

REPORT

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Final Waterbird Survey Report

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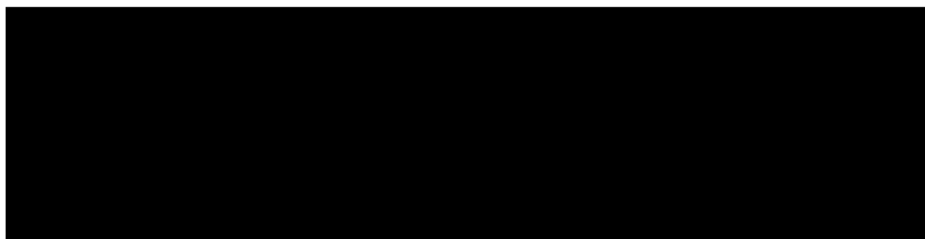


Winter Bird Survey Results along The River Haven, Boston, Lincolnshire.

December 2021 to March 2022



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Winter Bird Survey Results for land along The River Haven, Boston, Lincolnshire.

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Winter Bird Survey Results for land along The River Haven, Boston, Lincolnshire

1 INTRODUCTION

Independent Ecologist and Protected Species Consultant, Andrew Chick MPhil, was commissioned by Lowell Mills (Royal Haskoning DHV) to undertake a winter bird survey along The River Haven, Boston, Lincolnshire. The survey is required in connection with a future planning application related to the development of the Boston Alternative Energy Facility.

This report details the methods used, describes the habitats and species found on the site, discusses the results and makes recommendations for further work. The common English names are used for all species referred to throughout the text. The Latin name is also given following the common name the first time the species is referred to.

1.1 Accurate lifespan of ecological data

The majority of ecological data remains valid for only short periods of time due to the inherently transient nature of the subject. Where the species/group being surveyed for is present within the site, the data is considered to be accurate for two years. However, an update may be needed in order to obtain a European Protected Species licence, if such a licence is required. Where absent, although the data is considered accurate for two years, an update may be required if the habitats surrounding the site are of a quality that are likely to encourage the species to move into the site in the interim.

2 SITE DESCRIPTION

2.1 Site communities and habitats

The survey area is located between National Grid Reference (NGR) TF 34659 41763. and TF 39909 393365. The survey area was divided into three sections which are shown on Figure 1-3 as West Grid, Middle Grid and East Grid, with the approximate survey boundary marked with a red line. Parts of the Site lie within The Wash SPA, SSSI boundary and are marked on by a green line defining Wetland Bird Survey sectors.

2.2 Site description

The immediate plot of land is currently unmanaged and primarily consists of a flood defence bank of coarse grasses and a narrow section of intertidal riverbank with mixed areas of saltmarsh.

2.3 Site description

2.3.1 West Grid - NGR TF 34659 41763 to TF 36350 39840

West Grid is located nearest to Boston Industrial Estate. The section starts at NGR TF 34659 41763 and ends at TF 36350 39840, this section of the river is approximately 70-75 metres wide.

The tidal River Haven runs through the middle of this section and during low tide there is exposed mud on both sides of the riverbank (which is covered on most high tides). Above the inter-tidal zone is a narrow strip of saltmarsh with a small number of pools that are dominated by common saltmarsh grass *Puccinellia maritima* and sea couch *Elytrigia atherica*, a larger open pool is situated at TF 35121 41129. The bank edge contains frequent sea aster *Aster tripolium* with occasional spear-leaved orache *atriplex prostrata*, common scurvygrass *Cochlearia officinalis* and glasswort *Salicornia sp.* Between the mud and saltmarsh an area of rocks line both banks on the inside at various levels, acting as a sea defence to minimise erosion of the banks.

To the rear of the saltmarsh is a sea wall which contains rough grasses dominated by false oat-grass *Arrhenatherum elatius* and cock's foot *Dactylus glomerate* with occasional perennial herbs. The sea wall is managed and probably mown 2-3 times per year. Along the top of the seawall is a public footpath. The sea bank is occasionally littered with allied materials, plus discarded items of a domestic nature.

A detailed map is shown in Figures 1.

2.3.2 Middle Grid - NGR TF 36350 39840 to TF 39121 37038

Middle Grid is located away from Boston town centre and is level with the Hobhole drain. The tidal river is within The Wash SPA boundary. The section starts at NGR TF 36350 39840 and ends at TF 39121 37038, this section of river is approximately 70-80 metres wide.

The tidal Haven runs through the middle of this section and at low tide there is exposed mud on both sides of the riverbank (which is covered during most high tides). The saltmarsh within this section is wider and relatively high, with numerous pools and ditches. The saltmarsh community is similar to that of Section A, with sea aster, spear-leaved orache, common scurvygrass, sea couch, common saltmarsh grass and glasswort all present. The Hobhole drain pumps out water into the Haven along this section.

To the rear of the saltmarsh is a sea wall which contains rough grasses dominated by false oat-grass *Arrhenatherum elatius* and cock's foot *Dactylus glomerate*, together with occasional perennial herbs. The sea wall is managed and probably mown 2-3 times per year. Along the

top of the seawall is a public footpath. The sea bank is occasionally littered with allied materials, plus discarded items of a domestic nature.

2.3.3 East Grid - NGR TF 39121 37038 to TF 39909 393365

East grid is located full within The Wash SPA boundary. The section starts at NGR TF 39121 37038, and ends at TF 39909 393365, this section of river is approximately 70-80 metres wide.

The tidal Haven runs through the middle of this section and at low tide there is exposed rocks and mud on both sides of the riverbank (which is covered during most high tides). The saltmarsh within this section is narrower and relatively high, with no pools or ditches. The saltmarsh community is similar to that of other grids, with sea aster, spear-leaved orache, common scurvygrass, sea couch, common saltmarsh grass and glasswort all present.

To the rear of the saltmarsh is a sea wall which contains rough grasses dominated by false oat-grass *Arrhenatherum elatius* and cock's foot *Dactylus glomerate*, together with occasional perennial herbs. The sea wall is managed and probably mown 2-3 times per year. Along the top of the seawall is a public footpath. The southern seabank has mature hawthorn sporadically situated and some World War 2 bunkers. The sea bank is occasionally littered with allied materials, plus discarded items of a domestic nature.

2.4 Survey constraints

There were no constraints to the survey, with full access available to the site.

2.5 Proposed work

The proposed work entails the building of a wharf at within the West grid.

3 METHODS

The site was surveyed twice at low tide and high tide between December 2021 and March 2022, with all survey work being undertaken by Anthony Bentley.

The bird survey used an abridged version of the Wetland Bird Survey (WeBS), where a sector was set up prior to the first recording visit. The three sectors included the banktops but no further land. Care was taken to avoid duplicate recording, although with some species this was not easy. The sectors were walked at an even speed.

Surveys began 90 minutes before either high or low tide and were finished 90 minutes after high or low tide. Weather has not been taken into consideration in these surveys. During each survey, all waterbirds were recorded using the site. Due to the high turnover of gull species using the site during the survey period an estimated maximum count is given.

3.1 Surveys

Eight surveys were undertaken; the dates and start times are included in the table below:

Date	Start Time	Weather (Temp at start of survey)	High/Low tide
20 th December 2021	12:30	5°C 8mph NW 8/8 Cloud cover	Low
31 st December 2021	14:00	14°C 14mph WSW 1/8 Cloud cover	High
3 rd January 2022	12:30	10°C 18mph SW 3/8 Cloud cover	Low
29 th January 2022	14:15	11°C 24mph WNW 2/8 Cloud cover	High
22 nd February 2022	09:20	9°C 17mph WSW 6/8 Cloud cover	High
22 nd February 2022	14:15	10°C 23mph WNW 1/8 Cloud cover	Low
6 th March 2022	07:30	0°C 14mph NW 1/8 Cloud cover	High
6 th March 2022	14:00	4°C 15mph NW 1/8 Cloud cover	Low

Table 1. Survey dates, start times, weather conditions and tidal states.

4 RESULTS

4.1 Data search

The National Biodiversity Network (NBN) www.nbn.org.uk was searched for records of protected species within the 10km OS grid square TF34. The River Haven is known to support numerous bird species including nationally significant numbers of Brent Goose.

4.2 Birds

A typical assemblage of common British birds was recorded on the site and in the immediate environs of the site.

A total of 37 species were recorded, with peak counts for each species included in the following tables.

4.2.1 West Grid

Bird species recorded within the vicinity of West Grid during the low and high tide surveys between December 2021 – March 2022 are included in the tables below:

	Dec	Jan	Feb	Mar	Peak Count
Avocet				7	7
Bar-tailed Godwit	1				1
Black-headed Gull	2	1	170	954	954
Black-tailed Godwit	1				1
Cormorant		1			1
Common Gull				13	13
Curlew	7	6	16	12	16
Dark-bellied Brent Goose	17	32	175	126	175
Grey Heron	1		1	1	1
Grey Plover	5				5
Herring Gull			1		1
Lesser Black-backed Gull				1	1
Little Egret			1	3	3
Mallard	5	10	6	2	10
Meadow Pipit	1				1
Oystercatcher			8	10	10
Redshank	18	22	34	17	34
Shelduck		2		10	10
Turnstone			2		2
Total	58	74	414	1156	1156

Table 2. Bird species recorded within the vicinity of West Grid during a low tide survey between December 2021 – March 2022.

	Dec	Jan	Feb	Mar	Peak Count
Avocet				4	4
Black-headed Gull	61	153	51	6	153
Black-tailed Godwit	4	1			4
Cormorant			3	5	5
Common Gull	1	3			3

Curlew	5	10	11	5	11
Dark-bellied Brent Goose		43	7	4	43
Gadwall			2	2	2
Great Black-backed Gull	1		1		1
Grey Heron	2	1	2		2
Grey Plover	1	1			1
Grey Wagtail				1	1
Herring Gull	4	2	2	1	4
Jack Snipe	1				1
Little Egret	1				1
Little Grebe		1		4	4
Mallard	2		4	6	6
Oystercatcher			10	6	10
Redshank	44	20	42	63	63
Rock Pipit				1	1
Ruff	5	15		1	15
Shelduck			2	2	2
Turnstone	1	1	2	2	2
Total	133	254	139	113	254

Table 3. Bird species recorded within the vicinity of West Grid during a high tide survey between December 2021 – March 2022.

4.2.2 Middle Grid

Bird species recorded within the vicinity of Middle Grid during the low and high tide surveys between December 2021 – March 2022 are included in the table below:

	Dec	Jan	Feb	Mar	Peak Count
Black-headed Gull	3	13	1	5	13
Cormorant		5	1	1	5
Common Gull				2	2
Curlew	7	5	3	5	7
Dark-bellied Brent Goose	1515	278	765		1515
Dunlin			1	5	5
Great Black-backed Gull		1			1
Great Crested Grebe				1	1
Grey Heron		1			1
Herring Gull	4	2	1		4
Little Egret				1	1
Little Grebe	7				7
Mallard	8		2	6	8
Merlin		1			1
Oystercatcher			6	4	6
Pale-bellied Brent Goose	2				2
Redshank	12	6	5	17	17

Ringed Plover			4	5	5
Rock Pipit	1				1
Ruff		1			1
Shelduck			5	7	7
Teal	3			3	3
Wigeon				2	2
Total	1562	313	794	64	1562

Table 4. Bird species recorded within the vicinity of Middle Grid during a low tide survey between December 2021 – March 2022.

