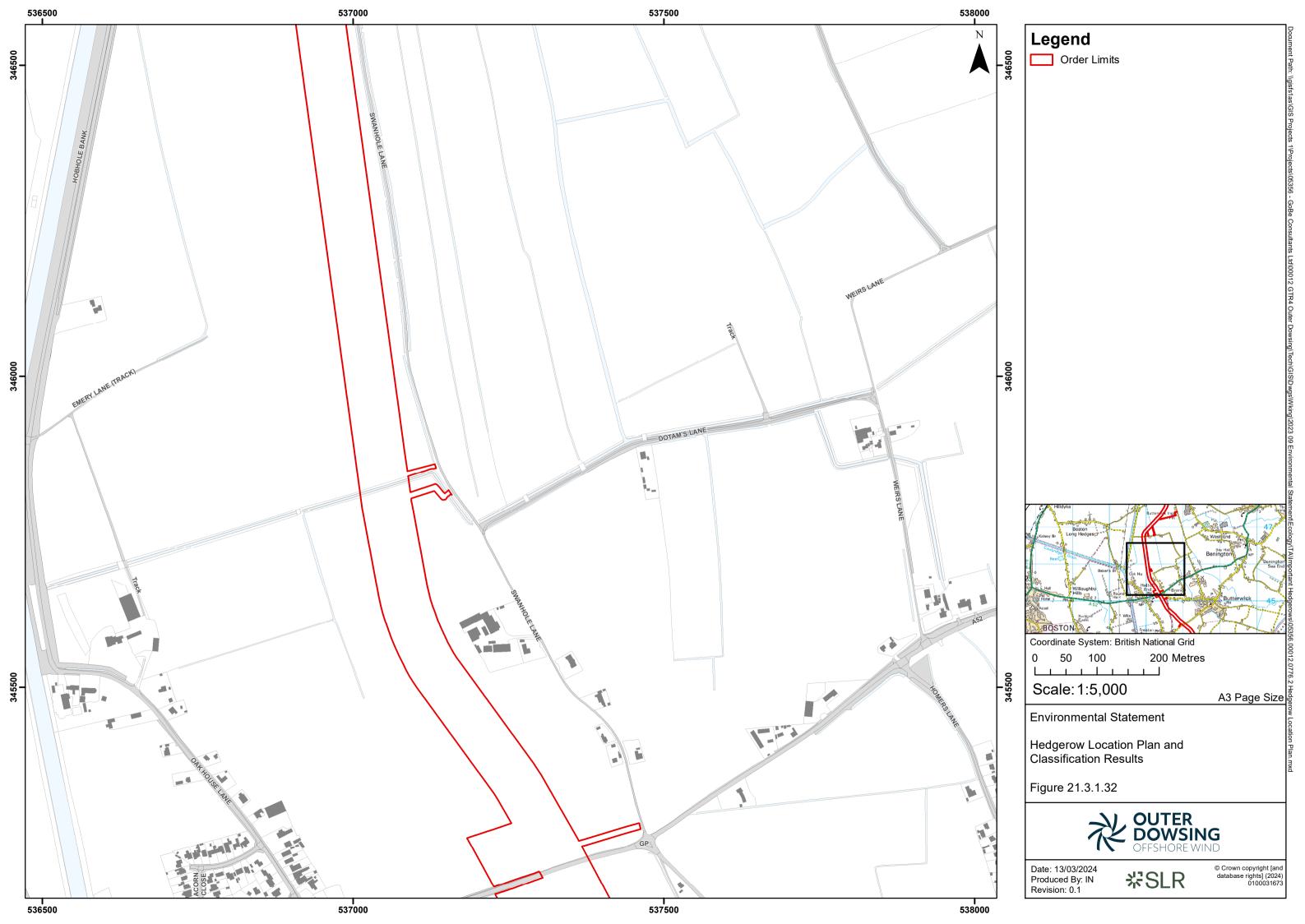


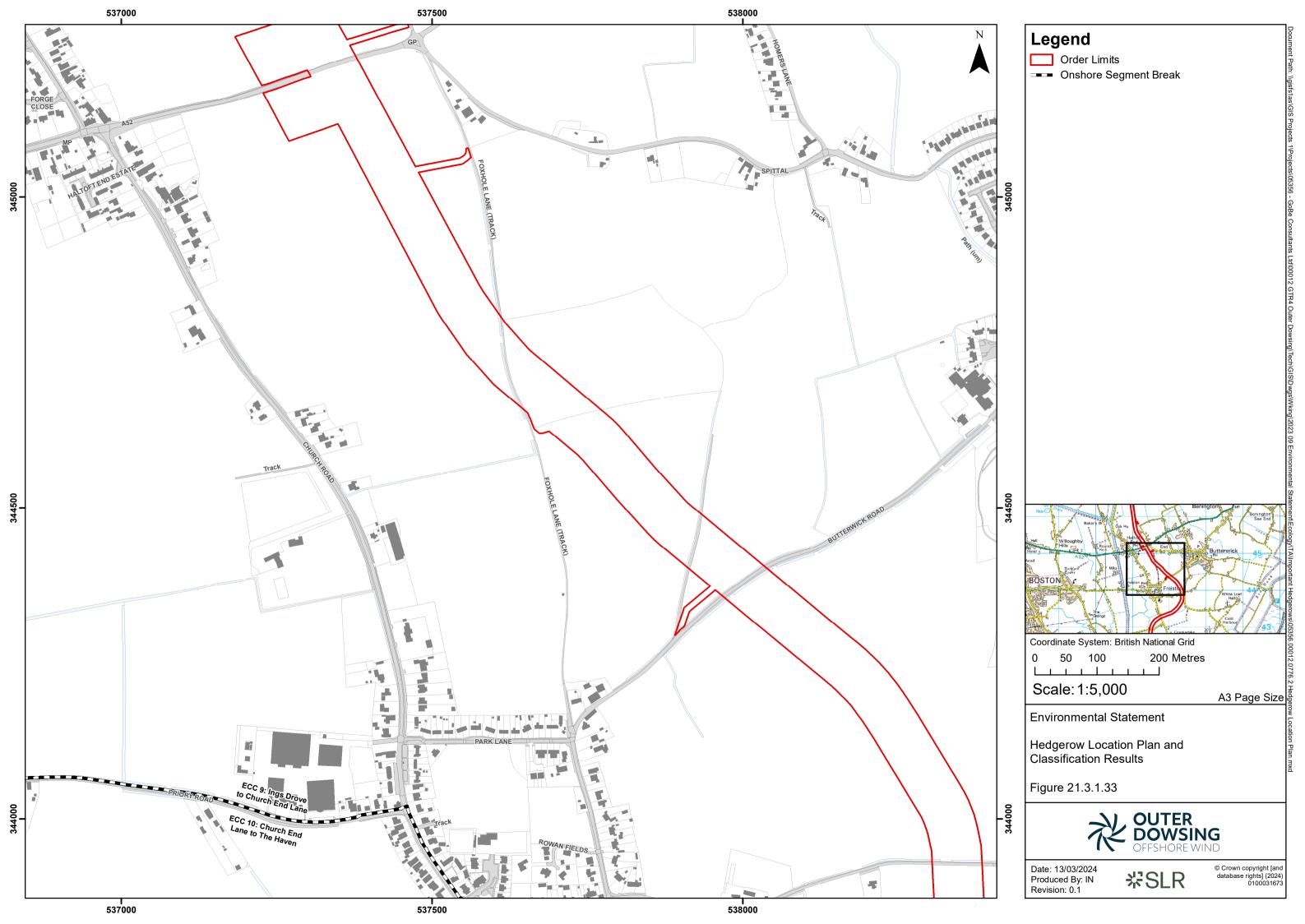


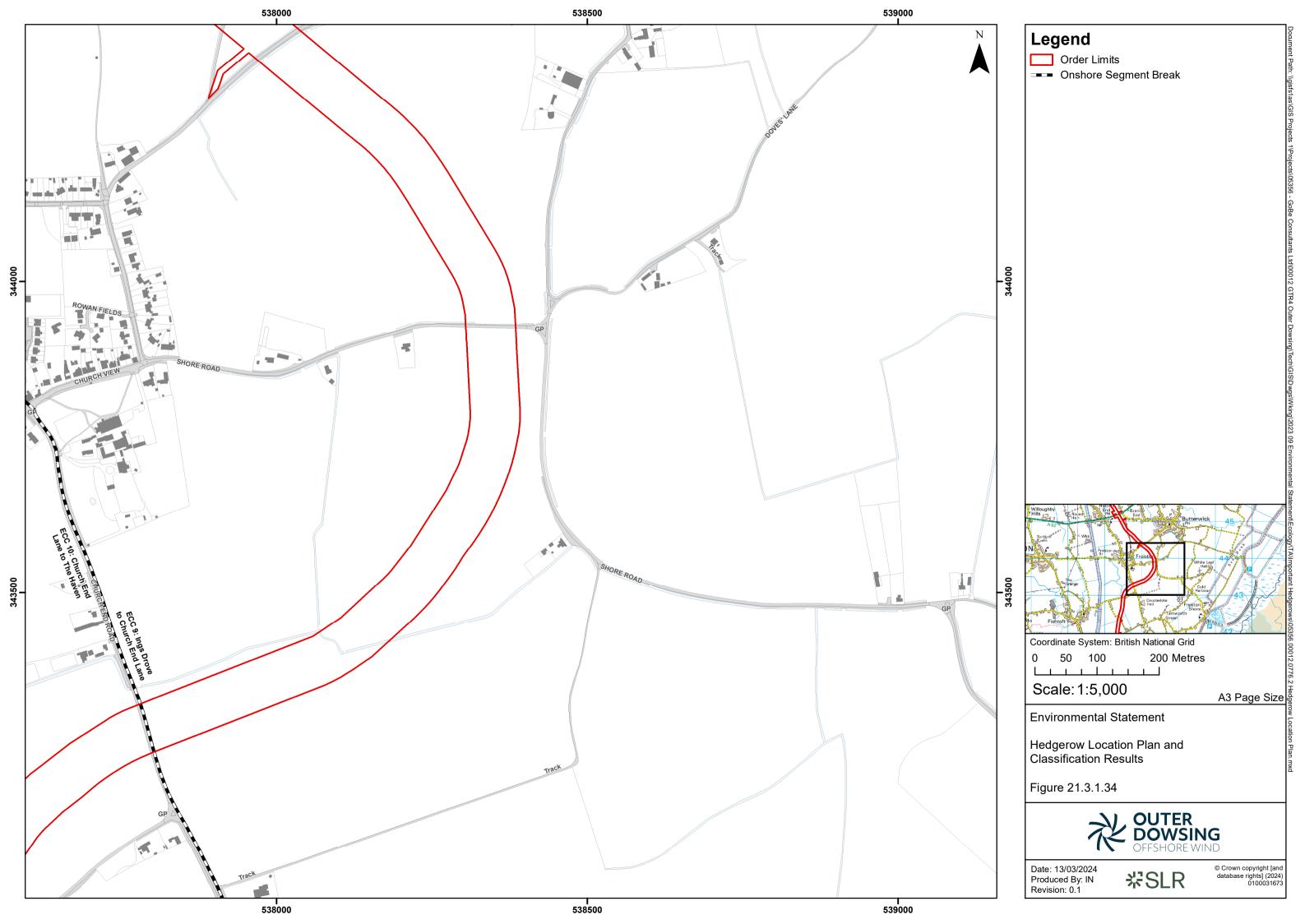


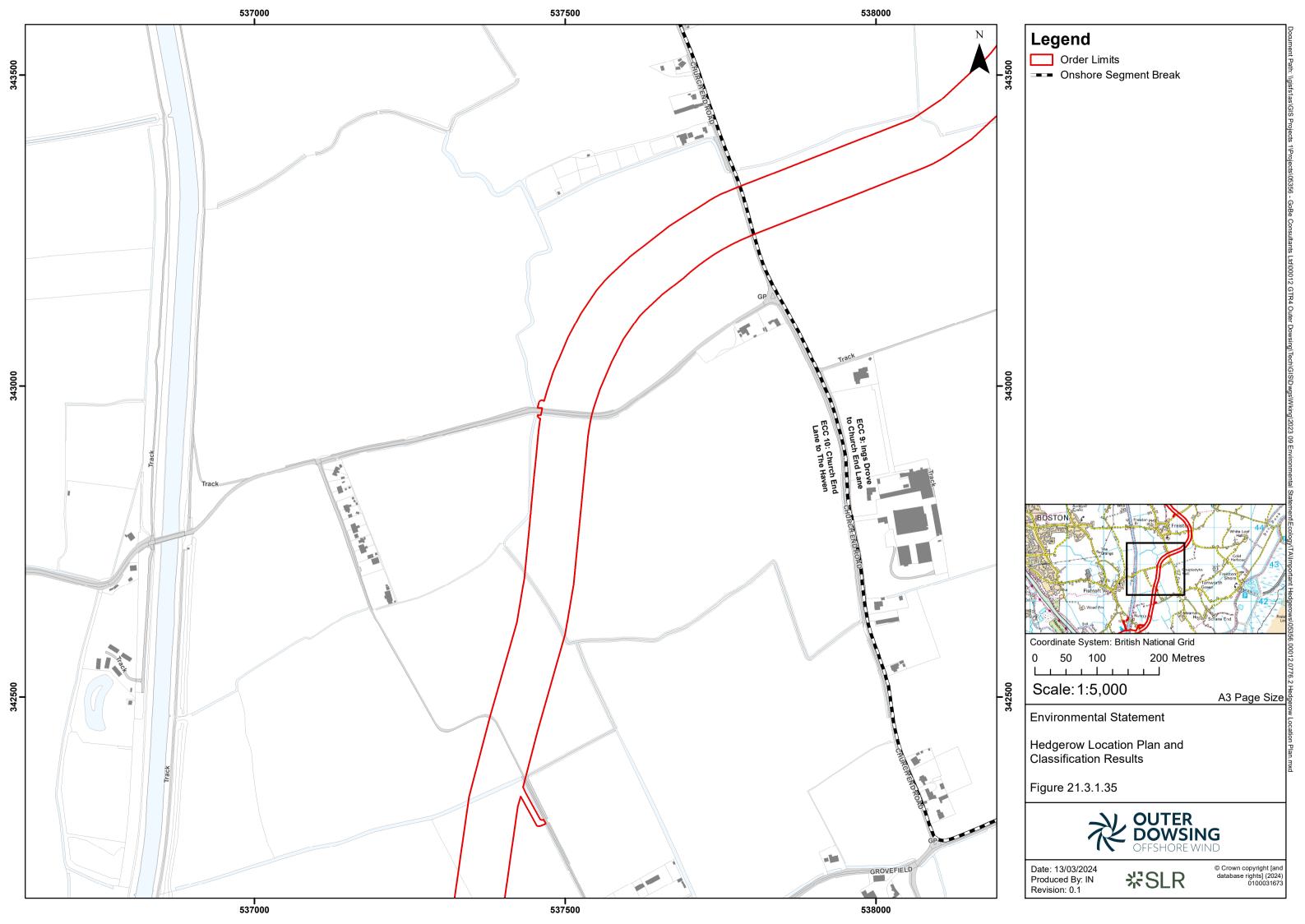


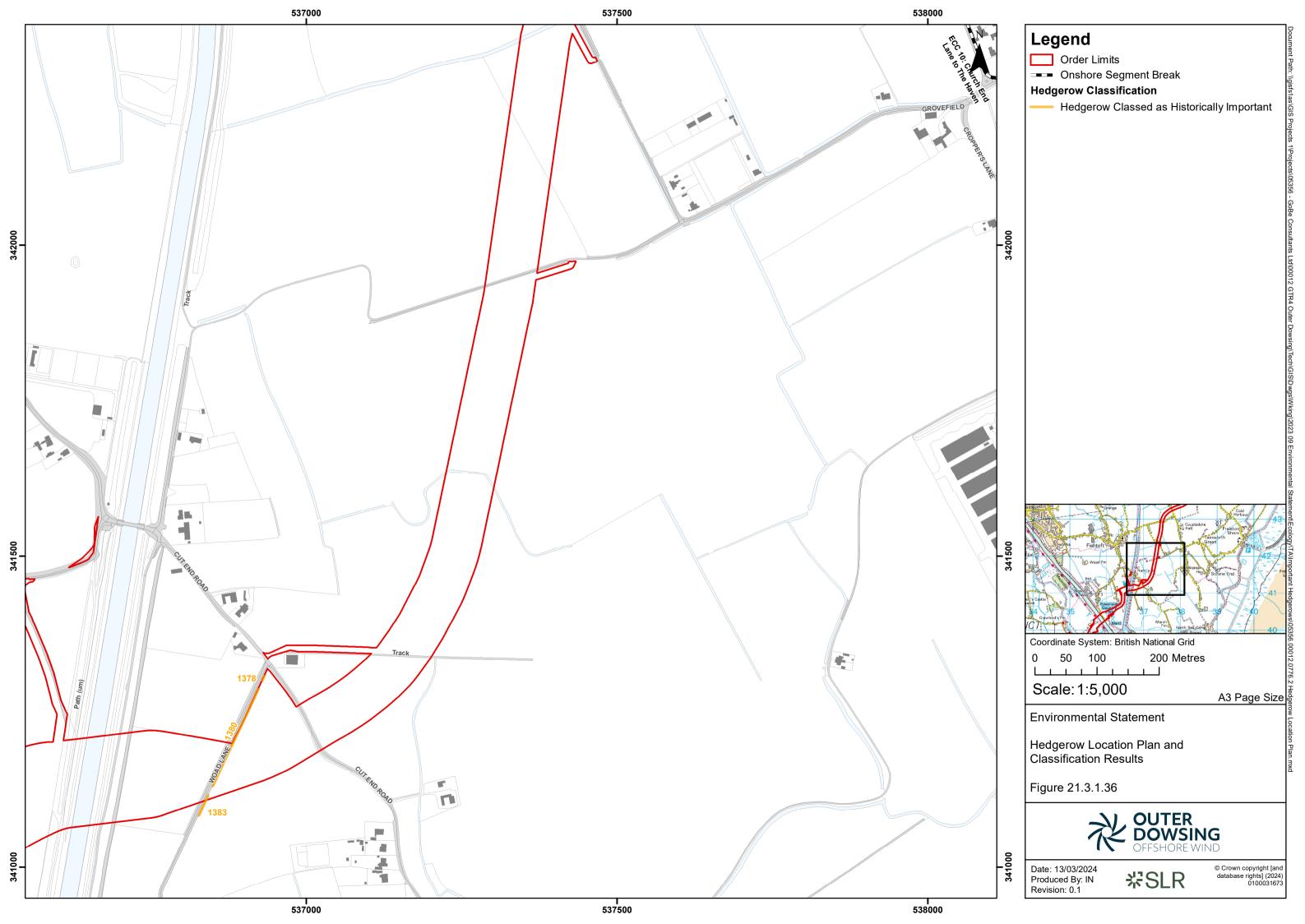


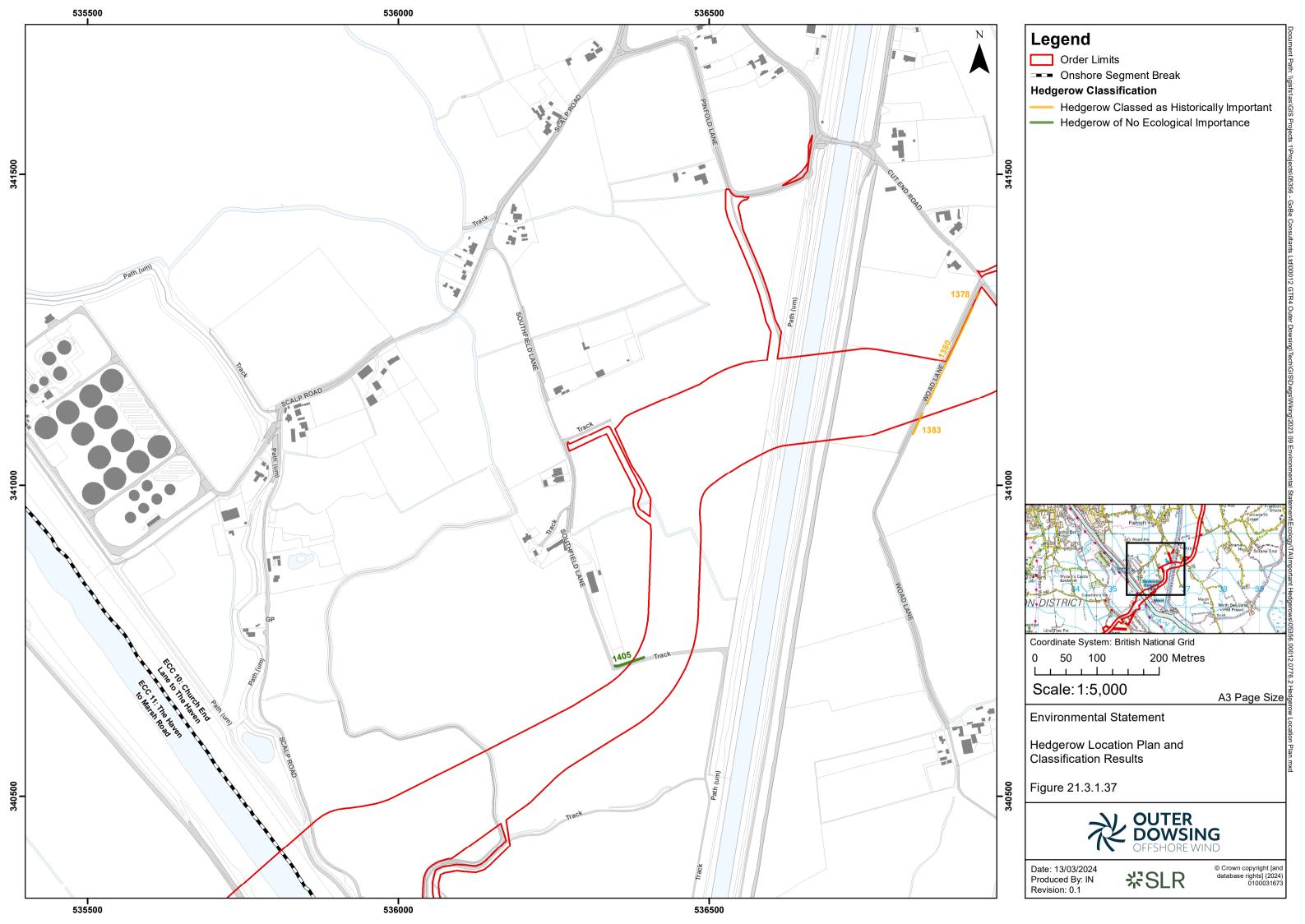


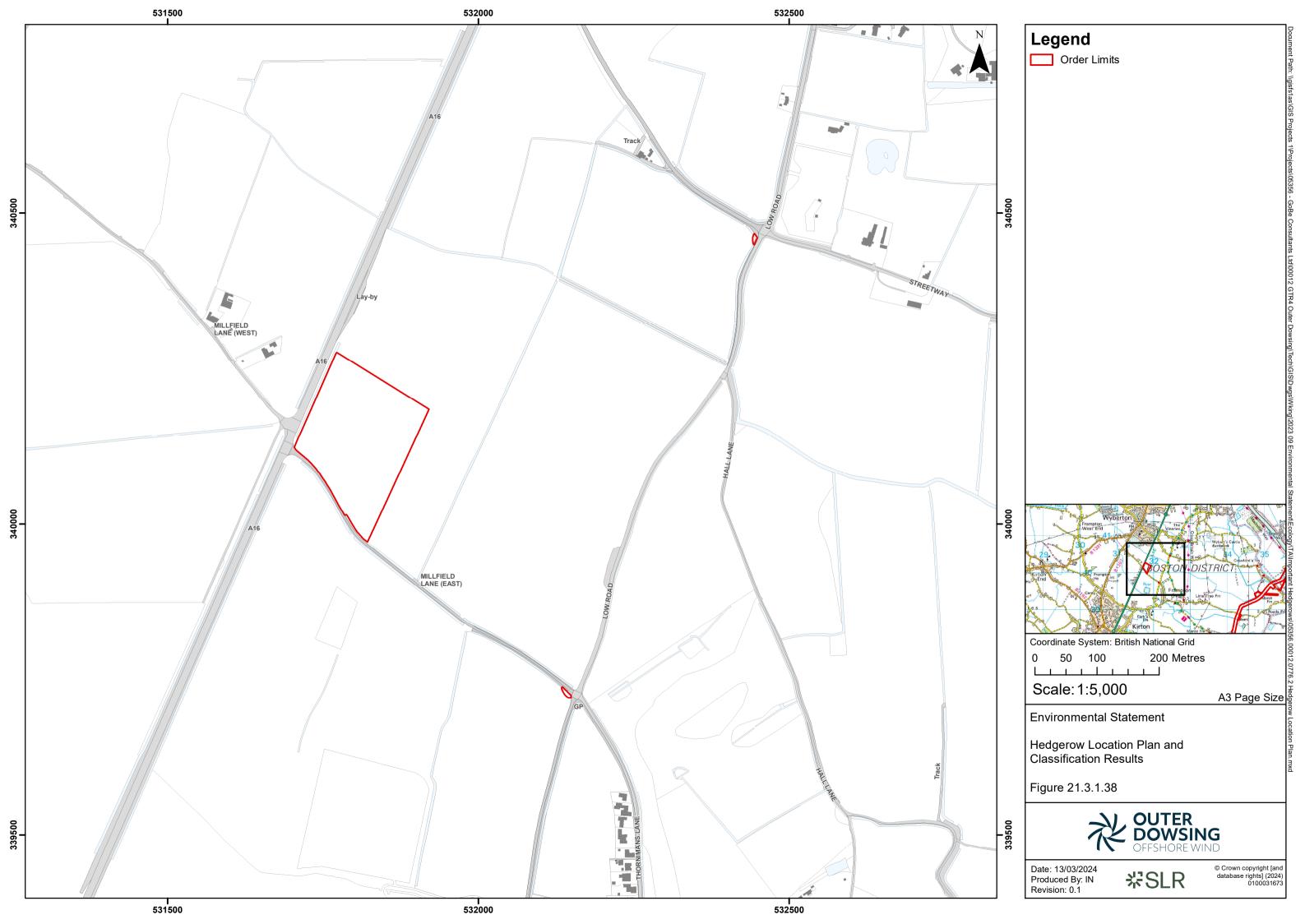


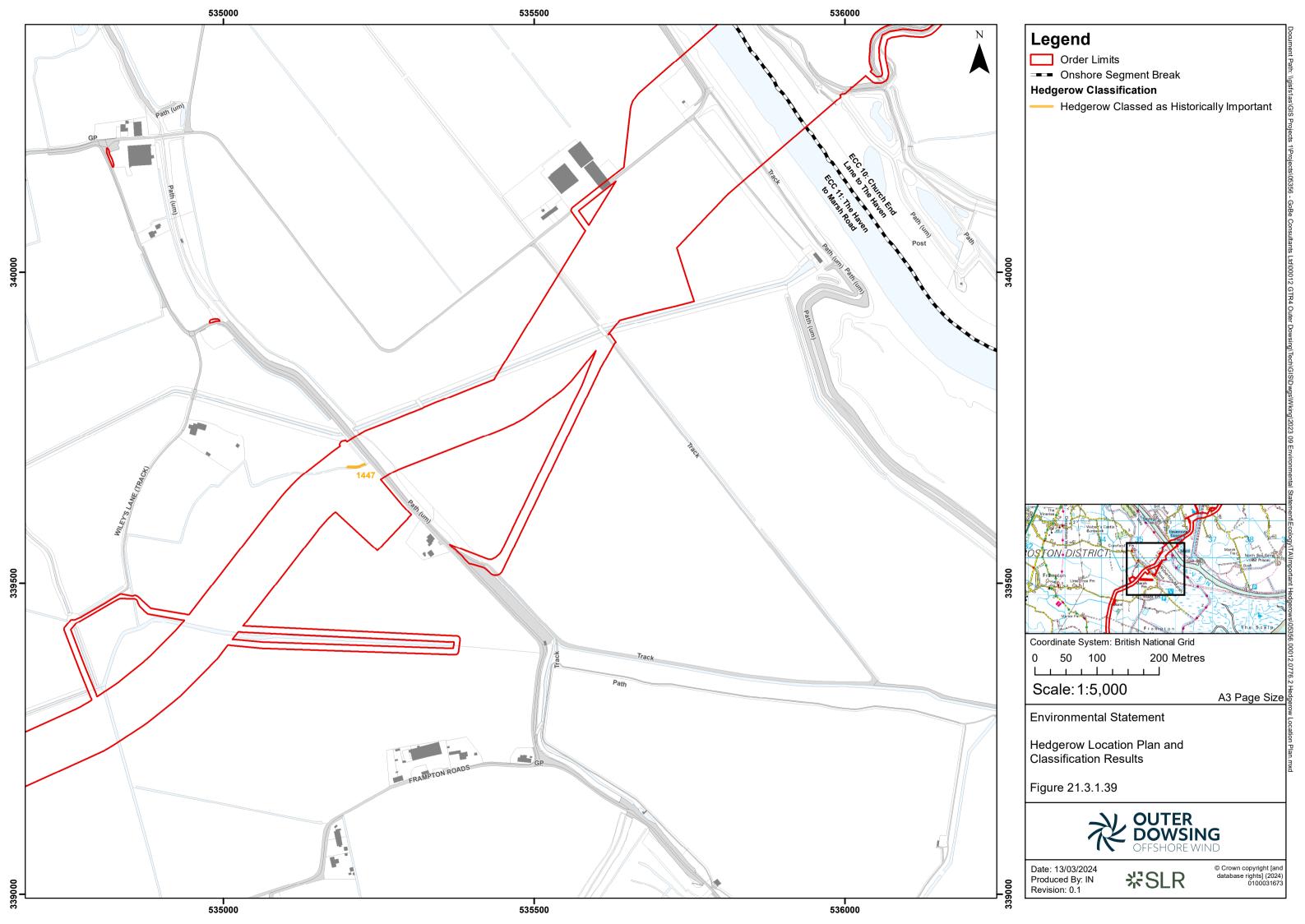


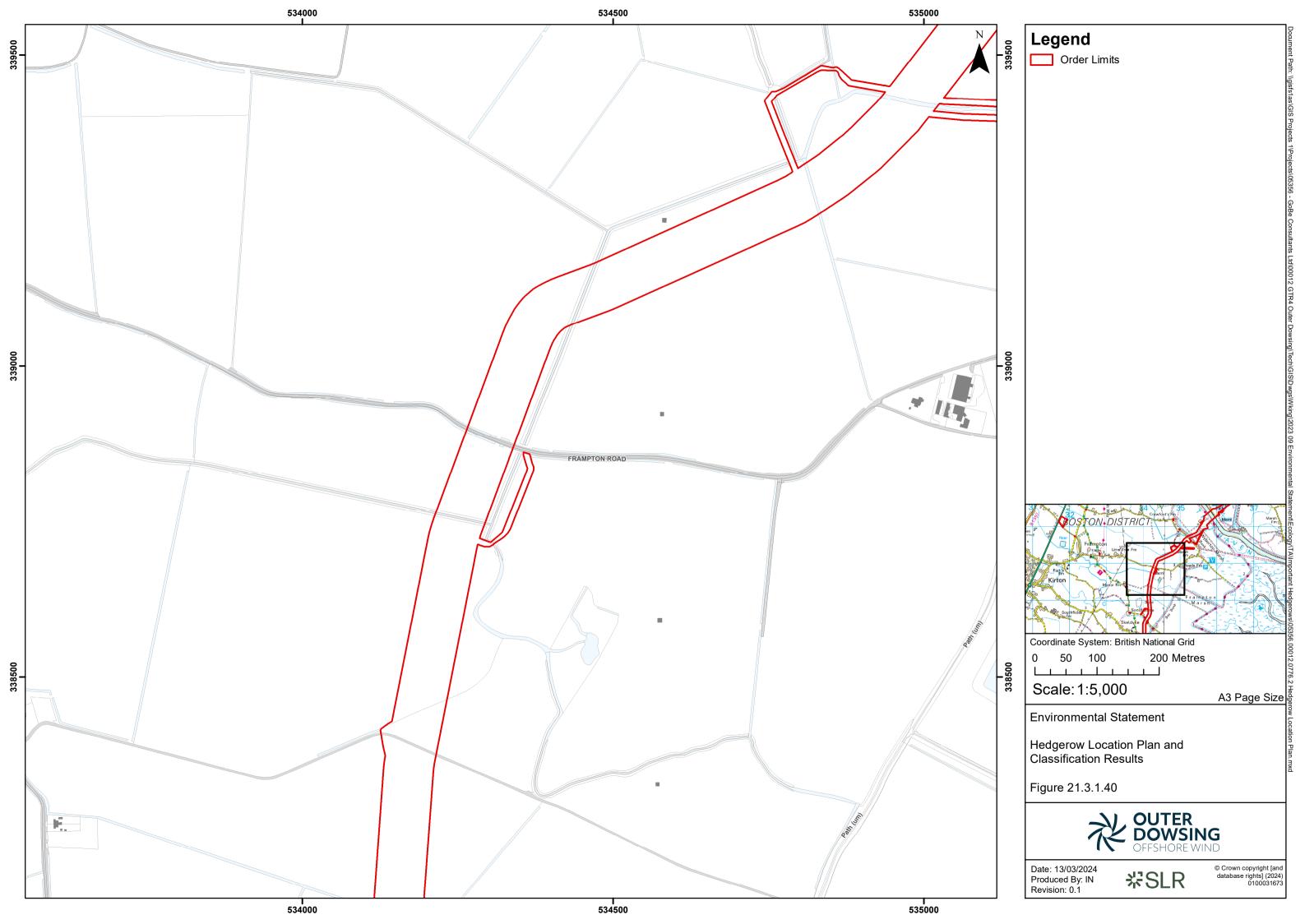


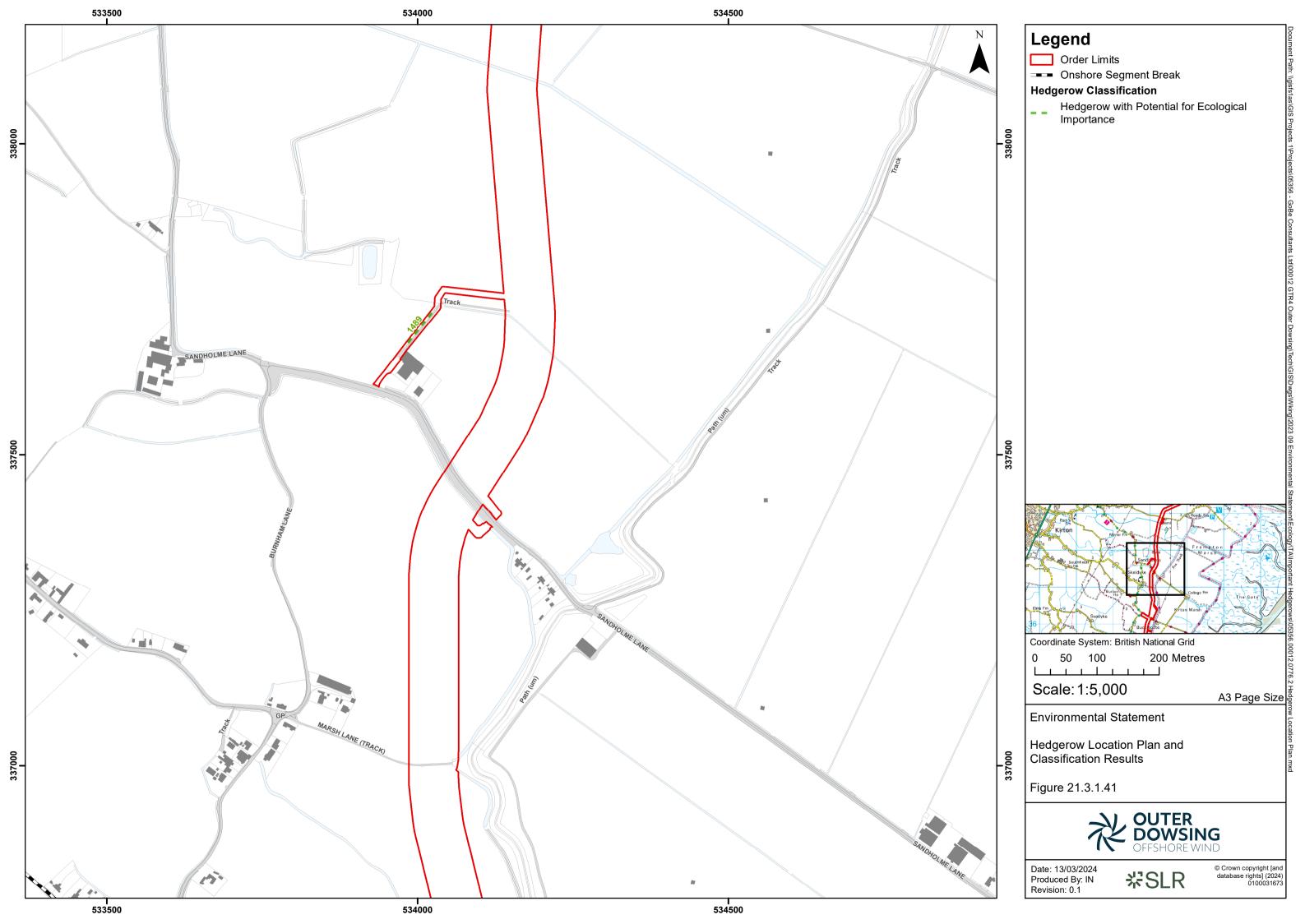


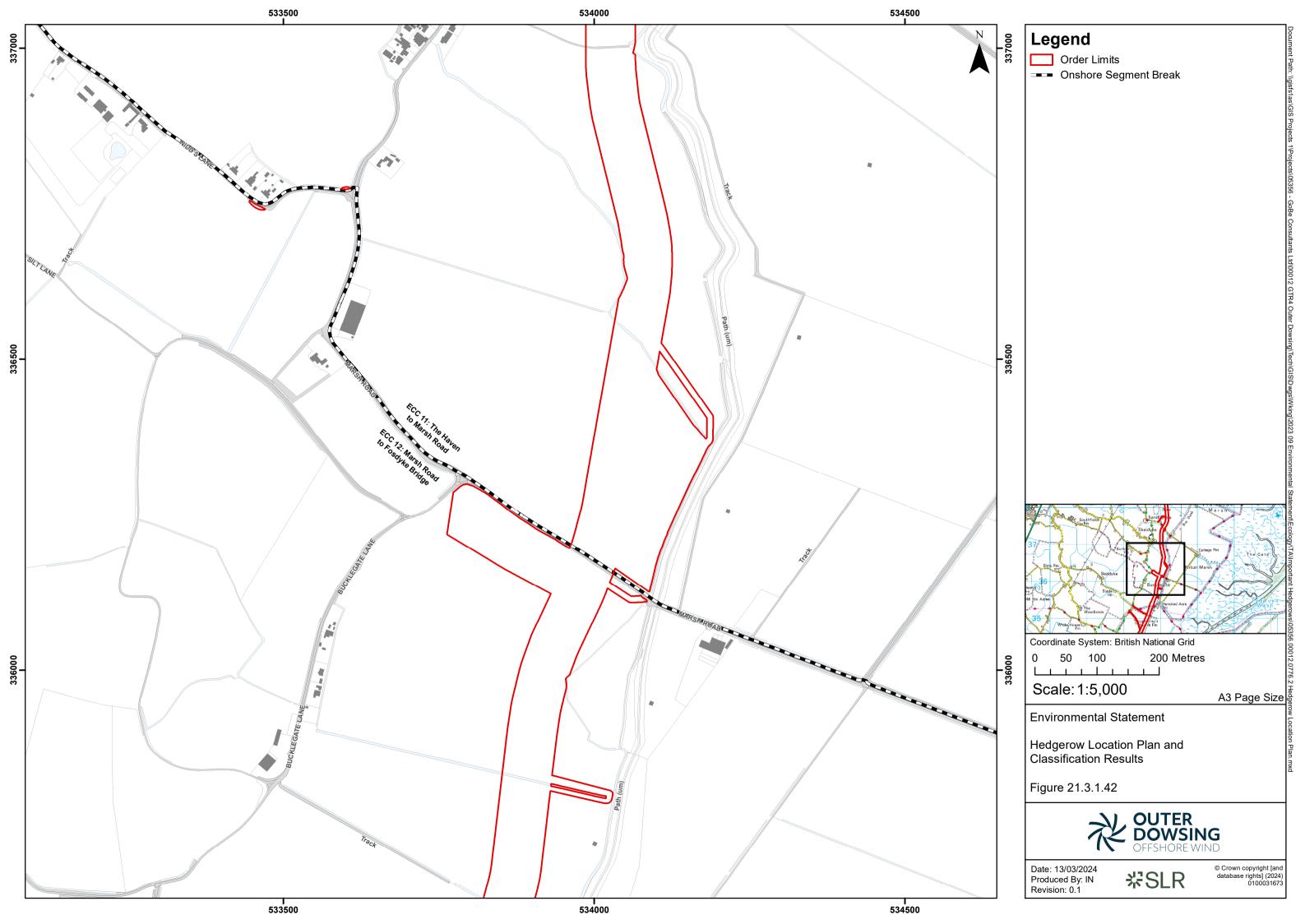


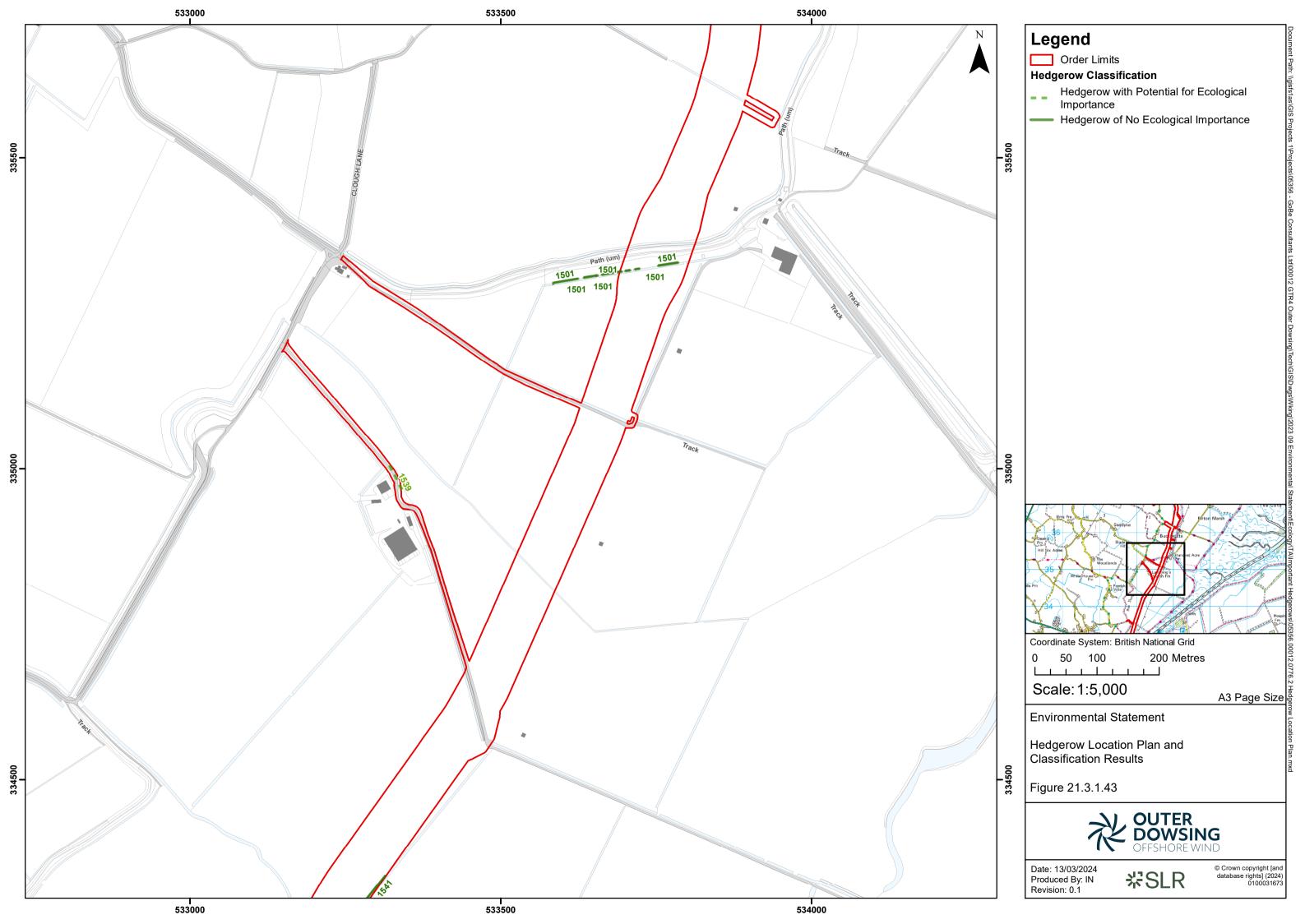


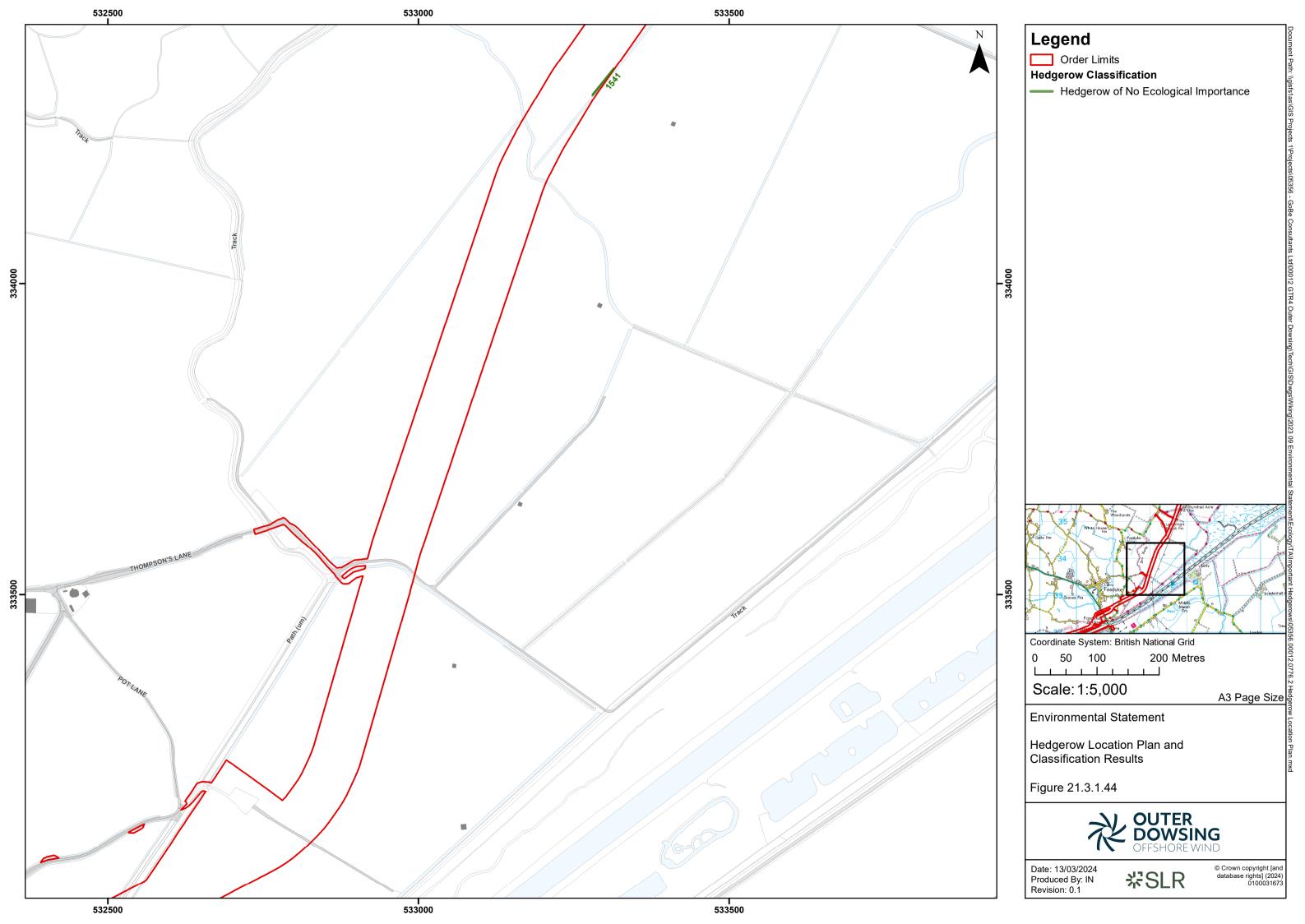


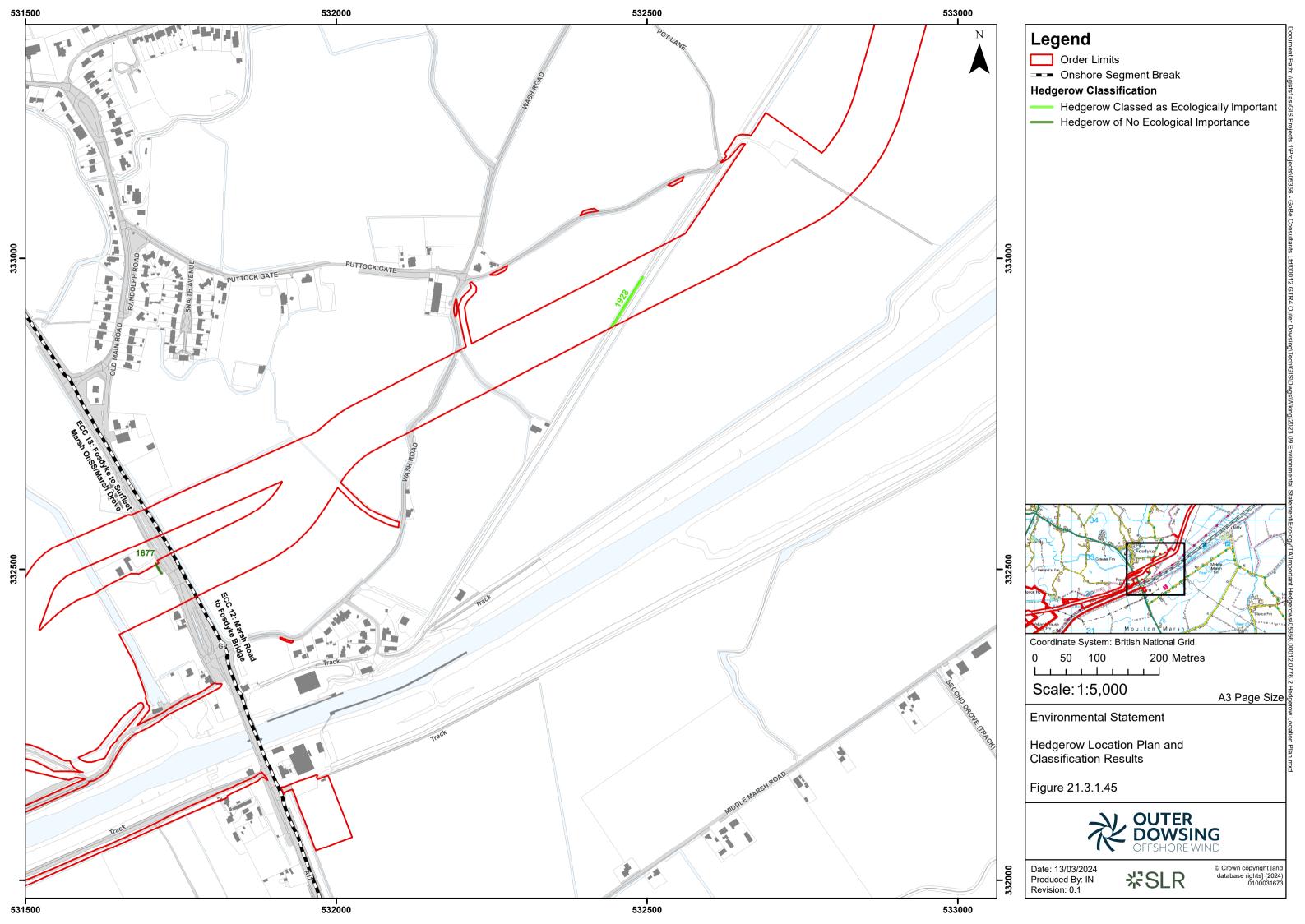


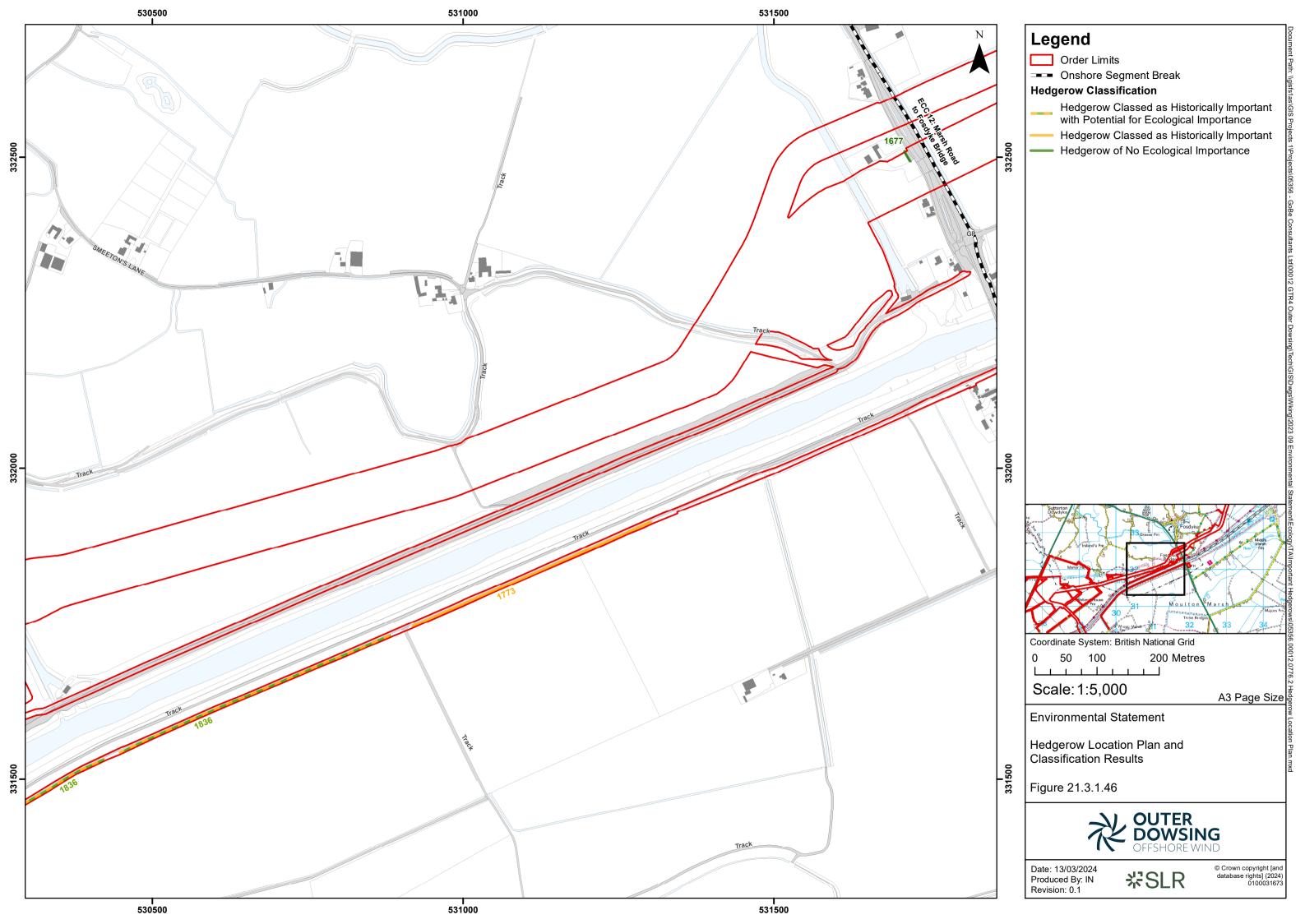


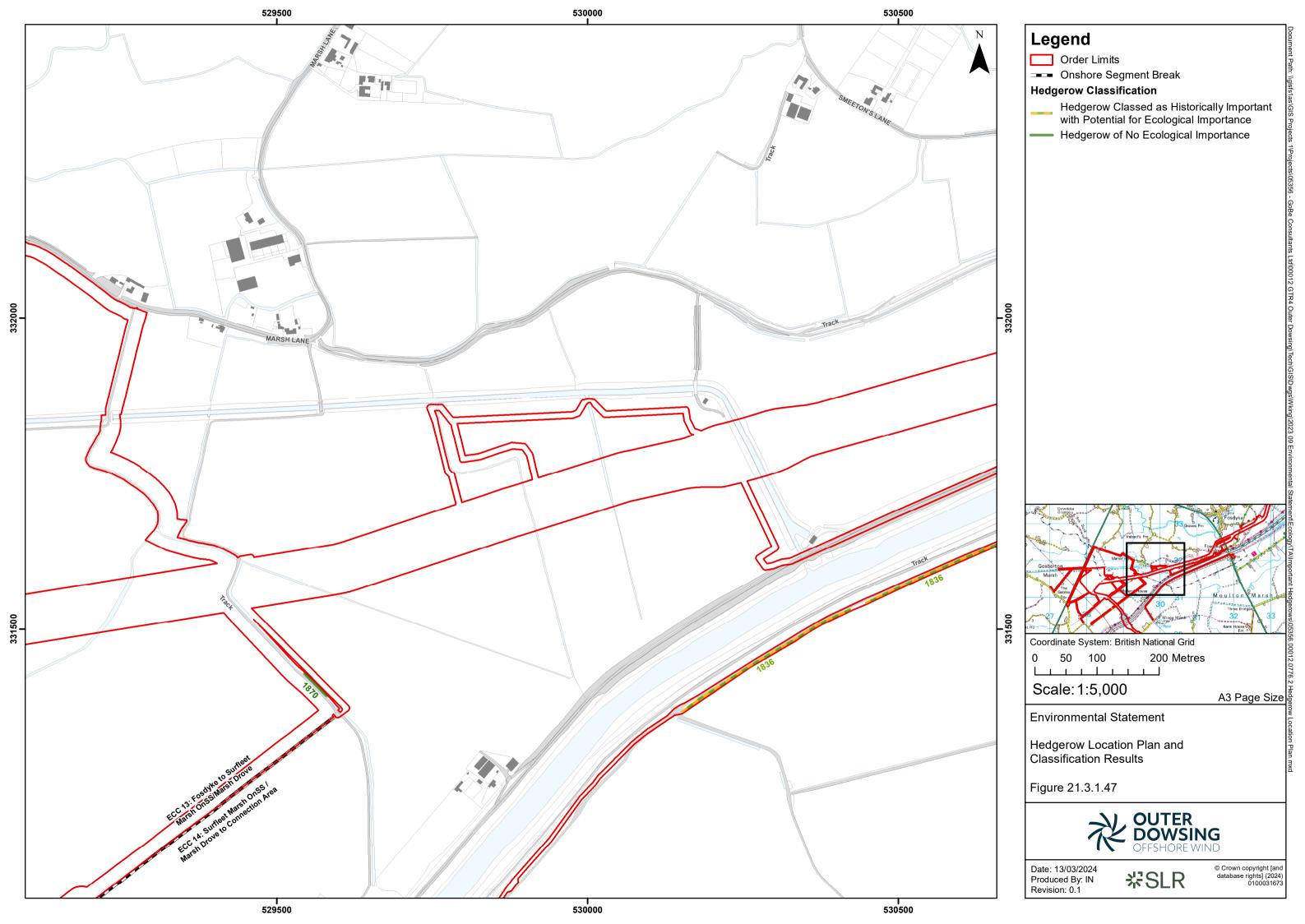


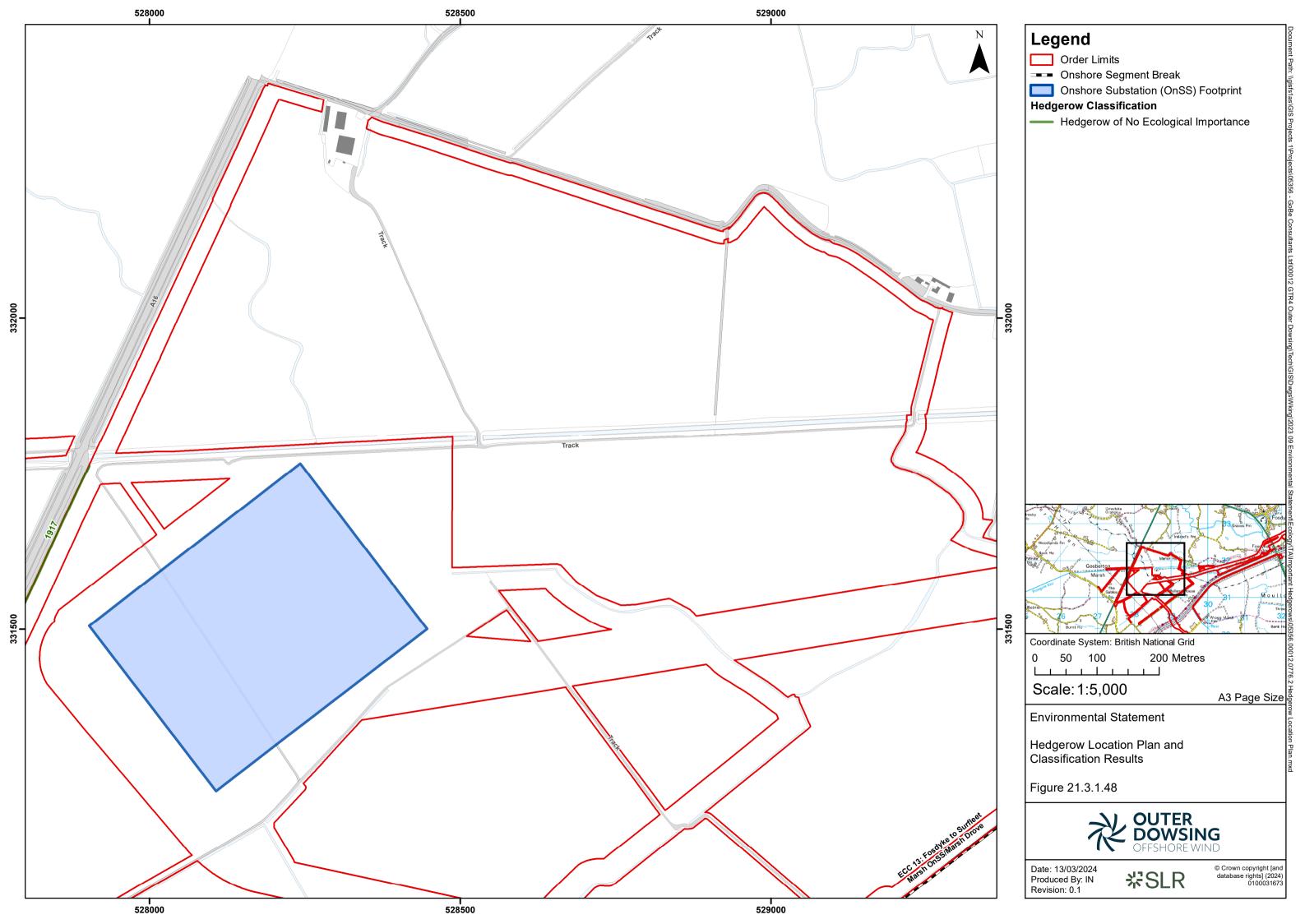


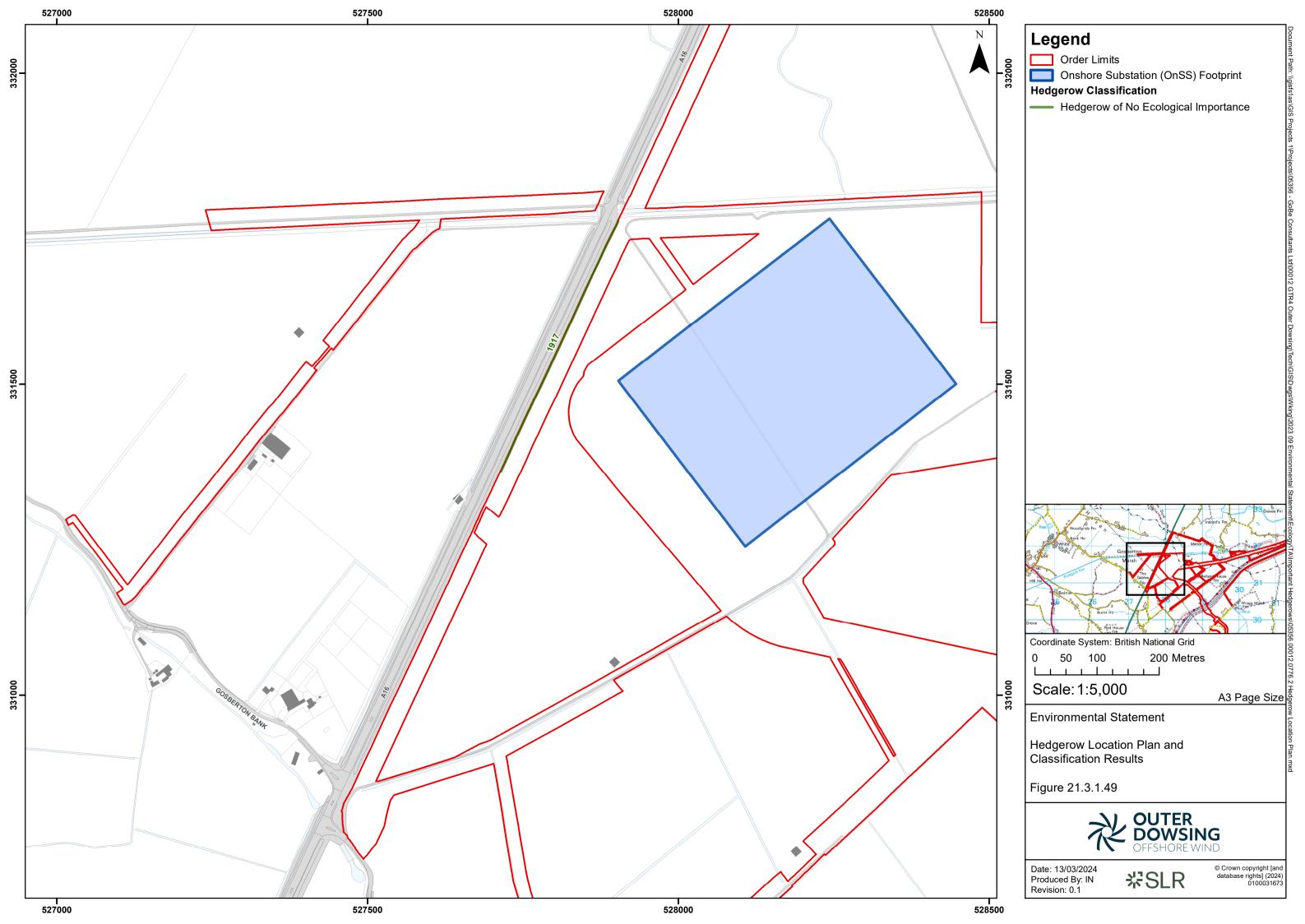