	Dec	Jan	Feb	Mar	Peak Count
Black-headed Gull	26	4	44	5	44
Canada Goose	1				1
Cormorant		6	1	1	6
Common Gull			1		1
Curlew	7	1	2	3	7
Dark-bellied Brent Goose	156		163	10	163
Great Black-backed Gull		1			1
Grey Plover	2		1		2
Herring Gull			1	1	1
Little Egret				1	1
Mallard	2	6		2	6
Oystercatcher	7		4	2	7
Redshank	6	6	9	7	9
Shelduck		6		8	8
Teal			1	3	3
Turnstone		2			2
Wigeon			3		3
Total	207	32	221	43	221

Table 5. Bird species recorded within the vicinity of Middle Grid during a high tide survey between December 2021 – March 2022.

4.2.3 East Grid

Bird species recorded within the vicinity of East Grid during the low and high tide surveys between December 2021 – March 2022 are included in the table below:

	Dec	Jan	Feb	Mar	Peak Count
Black-headed Gull	2	5		1	5
Cormorant		2			2
Dark-bellied Brent Goose			435	900	900
Eider				1	1

Goldeneye	2				2
Golden Plover	1000				1000
Herring Gull		2		2	2
Lapwing	860				860
Mallard		16	2		16
Oystercatcher	5	2	2	9	9
Redshank		2		2	2
Teal		22			22
Wigeon	5	115			115
Total	1874	166	439	915	1874

Table 6. Bird species recorded within the vicinity of East Grid during a low tide survey between December 2021 – March 2022.

	Dec	Jan	Feb	Mar	Peak Count
Cormorant		1			1
Dark-bellied Brent Goose			4	2	4
Dunlin	500	210		1100	1100
Lapwing	52	625	56		625
Mallard			1	2	2
Oystercatcher	14	155	14	2108	2108
Redshank	2	1	1	2	2
Ringed Plover	7				7
Turnstone	20			126	126
Wigeon				1	
Total	595	992	76	3341	3341

Table 7. Bird species recorded within the vicinity of East Grid during a high tide survey between December 2021 – March 2022.

4.2.4 West, Middle and East Grid

Combined count of bird species recorded within the vicinity of West, Middle and East Grid during the low and high tide surveys between December 2021 – March 2022 are included in the table below:

	Dec	Jan	Feb	Mar	Peak Count
Avocet				7	7
Bar-tailed Godwit	1				1
Black-headed Gull	7	19	171	960	960
Black-tailed Godwit	1				1
Common Gull				15	15
Cormorant		8	1	1	8
Curlew	14	11	19	17	19

Dark-bellied Brent Goose	1532	310	1375	1026	1532
Dunlin			1	5	5
Eider				1	1
Golden Plover	1000				1000
Goldeneye	2				2
Great Black-backed Gull		1			1
Great Crested Grebe				1	1
Grey Heron	1	1	1	1	1
Grey Plover	5				5
Herring Gull	4	4	2	2	4
Lapwing	860				860
Lesser Black-backed Gull				1	1
Little Egret			1	4	4
Little Grebe	7				7
Mallard	13	26	10	8	26
Meadow Pipit	1				1
Merlin		1			1
Oystercatcher	5	2	16	23	23
Redshank	30	30	39	36	39
Ringed Plover			4	5	5
Ruff		1			1
Shelduck		2	5	17	17
Teal	3	22		3	22
Turnstone			2		2
Wigeon	5	115		2	115

Table 8. Bird species recorded within the vicinity of West, Middle and East Grid during a Low tide survey between December 2021 – March 2022.

	Dec	Jan	Feb	Mar	Peak Count
Avocet				4	4
Black-headed Gull	117	157	95	11	157
Black-tailed Godwit	4	1			4
Canada Goose	1				1
Common Gull	1	3	1		3
Cormorant		7	4	6	7
Curlew	12	11	13	8	13
Dark-bellied Brent Goose	156	43	184	16	184
Dunlin	500	210		1100	1100
Gadwall			2	2	2
Great Black-backed Gull	1	1	1		1
Grey Heron	2	1	2		2
Grey Plover	3	1	1		3
Grey Wagtail				1	1
Herring Gull	4	2	3	2	4

Herring Gull					0
Jack Snipe	1				1
Lapwing	52	625	56		625
Little Egret	1			1	1
Little Grebe		1		4	4
Mallard	4	6	5	10	10
Oystercatcher	21	155	28	2116	2116
Redshank	52	27	52	72	72
Ringed Plover	7				7
Rock Pipit				1	1
Ruff	5	15		1	15
Shelduck		6	2	10	10
Teal			1	3	3
Turnstone	21	3	2	128	128
Wigeon			3	1	3

Table 9. Bird species recorded within the vicinity of West, Middle and East Grid during a high tide survey between December 2021 – March 2022.

4.3 Systematic list

The following systematic list discusses the significant species recorded during the survey period.

Key to abbreviations:

JNCC (2016) Seabird Population Trends and Causes of Change: 1986-2015 Report. Joint Nature Conservation Committee. Updated Sep 2016. <https://jncc.gov.uk/our-work/seabird-population-trends-and-causes-of-change-1986-2015-report-category/>

Wintering waterbirds thresholds. Frost, T., Austin, G., Hearn, R. *et al.* (2019). Population estimates of wintering waterbirds in Great Britain. *British Birds* 112: 130-145

WeBS – The Wetland Bird Survey (WeBS) monitors non-breeding waterbirds in the UK. WeBS surveyors monitor the UK's internationally important non-breeding waterbirds. The peak counts for the whole of The Wash are shown in the WeBS table for each species and are based on the 2013 – 2018 data only - <https://app.bto.org/webs-reporting> (at the time of writing the 2018/19 had not been released).

For waders and wildfowl the local status, WeBS threshold for international importance and the WeBS threshold for national importance is given. The table shows the five-year trend for The Wash and the 5-year average. Where a peak count for one grid is the same as all three combined no peak count is given for combined. Occurrences were based on combined Grid totals. Where combined peak counts exceeded 1% The Wash population based on the 5-year average a accurate percentage is given.

Avocet *Recurvirostra avosetta*

Common passage migrant and breeding species on scrapes and lagoons. Scarce winter visitor but increasing. Amber List. WeBS threshold for international importance: 940. WeBS threshold for national importance: 87.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
357	486	543	492	362		448

Avocet occurred on two surveys with a peak count of 7 within the West Grid at low tide on 6th March 2022. This equates to 1.56% of The Wash population based on the 5-year average.

Bar-tailed Godwit *Limosa lapponica*

Very common coastal passage migrant and winter visitor; scarce inland. Amber List (nominate). WeBS threshold for international importance 1500. WeBS threshold for national importance: 500.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
22,183	13,696	22,478	15,267	13,923		17,509

Bar-tailed Godwit occurred on one visit with 1 bird within the West Grid at low tide on 20th December 2021.

Black-tailed Godwit *Limosa limosa*

L.l. islandica: common passage migrant and winter visitor. *L.l. limosa*: rare migrant that has bred previously, last in 1974. Amber List (*islandica*) and Red List (nominate). WeBS threshold for international importance: 1100. WeBS threshold for national importance: 390.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
8,439	9,580	8,841	5,519	10,606		8,597

Black-tailed godwit occurred on three surveys, with a peak count of 4 within the West Grid at high tide on 31st December 2021.

Brent Goose *Branta bericla*

Two races. Dark-bellied Brent Goose *Branta bernicla* bernicla an autumn migrant and winter visitor. Amber List. WeBS threshold for international importance: 2100. WeBS threshold for national importance: 980. Pale-bellied Brent Goose *Branta bernicla hrota* a scarce winter visitor. Table below refers only to Dark-bellied Brent Goose *Branta bernicla* bernicla.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
15,720	10,438	10,722	10,112	9,115		11,221

Dark-bellied Brent Goose occurred on every visit, with a combined peak count of 1,532 at low tide, the peak count for a single grid was 1,515 within the Middle Grid at low tide both counts were on 20th December 2021. This equates to 13.65% of The Wash population based on the 5-year average.

Curlew *Numenius arquata*

Common passage migrant and winter visitor; scarce and local breeder. Red List. WeBS threshold for international importance: 7600. WeBS threshold for national importance: 1200.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
6,525	6,500	4,369	6,006	6,903		6,061

Curlew occurred in variable numbers across all surveys. The combined peak count of 19 occurred at low tide, the peak count for a single grid was 16 within the West Grid at low tide both counts were on 22nd February 2022.

Dunlin *Calidris alpina*

Three forms *schinzii* local breeder and common migrant. Amber list. *alpina* a common migrant and wintering species. Amber list. *artica* a scarce migrant. Amber list. WeBS for international importance: 13300. WeBS threshold for national importance: 3400.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
22,608	20,919	31,104	29,997	25,930		26,150

Recorded on 5 surveys with a peak count of 1100 within the East Grid on 6th March 2022, these birds were all roosting during a high tide at a known roost site on the mouth of the Haven. This equates to 4.25% of The Wash population based on the 5-year average.

Gadwall *Mareca strepera*

A passage migrant and common winter species, breeding locally at some sites. Amber list. WeBS threshold for international importance: 1200. WeBS threshold for national importance: 310.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
85	106	137	137	147		122

Recorded on 2 surveys with a both records consisting of two birds (a pair). This equates to 1.64% of The Wash population based on the 5-year average.

Golden Plover *Pluvialis apricaria*

A common passage migrant and common winter visitor. Green list. WeBS threshold for international importance: 9300. WeBS threshold for national importance: 4000.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
14,368	14,891	14,944	15,564	16,295		15,212

Just 1 sighting across the surveys with 1000 roosting at the river mouth within East Grid at low tide on 20th December 2021. This equates to 6.59% of The Wash population based on the 5-year average.

Grey Plover *Pluvialis squatarola*

A common passage migrant and common winter visitor. Rare inland. Amber list. WeBS threshold for international importance: 2000. WeBS threshold for national importance: 330.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
7,990	8,914	9,298	10,270	5,094		8,313

During the surveys Grey Plover was noted 4 times. A peak count of 5 within the West Grid at low tide on 20th December 2021.

Jack Snipe *Lymnocyptes minimus*

A scarce passage migrant and winter visitor. Probably much under-recorded. Green List.

This secretive wading bird was recorded just once on 31st December 2021 within the West Grid at high tide,

Lapwing *Vanellus vanellus*

Declining breeding species, becoming scarce; very common passage migrant and winter visitor. Red List. WeBS threshold for international importance: 20,000. WeBS threshold for national importance: 6200.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
6,204	26,323	8,884	9,402	14,067		12,976

Lapwing was recorded 4 times with the peak being on the 20th December 2021, 860 roosting at the river mouth within the East Grid at low tide. This equates to 6.63% of The Wash population based on the 5-year average.

Oystercatcher *Haematopus ostralegus*

A very common coastal passage migrant / winter visitor and fairly common resident. Less common inland, but now breeds in small numbers. Amber List. WeBS threshold for international importance: 8200. WeBS for national importance: 2900.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
22,608	17,176	22,055	24,964	46,129		26,586

Oystercatcher occurred all 8 surveys with peak count being 2108 within East Grid on 6th March 2022. Of the 2108, 2100 were roosting at the known roost site at the river mouth. The peak combined count was also on the 6th March 2022 with 2116 Oystercatcher recorded across the three grids. This equates to 7.96% of The Wash population based on the 5-year average.