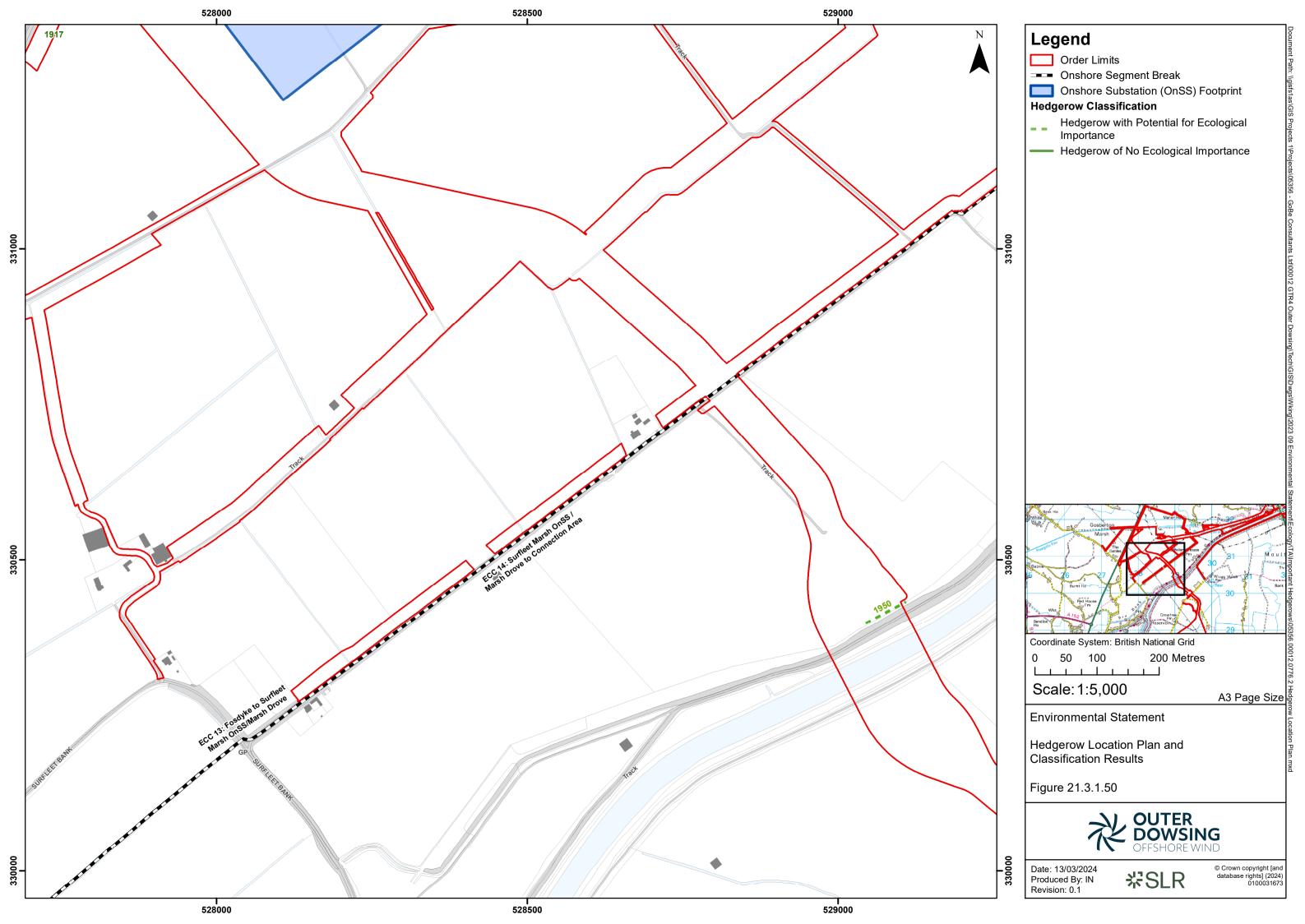


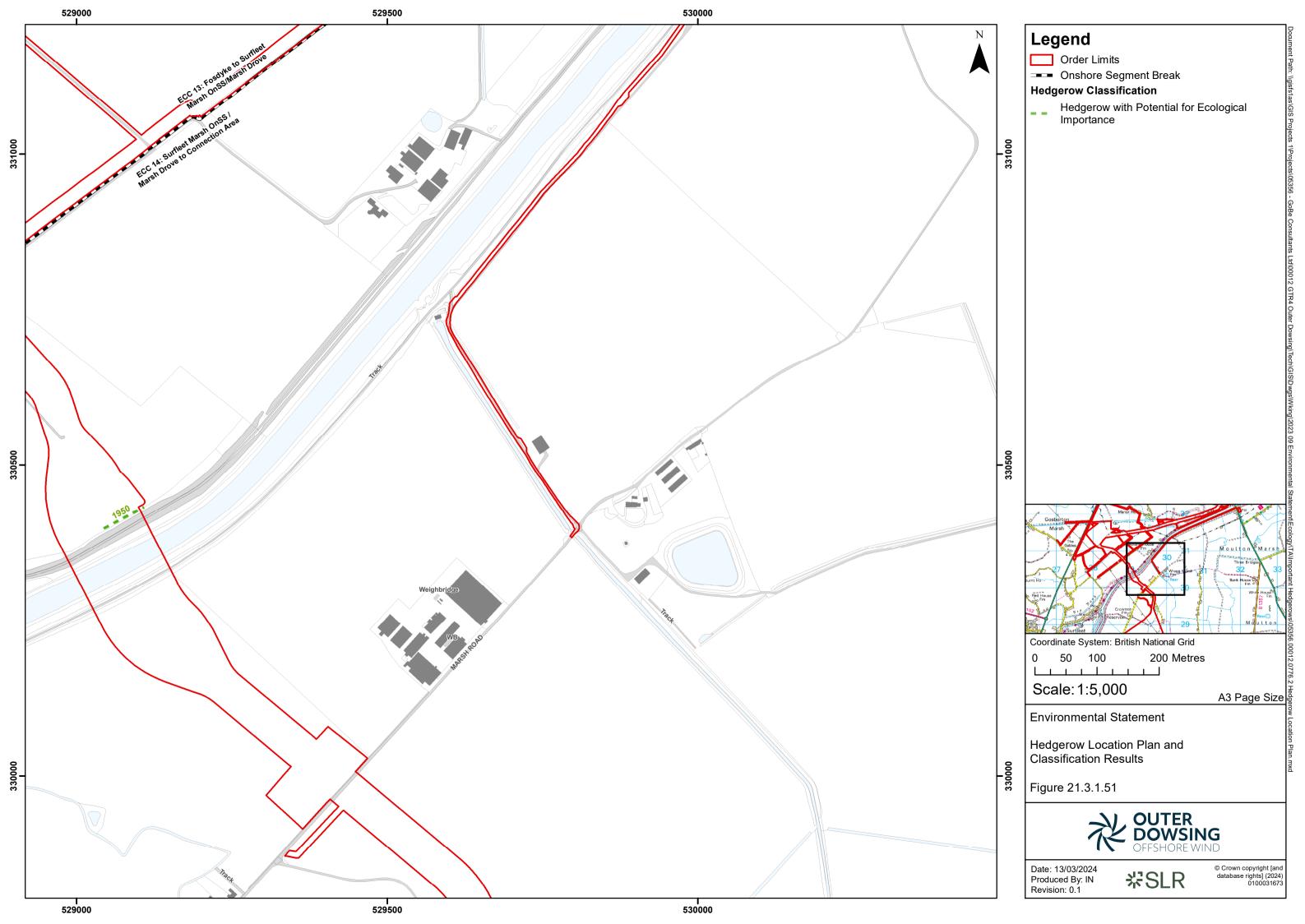


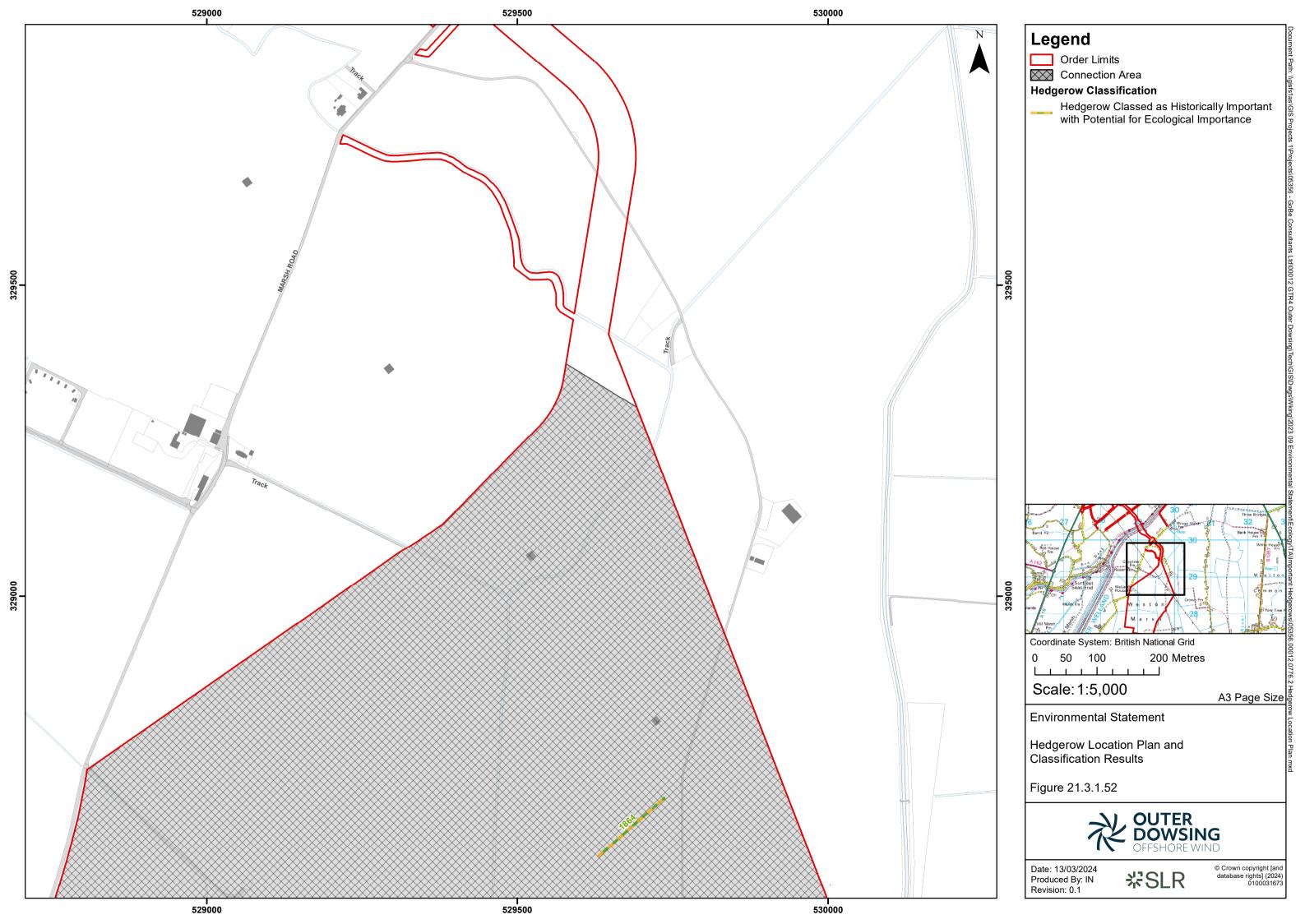


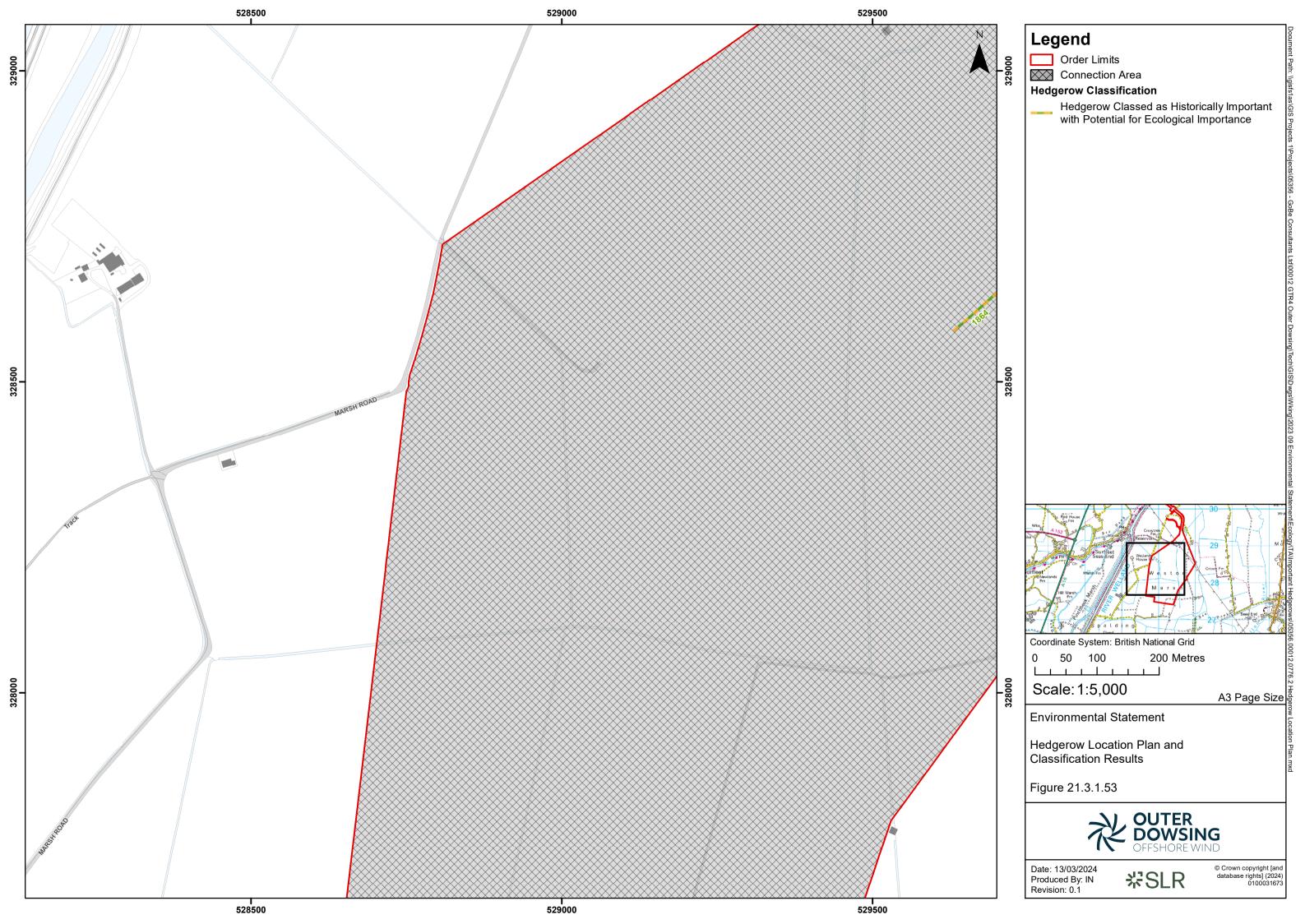


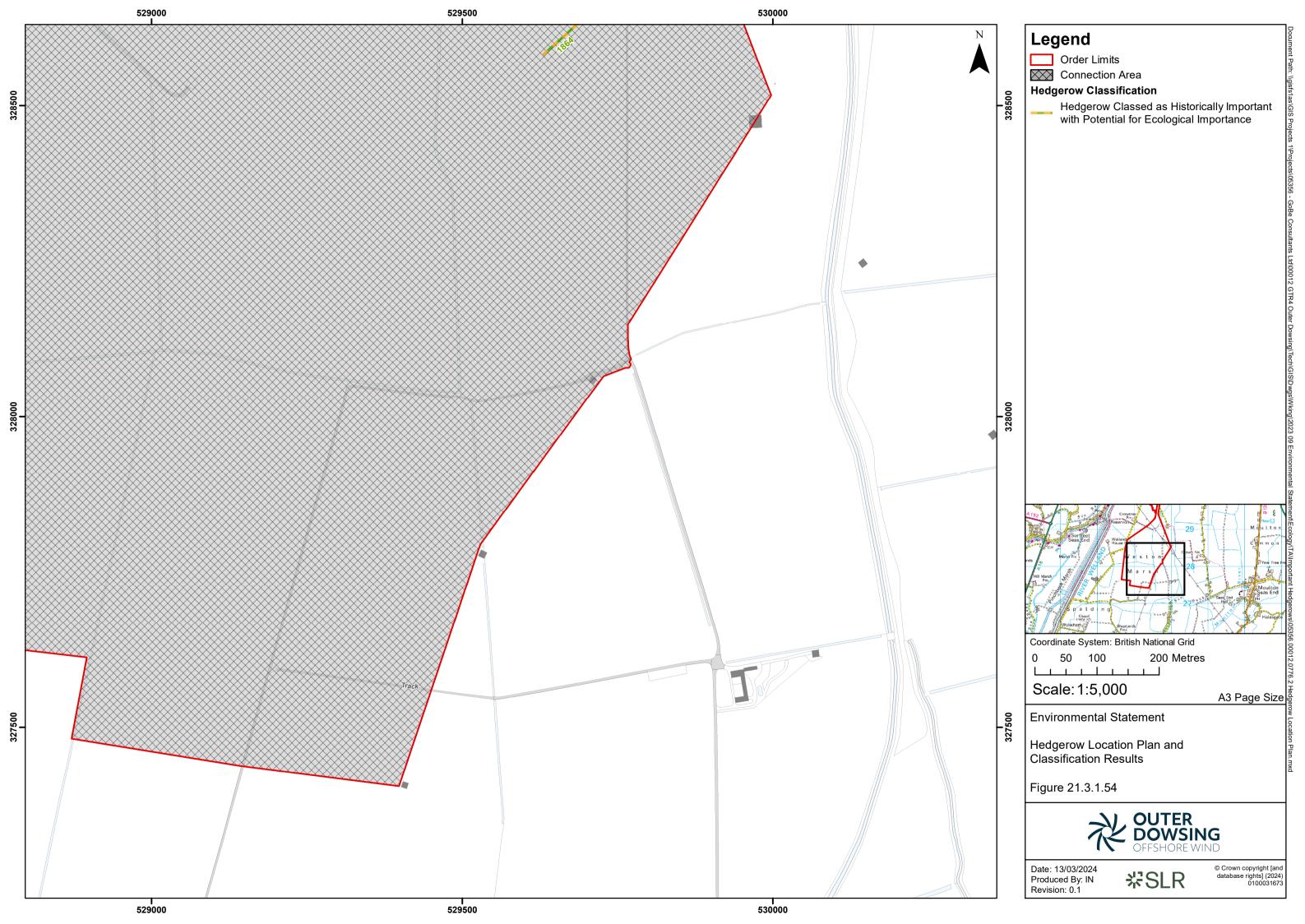














Annex A. Table of Hedgerows

Volume 3, Appendix 21.3: Important Hedgerows Survey

Outer Dowsing Offshore Wind Environmental Statement Environmental Statement

GoBe Consultants Ltd

31 January 2024



Survey Date	Hedge Number	Object ID (UK Hab)	At least 30 years old?	4 woody species present in hedgerow? (species)	Detailed assessment required?		
ECC 1: Landfall to A52 – Hogsthorpe							
09/10/23	1986	642	Yes	No (Hawthorn)	No		
09/11/2023	57	5491	No	No (Hawthorn	No		
31/05/2023	91	3742	Yes	No (Hawthorn)	No		
17/11/2022	71	669	Yes	No (Hawthorn)	No		
12/10/2023	NA	5768	Yes	No (Hawthorn, dewberry)	No		
12/10/2023	NA	5769	Yes	No (Hawthorn)	No		
31/05/2023	99	3864	Yes	No (Hawthorn, bay willow)	No		
03/01/24	64	674	Yes	No (Hawthorn, "coniferous trees"- all same species)	No		
12/10/23	1980	5769	Yes	No (Hawthorn)	No		
12/10/23	1981	277	Yes	No (Hawthorn, dewberry)	No		
31/05/2023	96	3865	Yes	No (Hawthorn)	No		
31/05/2023	107	3862	Yes	No (Hawthorn)	No		
31/08/2023	97	5490	No	No (Hawthorn)	No		
No survey	183	3113	Yes	No information	Unknown		
31/08/2023	213	3110	Yes	No (Hawthorn)	No		
31/08/2023	201	3111	Yes	No (Hawthorn)	No		
01/09/2023	197	3750	No	No (Hawthorn)	No		
01/09/2023	203	976	Yes	No (Hawthorn)	No		
01/09/2023	211	975	Yes	No (Hawthorn)	No		
01/09/2023	181	977	Yes	No (Hawthorn, dogrose <i>Rosa canina</i>)	No		
ECC 2: A52 - Hogsthorpe to Marsh Lane							
27/09/2023	1976	5744	Yes	No (Hawthorn)	No		
27/09/2023	1932	5744	Yes	No (Hawthorn)	No		
17/01/2023	186	732	Yes	No (Hawthorn)	No		
No Survey	1977	5787	Yes	No information	Unknown		
11/10/2023	1940	5746	Yes	No (Hawthorn, blackthorn)	No		



Survey Date	Hedge Number	Object ID (UK Hab)	At least 30 years old?	4 woody species present in hedgerow? (species)	Detailed assessment required?	
11/10/2023	1931 (Object ID)	5746	Yes	No (Hawthorn, blackthorn)	No	
01/09/2023	157	748	Yes	No (Hawthorn)	No	
11/10/2023	1929	5749	Yes	No (Hawthorn, blackthorn, ash)	No	
16/10/2023	65	766	Yes	No (Hawthorn, elder, rose <i>Rosa sp.</i>)	No	
17/10/2023	55	767	Yes	No (Hawthorn, rose)	No	
01/09/2023	63	795	Yes	No (Hawthorn)	No	
No survey	1972	5789	Yes	No information	Unknown	
No survey	1971	5790	Yes	No information	Unknown	