Redshank *Tringa totanus*

Nominate British and continental form a common passage migrant and winter visitor, and fairly common breeding species of coastal marshes. Scarce/very scarce inland. Icelandic form (*robusta*) a common passage migrant and winter visitor. Amber List (both forms). WeBS threshold for international importance 2400. WeBS threshold for national importance: 940.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
5,267	4,183	5,834	4,425	5,727		5,087

Redshank was recorded on every visit during the survey period, with the peak count of 63 occurring at high tide within the West Grid on 6th March 2022, the combined peak of 72 also occurred during this period. Below is a simple table showing the combined count of all Redshank across all visit. This equates to 1.42% of The Wash population based on the 5-year average.

	West Grid	Middle Grid	East Grid
Low Tide	91	40	4
High Tide	169	28	6

Ringed Plover *Charadrius hiaticula*

Nominate British and southern Scandinavian form a fairly common passage migrant; mainly coastal. Breeding has spread to inland sites in the last 40 years. Northern Scandinavian and Russian form *tundrae* ('Tundra Ringed Plover') are fairly common passage migrants. Red List (nominate) and Green List (*tundrae*). WeBS threshold for international importance: 540. WeBS threshold for national importance: 420.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
1,361	1,063	1,090	1,400	1,659		1,315

Occurring on 3 visits with a peak count of 7 roosting birds at high tide within the East Grid on 31st December 2021.

Ruff *Calidris pugnax*

A fairly common passage migrant and scarce winter visitor. Bred to nineteenth century. Red List. WeBS threshold for national importance: 9. **RBBP**

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
73	55	102	39	133		80

Ruff occurred on 4 visits with a peak count of 15 on 29th January 2022 within the West Grid at high tide. This equates to 18.75% of The Wash population based on the 5-year average.

Shelduck *Tadorna tadorna*

Common resident, partial migrant and winter visitor, with concentrations mainly in the Humber, on the north-east coast and in The Wash. Fairly common as a breeding species in estuaries and coastal areas, but scarce inland. Amber List. WeBS threshold for international importance: 2500. WeBS threshold for national importance: 470.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
(1,812)	2,987	2,396	1,484	2,620		2,374

Shelduck occurred on 6 visits in total with a peak count of 10 within the West Grid at low tide, the combined grid peak count was 17 also on 6^h March 2022 at low tide.

Teal *Anas crecca*

A common passage migrant and winter visitor. Occasional lingering summer birds. Amber List. WeBS for international importance: 5000. WeBS threshold for national importance: 4300.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
2,963	3,470	2,071	2,549	2,904		2,791

Teal occurred on 5 visits with a peak count of 22 on 3rd January 2022 within the East Grid at low tide.

Turnstone *Arenaria interpres*

A fairly common/common passage migrant and winter visitor. Rare inland. Amber List. WeBS for international importance: 1400. WeBS threshold for national importance: 400.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
642	893	735	682	822		755

Turnstone occurred on 5 visits with a peak count of 126, these were roosting birds within the East Grid on 6^h March 2022 at high tide. A further two were recorded in other grids making the combined peak count 128. This equates to 16.95% of The Wash population based on the 5-year average.

Wigeon *Mareca penelope*

A common passage migrant and winter visitor. Amber List. WeBS for international importance: 14000. WeBS threshold for national importance: 4500.

WeBS - The Wash – Numbers and Trends						
2015/16	2016/17	2017/2018	2018/2019	2019/2020		5-year Average
12,315	8,777	15,245	15,030	9,763		12,226

Wigeon occurred on 5 visits with a peak count of 115 on 3rd January 2022 within the East Grid at low tide.

5 DISCUSSION AND RECOMMENDATIONS

All recommendations provided in this section are based on the current understanding of the site proposals, correct at the time the report was compiled. Should the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

5.1.1 Recommendations

Overall, 37 bird species were recorded across both sections between December 2021 – March 2022; of these 18 appear on the amber list and 8 are on the red list. 10 species occurred in numbers over 1% of The Wash population based on latest 5 year mean.

Of these 11 species 5 (Dunlin, Golden Plover, Lapwing, Oystercatcher and Turnstone) were roosting at the known roost site at the mouth of The Haven within the East Grid. Dark-bellied Brent Goose peaked at 1532 with 98.89% of those within the Middle Grid, the site was used by multiple flocks to bath and or feed along the saltmarsh edge. Avocet and Gadwall peak counts were restricted completely to the West Grid, both species using the site to feed. Ruff numbers peaked at 15 with all birds present within the West Grid, using the site to roost during high tide.

Redshank peaked at 72 with 87.5% of those occurring within the West Grid at high tide, these birds were using the site to predominantly roost, during low tides Redshank were using The Haven to feed, peaking at 39 with 34 (87.18%) of these within the West Grid. These two percentages show the importance of the West Grid to Redshank at high and low tide. One might argue that the West Grid and Sites A and B are actually of more value to wintering Redshank than the current SSSI boundary along The Haven.

6 REFERENCES

BTO – WeBS Survey Data - <https://app.bto.org/webs-reporting/?tab=alerts>

Eaton, M.A., Aebischer, N.J., Brown, A.F., Hearn, R., Lock, L. Musgrove, A., Noble, D., Stroud, D., Richard, G. (2015) Birds of conservation concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 108, 708-746.

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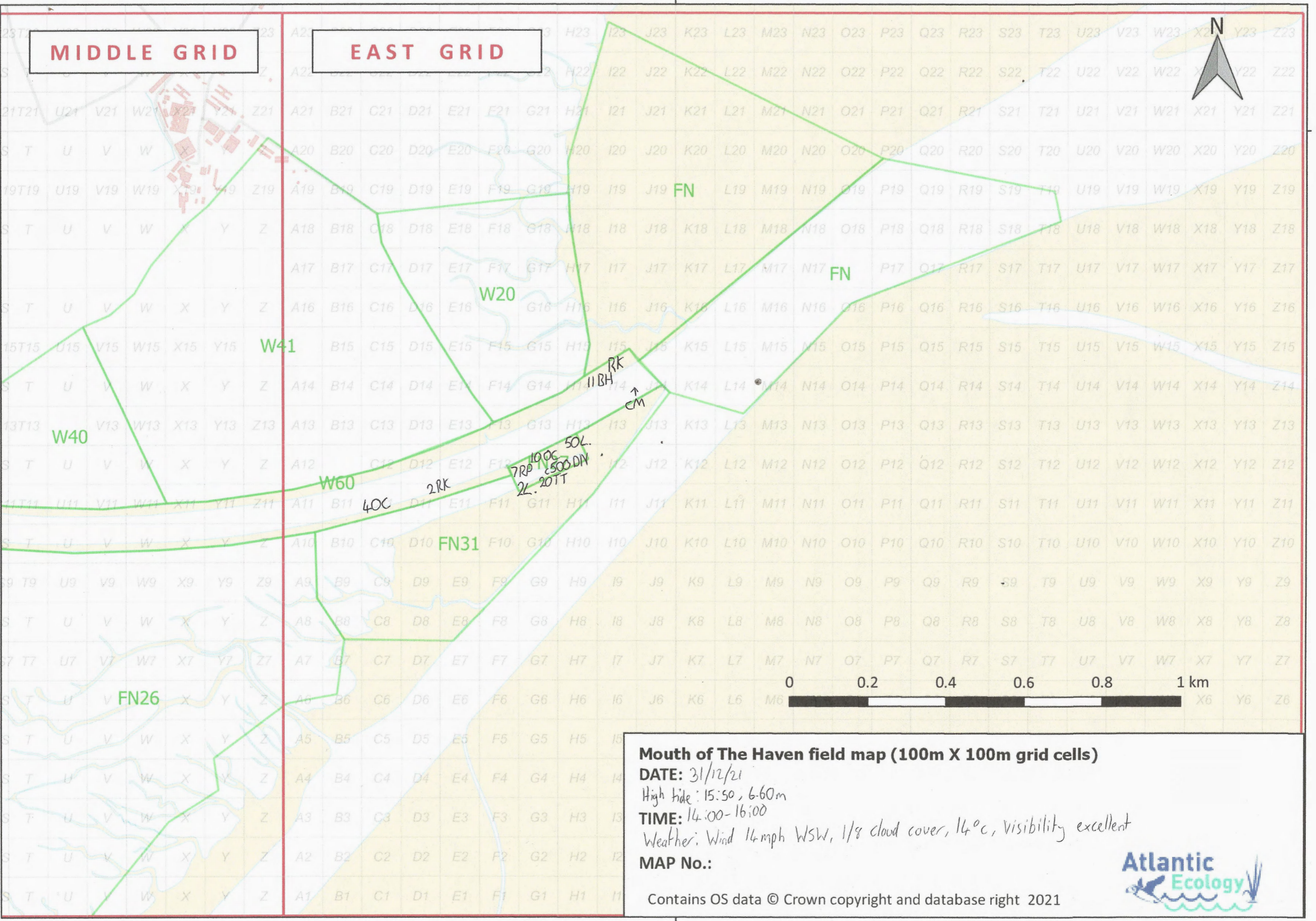
NBN Gateway. Available: nbn.org.uk.

Wintering waterbirds thresholds. Frost, T., Austin, G., Hearn, R. *et al.* (2019). Population estimates of wintering waterbirds in Great Britain. *British Birds* 112: 130-145

Appendix 1.
Survey Maps

MIDDLE GRID

EAST GRID



Mouth of The Haven field map (100m X 100m grid cells)