No survey	1969	5792	Yes	No information	Unknown	
ECC 3: Marsh Lane	to A158 - Skegne	ss Road				
18/10/23	190	3874	Yes	No (Hawthorn, Elder)	No	
11/10/2023	168	3876	Yes	Yes (Hawthorn, Silver birch, blackthorn, elder)	Yes	
11/08/2023	305	5527	Yes	No (Hawthorn)	No	
ECC 4: Low Road to \$	Steeping River – r	no hedgero	ws present			
No survey	270	3901	Yes	No information	Unknown	
10/10/23	287	836	Yes	No (Hawthorn, dewberry)	No	
ECC 5: Low Road to S	Steeping River					
04/09/2023	325	755	Yes	No (Hawthorn)	No	
04/09/2023/09/11/23	335	754	Yes	No (Hawthorn)	No	
17/10/2023	546	4165	Yes	Yes (Hawthorn, ash, wych elm, elm sp., elder, ash, beech)	Yes	
04/09/2023	719	5385	Yes	No (Hawthorn)	No	
ECC 6: Steeping River to Fodder Dike Bank/Fen Bank – no hedgerows present						
18/10/2023	1948	4185	Yes	Yes (Hawthorn, prunus sp., elder sp., dog rose, ash, and sycamore)	Yes	



Survey Date	Hedge Number	Object ID (UK Hab)	At least 30 years old?	4 woody species present in hedgerow? (species)	Detailed assessment required?	
No survey	905	5442	Yes	No information	Unknown	
No survey	907	4011	Yes	No information	Unknown	
ECC 7: Fodder Dike Bank/Fen Bank to Broadgate						
23/11/2023	1959	5800	Yes	No (Hawthorn)	No	
No survey	1958	5865	Yes	No information	Unknown	
05/10/2023	1926	5751	Yes	Yes (Hawthorn, elder, ash, rose)	Yes	
05/10/2023	1926 (smaller)	5750	Yes	No (Hawthorn, Plum/cherry tree prunus sp., elder)	No	
09/10/2023	1015	5553	Yes	No (Hawthorn)	No	
22/02/2023	1036	5384	Yes	Yes (Hawthorn, blackthorn, elder, rose)	Yes	
No survey	1954	5860	No	No information	No	