DATE: 31/12/21

High tide: 15:50, 6-60m

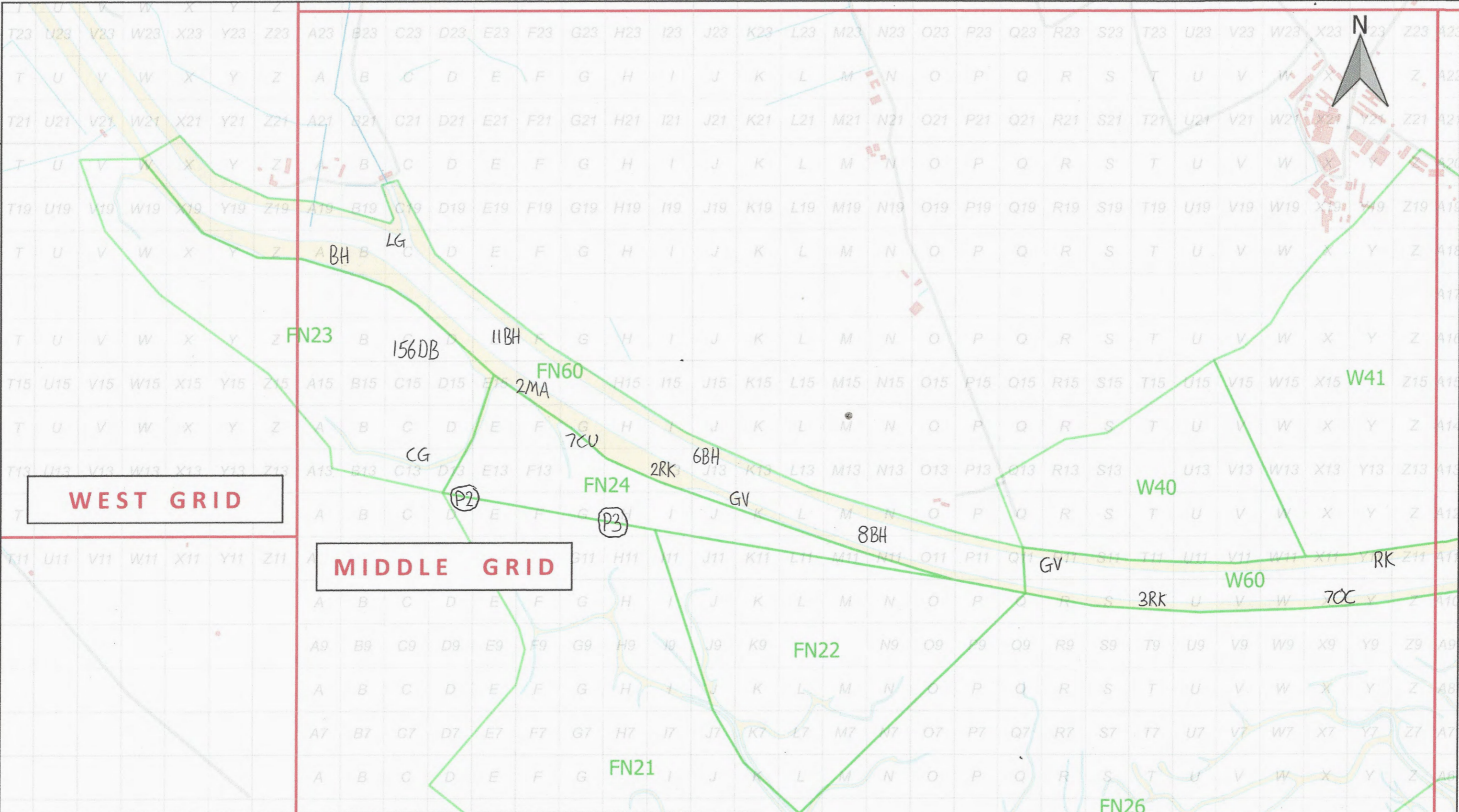
TIME: 14:00-16:00

Weather: Wind 14mph WSW, 1/8 cloud cover, 14°C, visibility excellent

MAP No.:

Contains OS data © Crown copyright and database right 2021





WEST GRID

MIDDLE GRID

Middle part of The Haven field map (100m X 100m grid cells)

DATE: 31/12/21

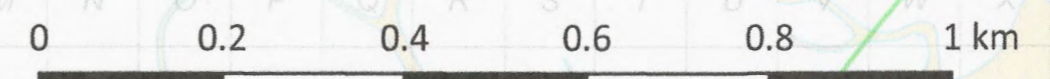
High tide: 15:50, 6.60m

TIME: 14:00 - 16:00

Weather: Wind 14 mph WSW, 1/8 cloud cover, 14°C, Visibility excellent

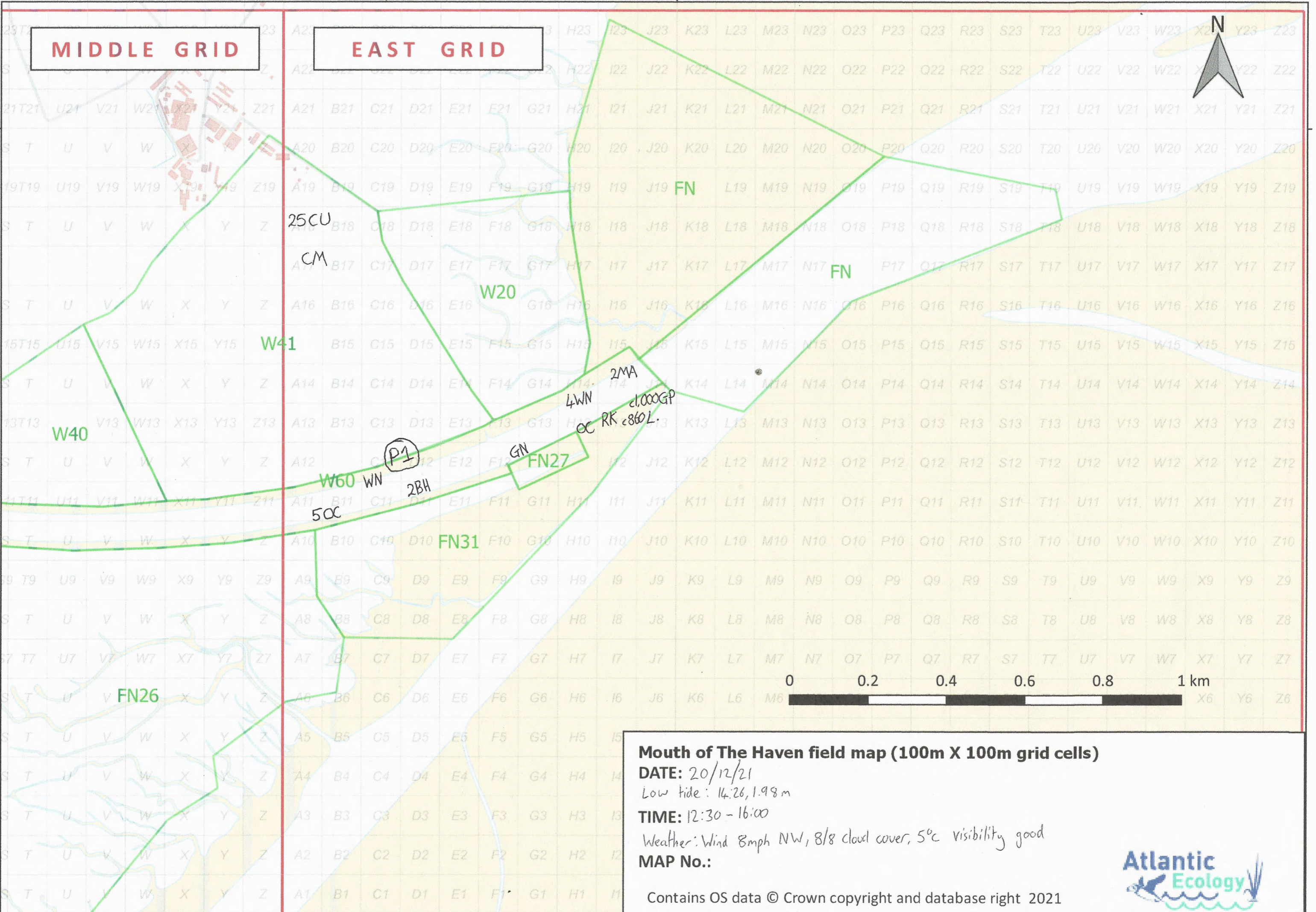
MAP No.:

Contains OS data © Crown copyright and database right 2021



MIDDLE GRID

EAST GRID



Mouth of The Haven field map (100m X 100m grid cells)

DATE: 20/12/21

Low tide: 14:26, 1.98m

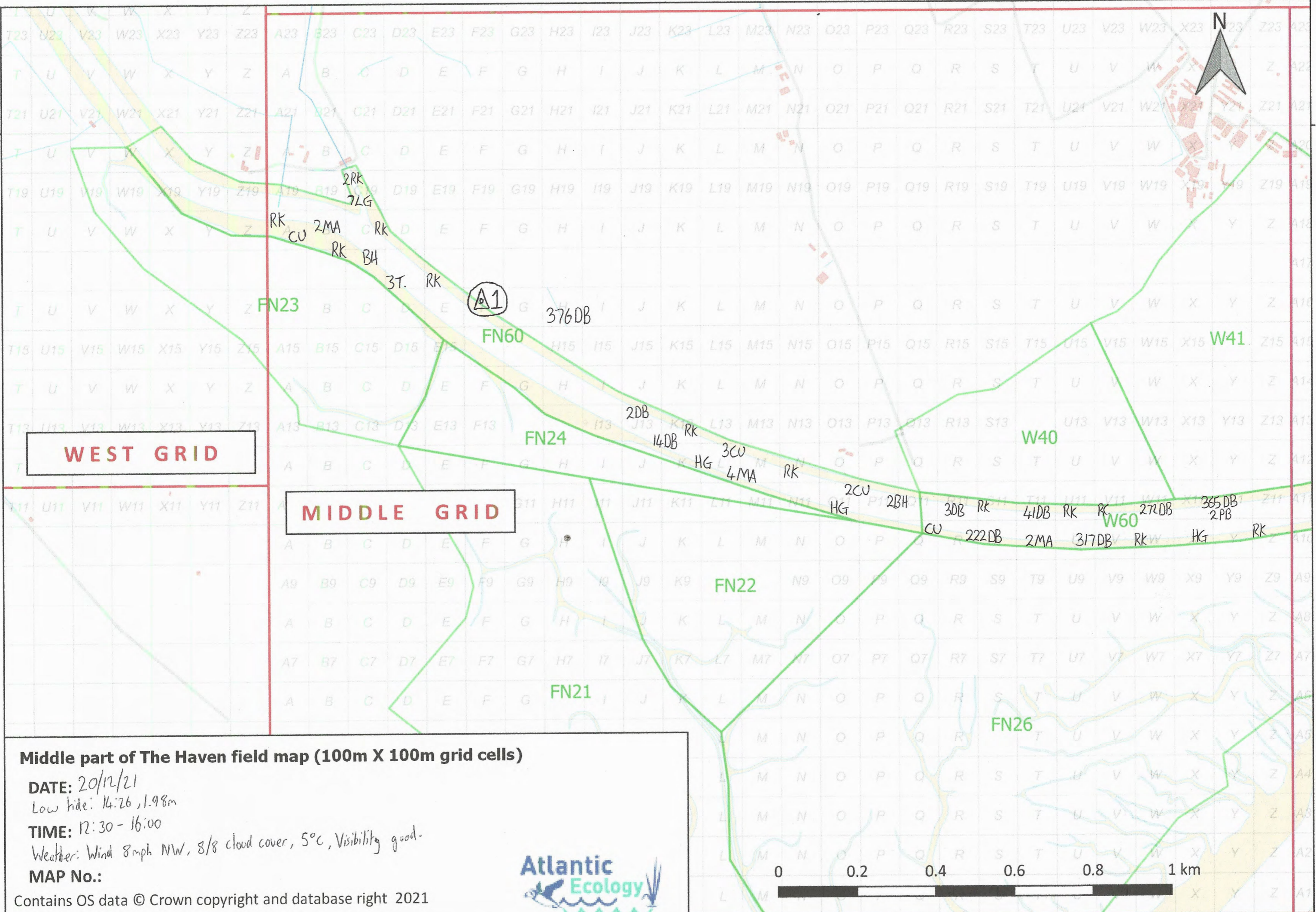
TIME: 12:30 - 16:00

Weather: Wind 8mph NW, 8/8 cloud cover, 5°C visibility good

MAP No.:

Contains OS data © Crown copyright and database right 2021

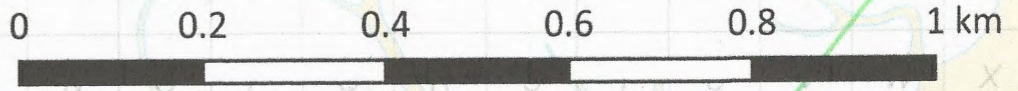




WEST GRID

MIDDLE GRID

Middle part of The Haven field map (100m X 100m grid cells)
DATE: 20/12/21
 Low tide: 14:26, 1.98m
TIME: 12:30 - 16:00
 Weather: Wind 8mph NW, 8/8 cloud cover, 5°C, Visibility good.
MAP No.:
 Contains OS data © Crown copyright and database right 2021



WEST GRID



Noert-west end of The Haven field map (100m X 100m grid cells)

DATE: 20/12/21

Low tide: 14:26, 1.98m

TIME: 12:30 - 16:00

Weather: Wind 8 mph NW, 8/8 cloud cover, 5°C, visibility good

MAP No.:

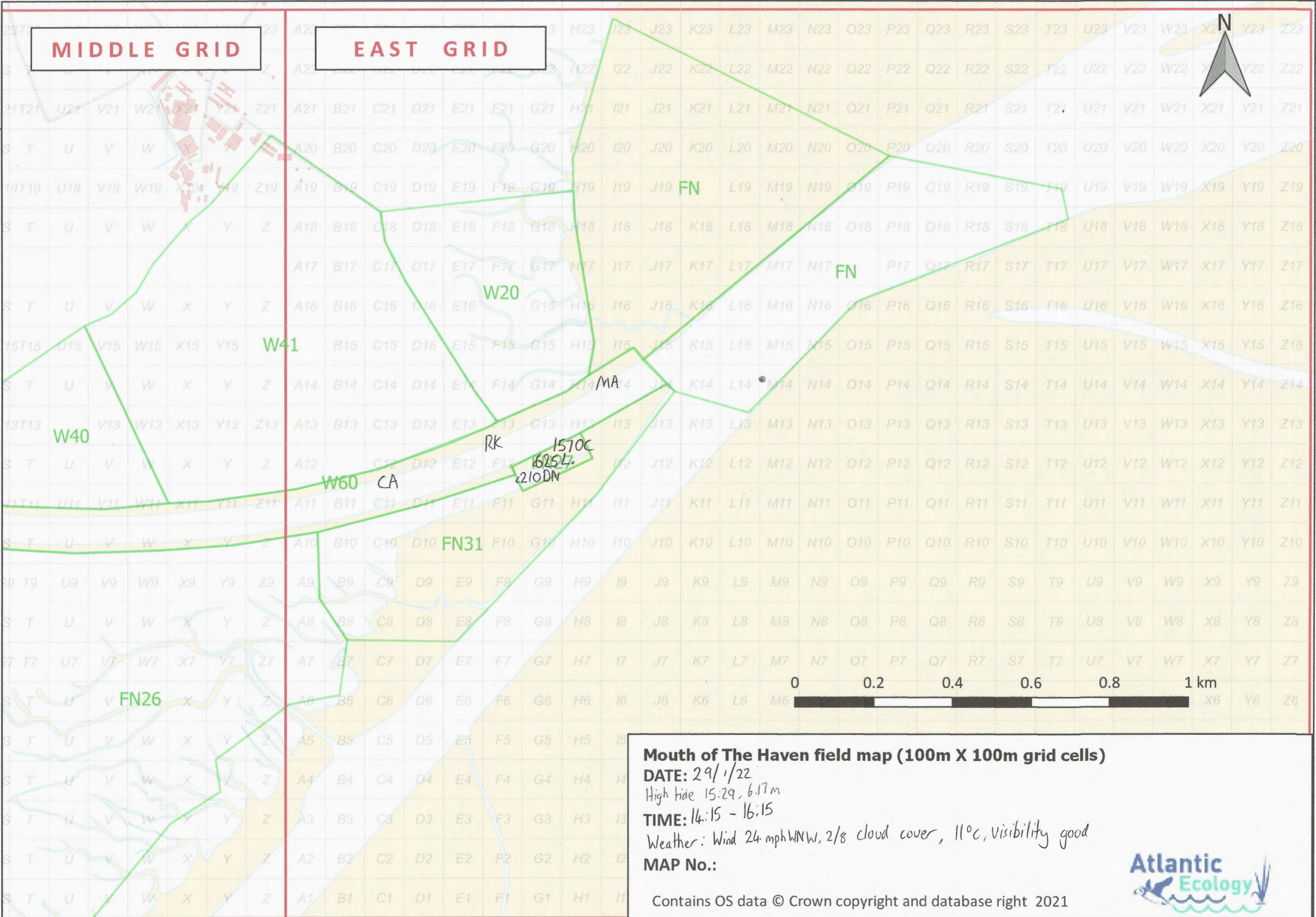
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MIDDLE GRID

EAST GRID



Mouth of The Haven field map (100m X 100m grid cells)

DATE: 29/1/22

High tide 15:29, 6.17m

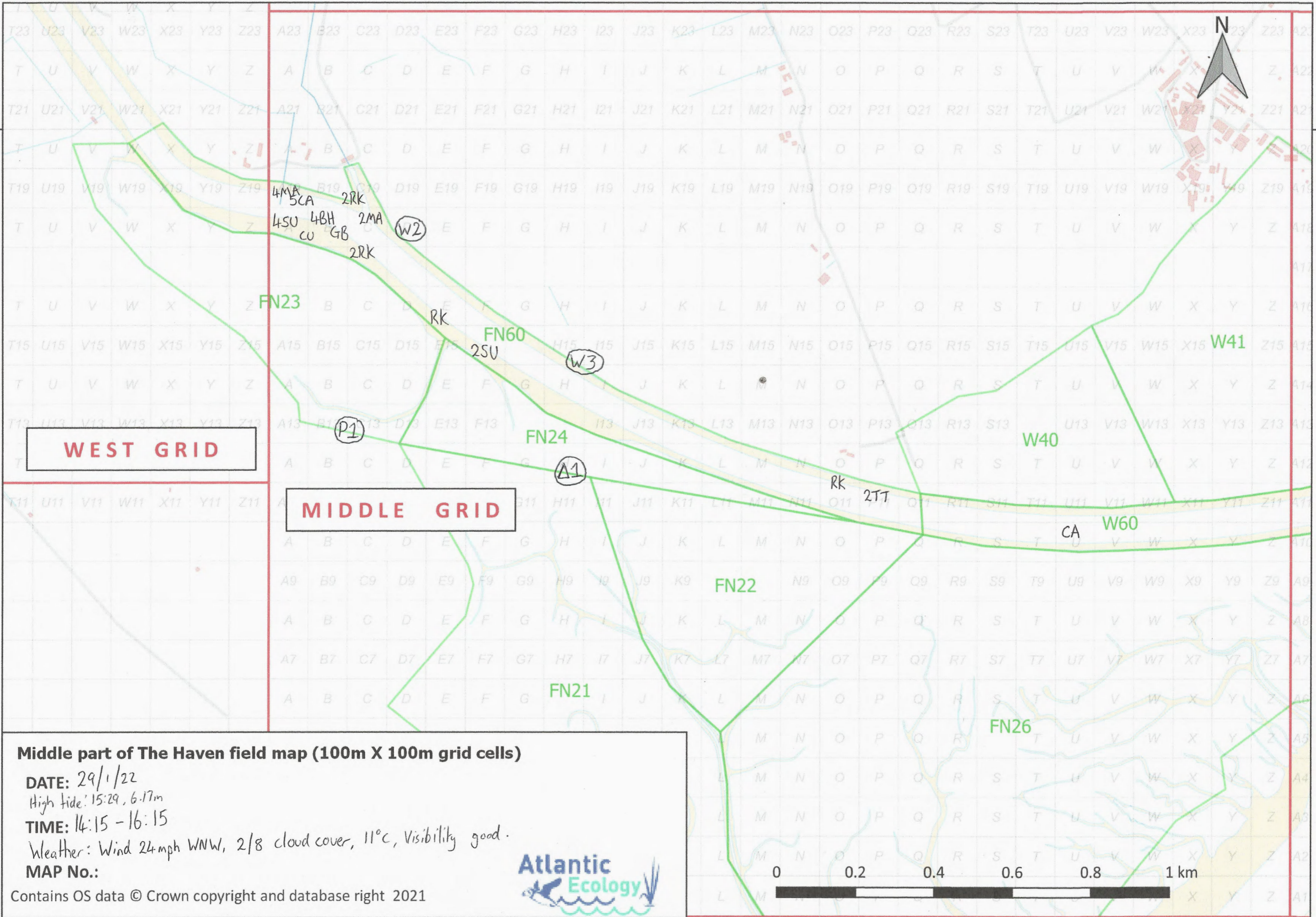
TIME: 14:15 - 16:15

Weather: Wind 24 mph WNW, 2/8 cloud cover, 11°C, visibility good

MAP No.:

Contains OS data © Crown copyright and database right 2021





WEST GRID

MIDDLE GRID

Middle part of The Haven field map (100m X 100m grid cells)

DATE: 29/1/22

High tide: 15:29, 6.17m

TIME: 14:15 - 16:15

Weather: Wind 24mph WNW, 2/8 cloud cover, 11°C, Visibility good.

MAP No.:

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0 0.2 0.4 0.6 0.8 1 km

WEST GRID



Noert-west end of The Haven field map (100m X 100m grid cells)

DATE: 29/1/22

High tide: 15:29, 6-17m

TIME: 14:15 - 16:15

Weather: Wind 24 mph WNW, 2/8 cloud cover, 11°C, Visibility good.

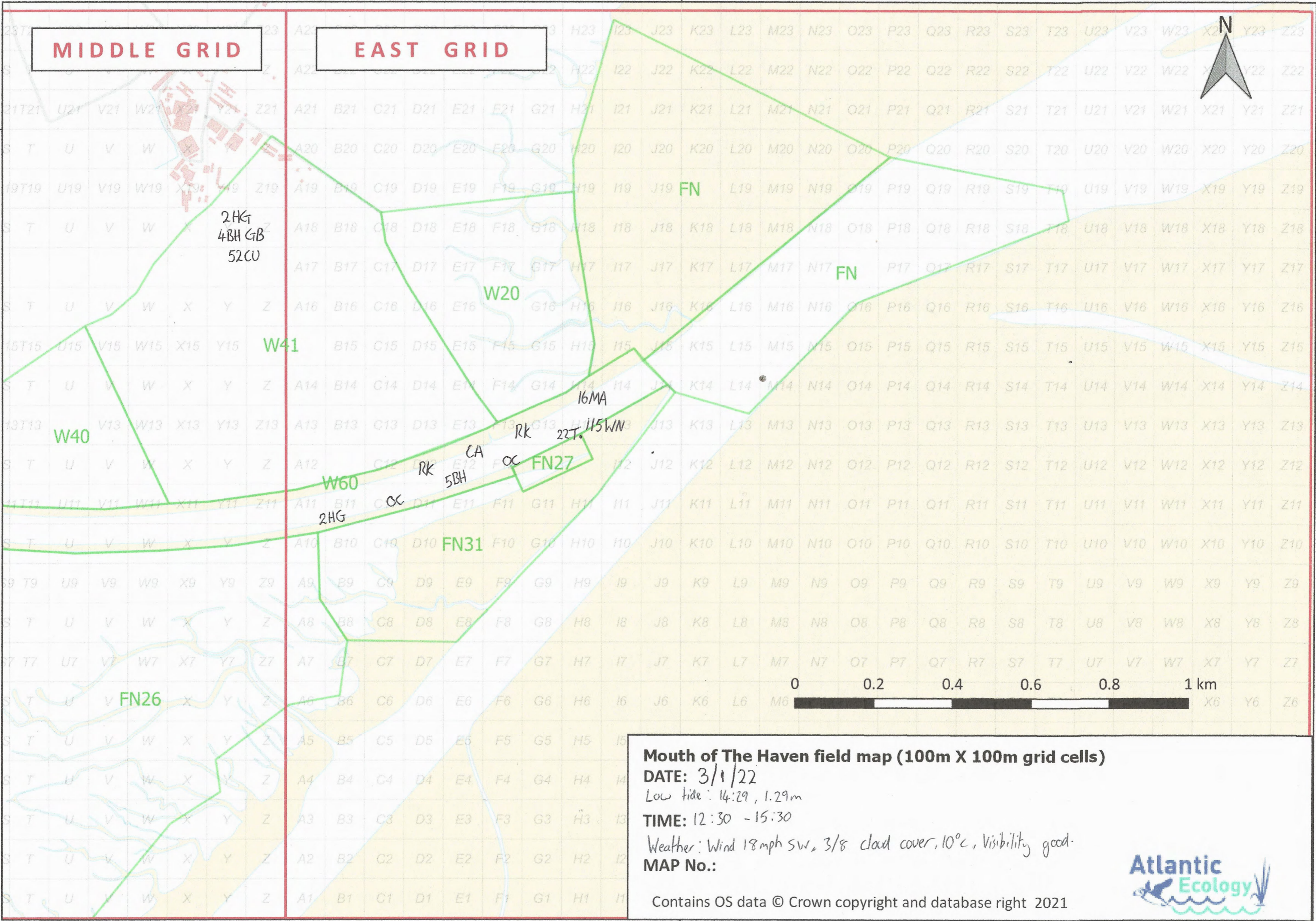
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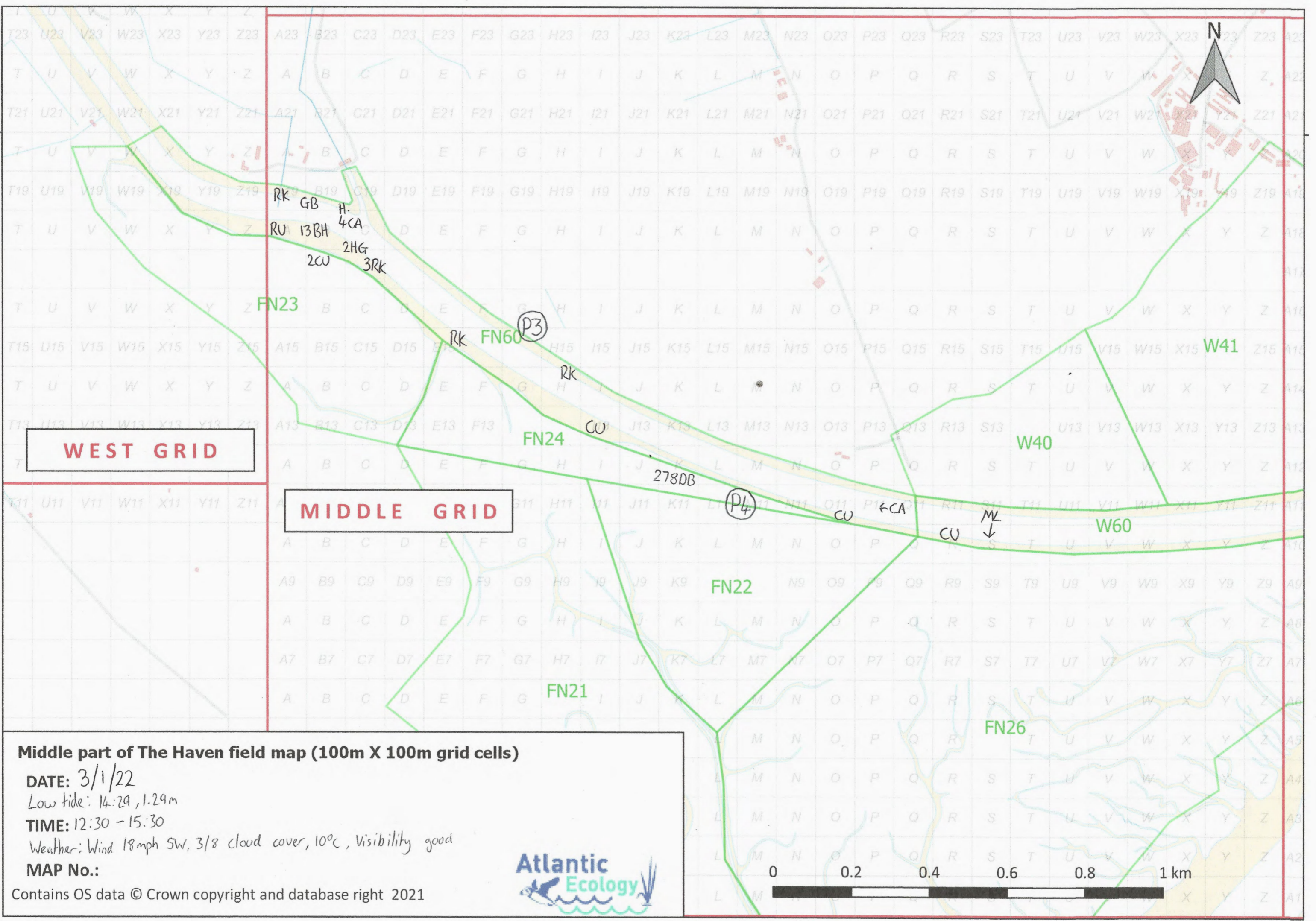
EAST GRID



Mouth of The Haven field map (100m X 100m grid cells)
DATE: 3/1/22
 Low tide: 14:29, 1.29m
TIME: 12:30 - 15:30
 Weather: Wind 18mph SW, 3/8 cloud cover, 10°C, Visibility good.
MAP No.:

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WEST GRID

MIDDLE GRID

Middle part of The Haven field map (100m X 100m grid cells)

DATE: 3/1/22

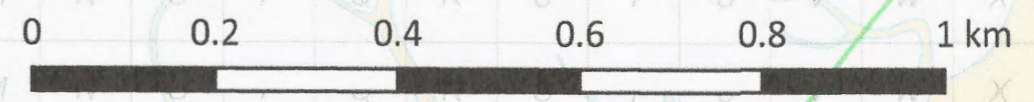
Low tide: 14:29, 1.29m

TIME: 12:30 - 15:30

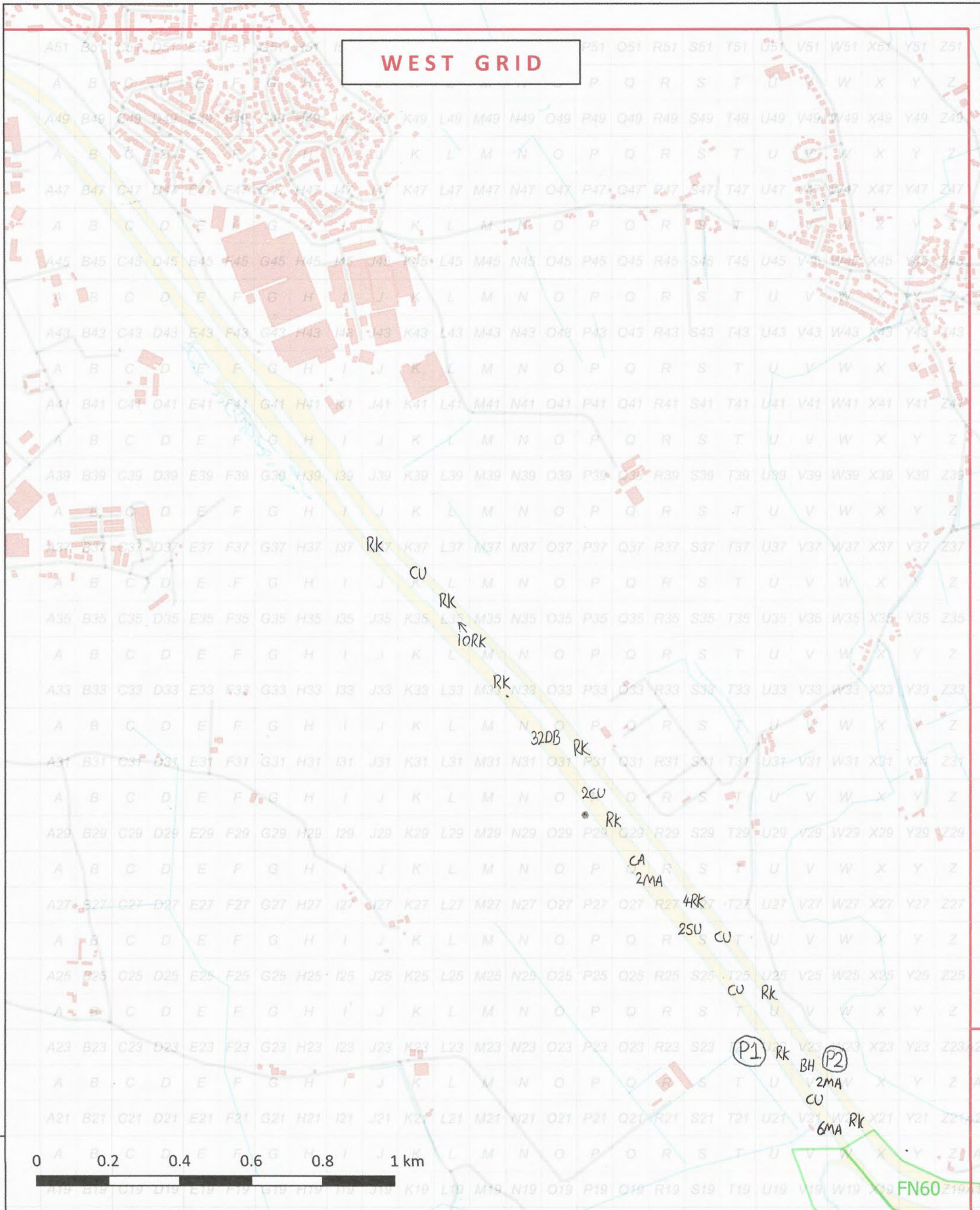
Weather: Wind 18mph SW, 3/8 cloud cover, 10°C, Visibility good

MAP No.:

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WEST GRID



Noert-west end of The Haven field map (100m X 100m grid cells)

DATE: 3/1/22

Low tide: 14:29, 1.29m

TIME: 12:30 - 15:30

Weather: Wind 18mph SW, 3/8 cloud cover, 10°C, visibility good.