11/10/2023	1931	NA	No	Yes (Hawthorn, dogrose, field maple, hazel, alder sp., silver birch, oak sp. – whole hedge)	No	
ECC 8: Broadgate to	Ings Drove	T	T		Г	
09/10/2023	1154	4235	Yes	No (Elder, garden privet <i>Ligustrum</i> ovalifolium)	No	
No survey	1987	5796	Yes	No information	Unknown	
ECC 9: Ings Drove to	Church End Lane)	,		.	
18/10/2023	1323	4211	Yes	No (Hawthorn, dogrose)	No	
ECC 10: Church End Lane to The Haven						
14/06/2023	1380	3143	Yes	No (Hawthorn, dogrose)	No	
01/09/2023	1383	3145	Yes	No (Hawthorn, dogrose)	No	
01/09/2023	1405	20	No	No (Hawthorn)	No	
ECC 11: The Haven to Marsh Road						
04/09/2023	1447	3836	Yes	No (Hawthorn)	No	
No survey	1489	2002	Yes	No information	Unknown	
ECC 12: Marsh Road to Fosdyke Bridge						



Survey Date	Hedge Number	Object ID (UK Hab)	At least 30 years old?	4 woody species present in hedgerow? (species)	Detailed assessment required?	
09/11/23	1501	1981	No	No (Hawthorn)	No	
No survey	1539	5639	Yes	No information	Unknown	
01/09/2023	1541	904	No	No (Hawthorn)	No	
27/09/2023	1928	5745	Yes	Yes (Hawthorn, blackthorn, wild privet <i>Ligustrum</i> <i>vulgare</i> , pedunculate oak)	Yes	
ECC 13: Fosdyke to Surfleet Marsh OnSS/Marsh Drove						
No survey	1836	21	Yes	No information	Unknown	
No survey	1823	25	Yes	No information	Unknown	
28/09/2023	1773	523	Yes	No (Hawthorn)	No	
11/08/23	1870	5653	Yes	No (Hawthorn, elder)	No	
16/06/23	1917	3105	Yes	No (Hawthorn, blackthorn)	No	
ECC 14: Surfleet Marsh OnSS/Marsh Drove to the Connection Area -no hedgerows present						
No Survey	1950	5817	Yes	No information	Unknown	
10/01/2023	1864	3354	Yes	No information	Unknown	