MAP No.:

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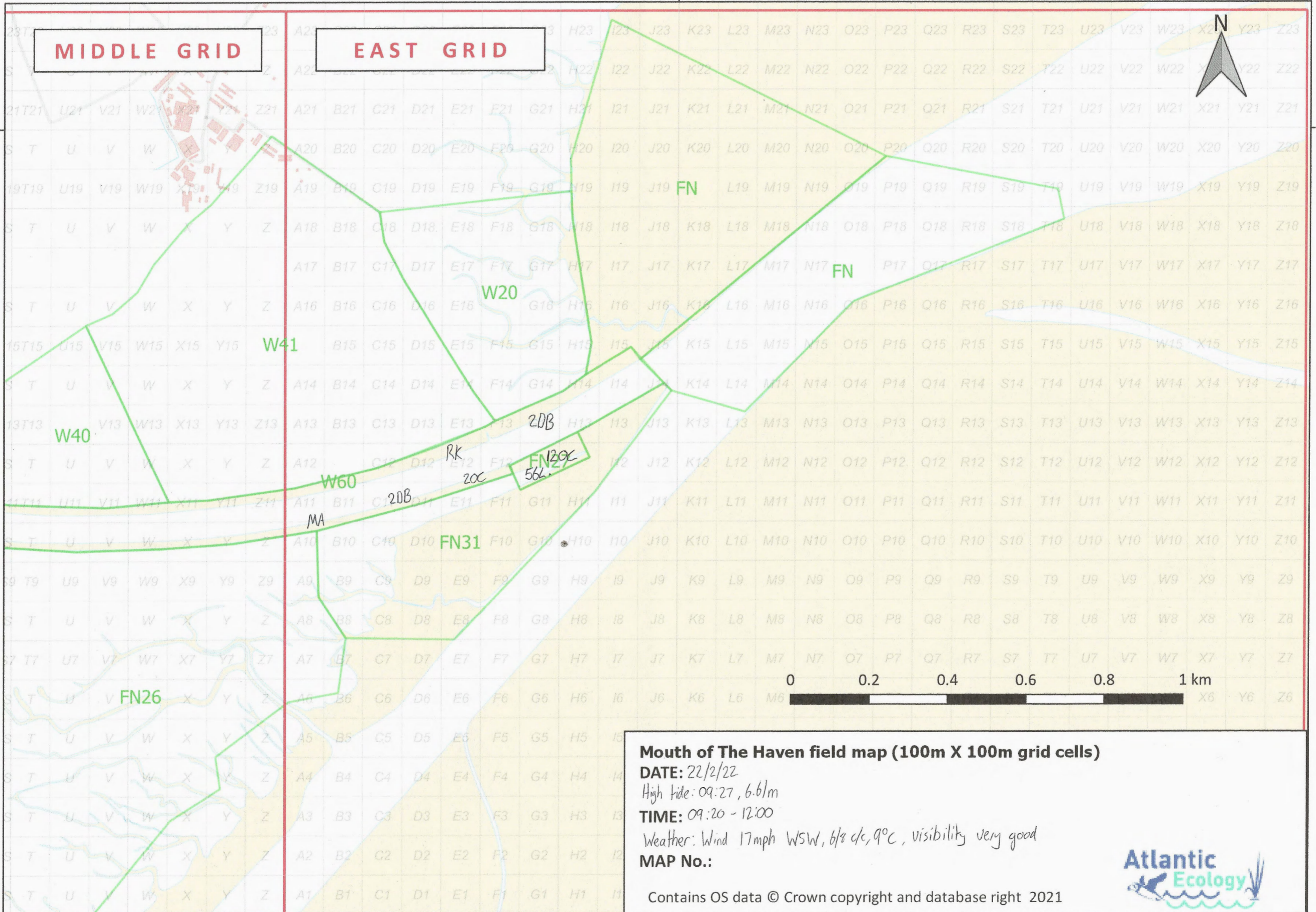


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MIDDLE GRID

EAST GRID



Mouth of The Haven field map (100m X 100m grid cells)

DATE: 22/2/22

High tide: 09:27, 6.61m

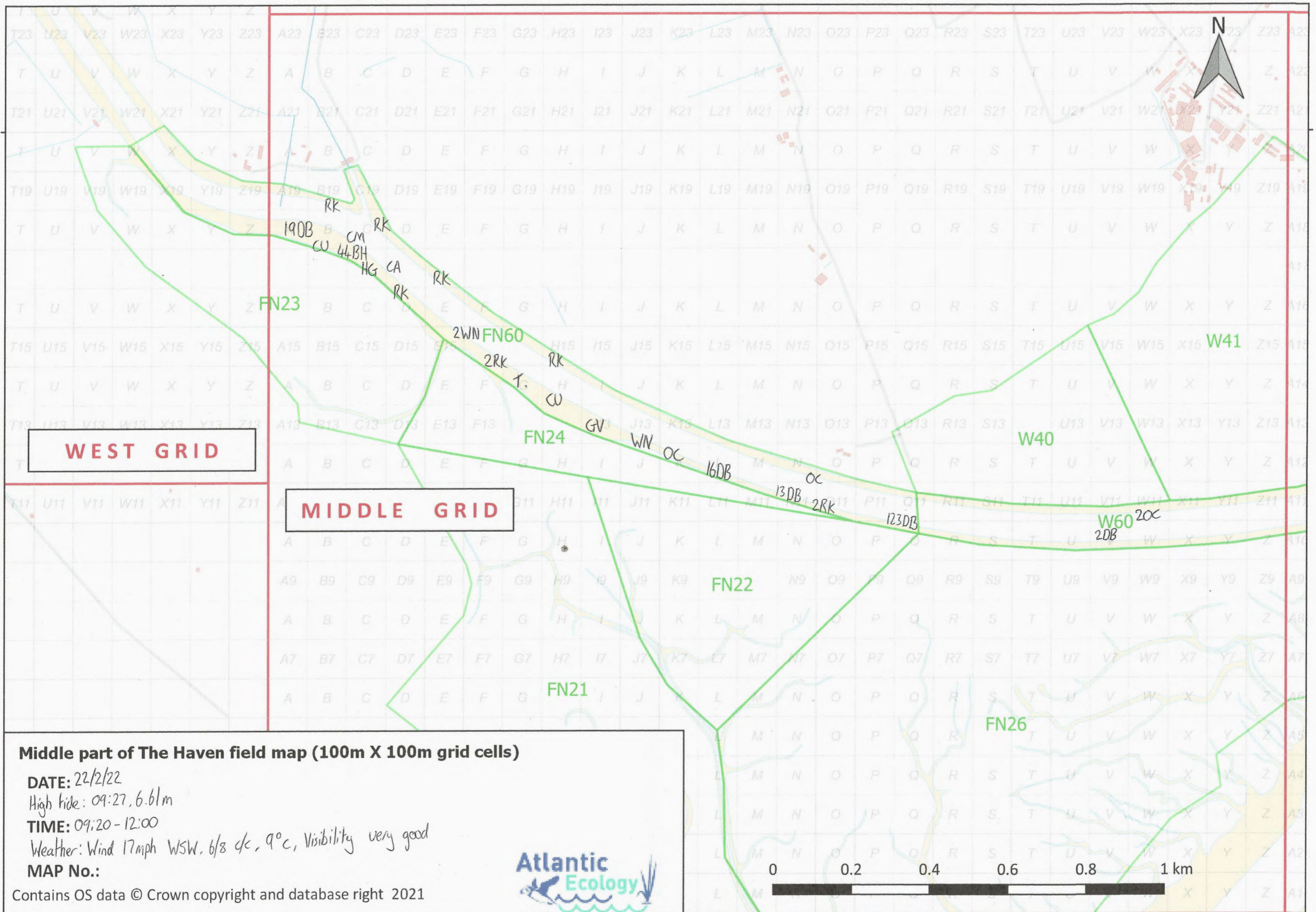
TIME: 09:20 - 12:00

Weather: Wind 17mph WSW, 6/8 c/c, 9°C, visibility very good

MAP No.:

Contains OS data © Crown copyright and database right 2021

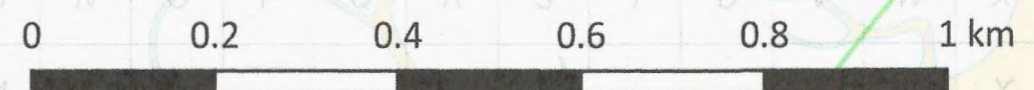




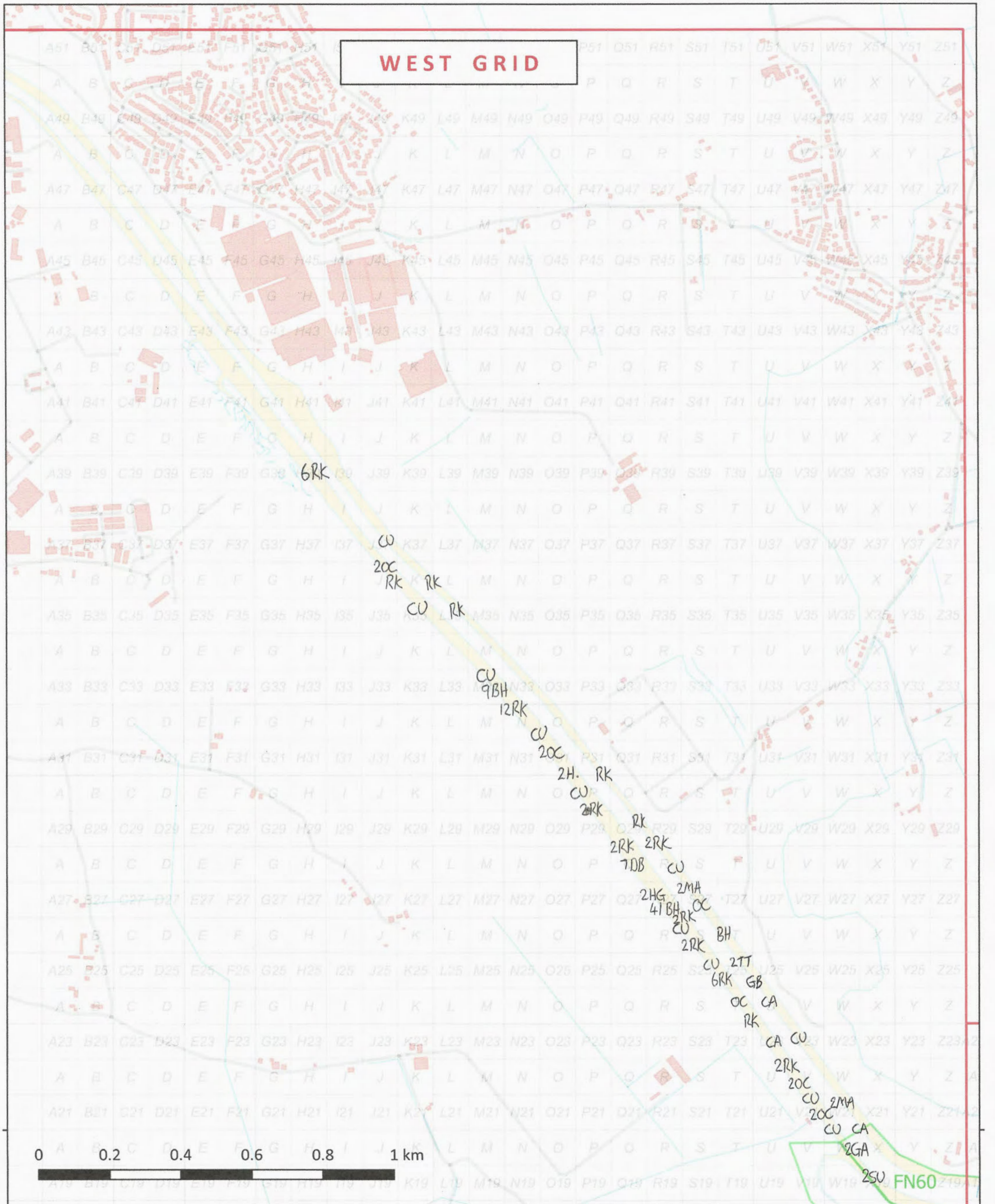
WEST GRID

MIDDLE GRID

Middle part of The Haven field map (100m X 100m grid cells)
DATE: 22/2/22
 High tide: 09:27, 6.61m
TIME: 09:20 - 12:00
 Weather: Wind 17mph WSW, 6/8 c/c, 9°C, Visibility very good
MAP No.:
 Contains OS data © Crown copyright and database right 2021



WEST GRID



Noert-west end of The Haven field map (100m X 100m grid cells)

DATE: 22/2/22

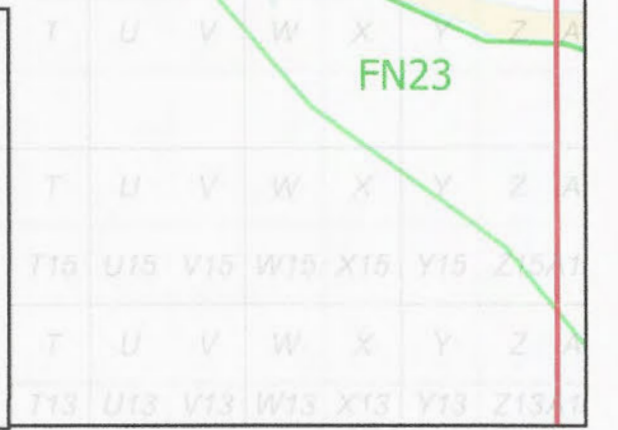
High tide: 09:27, 6.61m

TIME: 09:20 - 12:00

Weather: Wind 17mph WSW, 6/8 c/k, 9°C, visibility very good

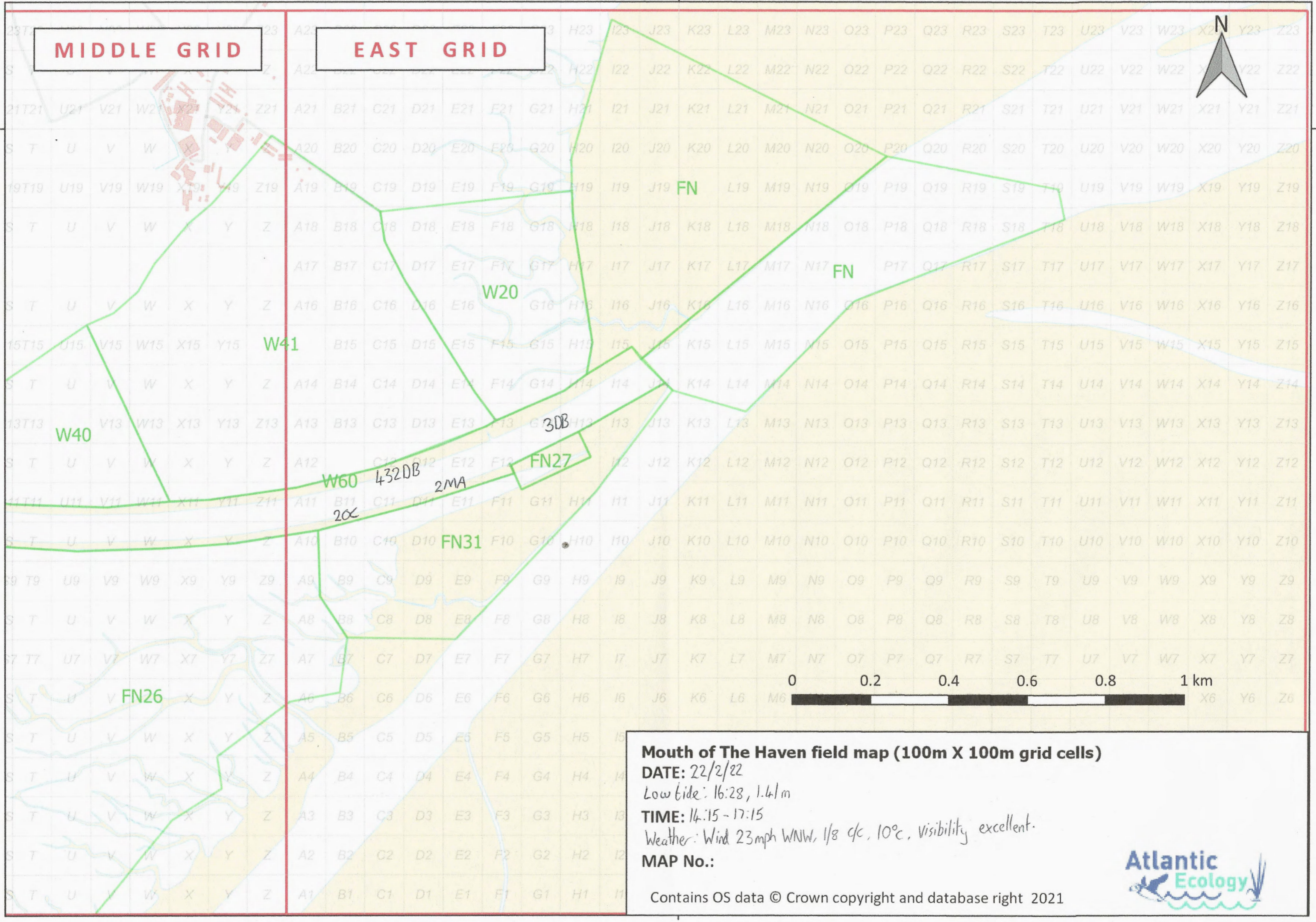
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MIDDLE GRID

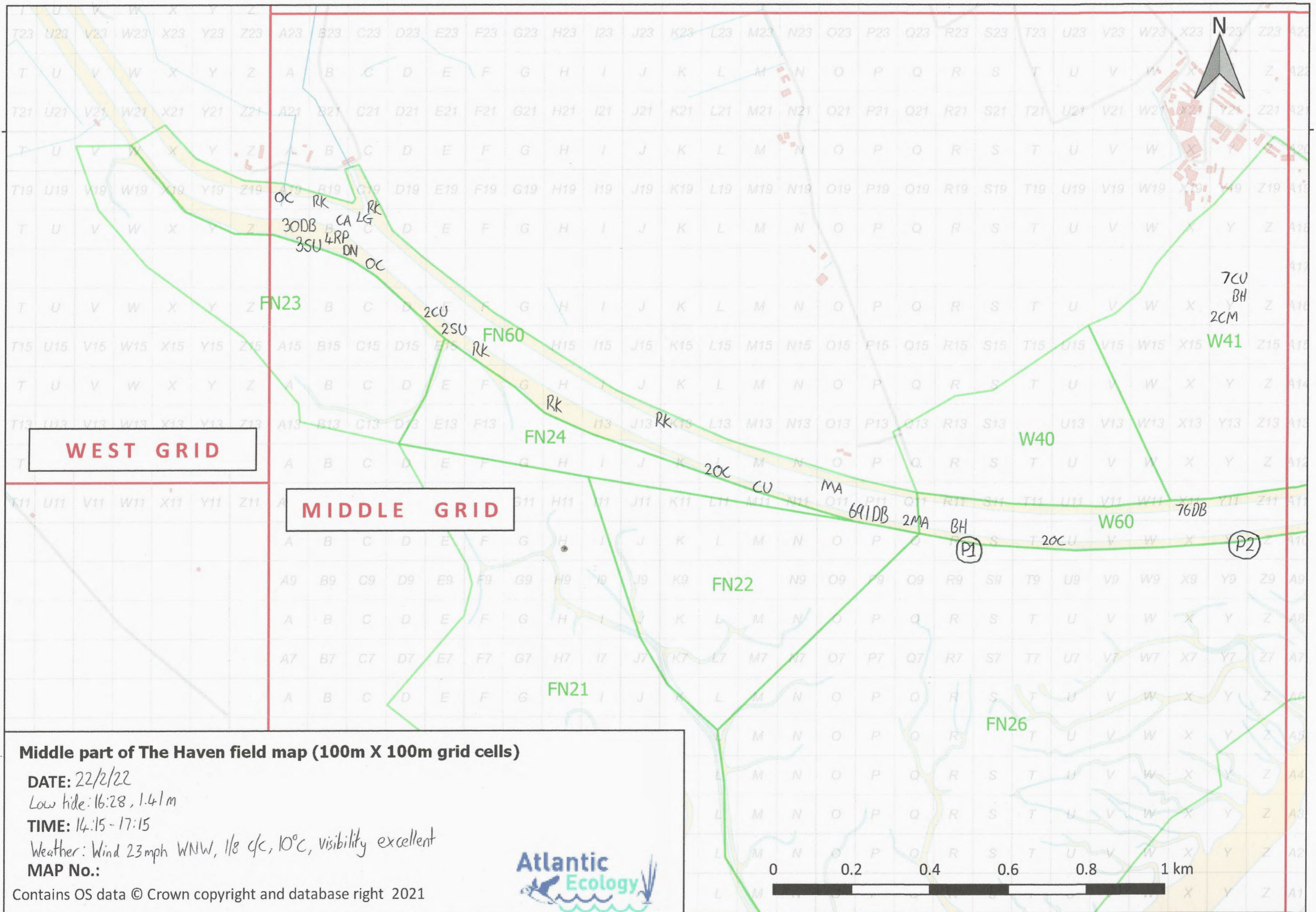
EAST GRID



Mouth of The Haven field map (100m X 100m grid cells)
DATE: 22/2/22
 Low tide: 16:28, 1.41m
TIME: 14:15 - 17:15
 Weather: Wind 23mph WNW, 1/8 c/c, 10°C, visibility excellent.
MAP No.:

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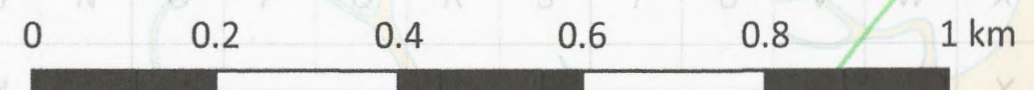




WEST GRID

MIDDLE GRID

Middle part of The Haven field map (100m X 100m grid cells)
DATE: 22/2/22
 Low tide: 16:28, 1.41m
TIME: 14:15 - 17:15
 Weather: Wind 23mph WNW, 1/8 d/c, 10°C, visibility excellent
MAP No.:
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WEST GRID



Noert-west end of The Haven field map (100m X 100m grid cells)

DATE: 22/2/22

Low tide: 16:28, 1.41m

TIME: 14:15 - 17:15

Weather: Wind 23mph WNW, 1/8 c/k, 10°C, Visibility excellent

MAP No.:

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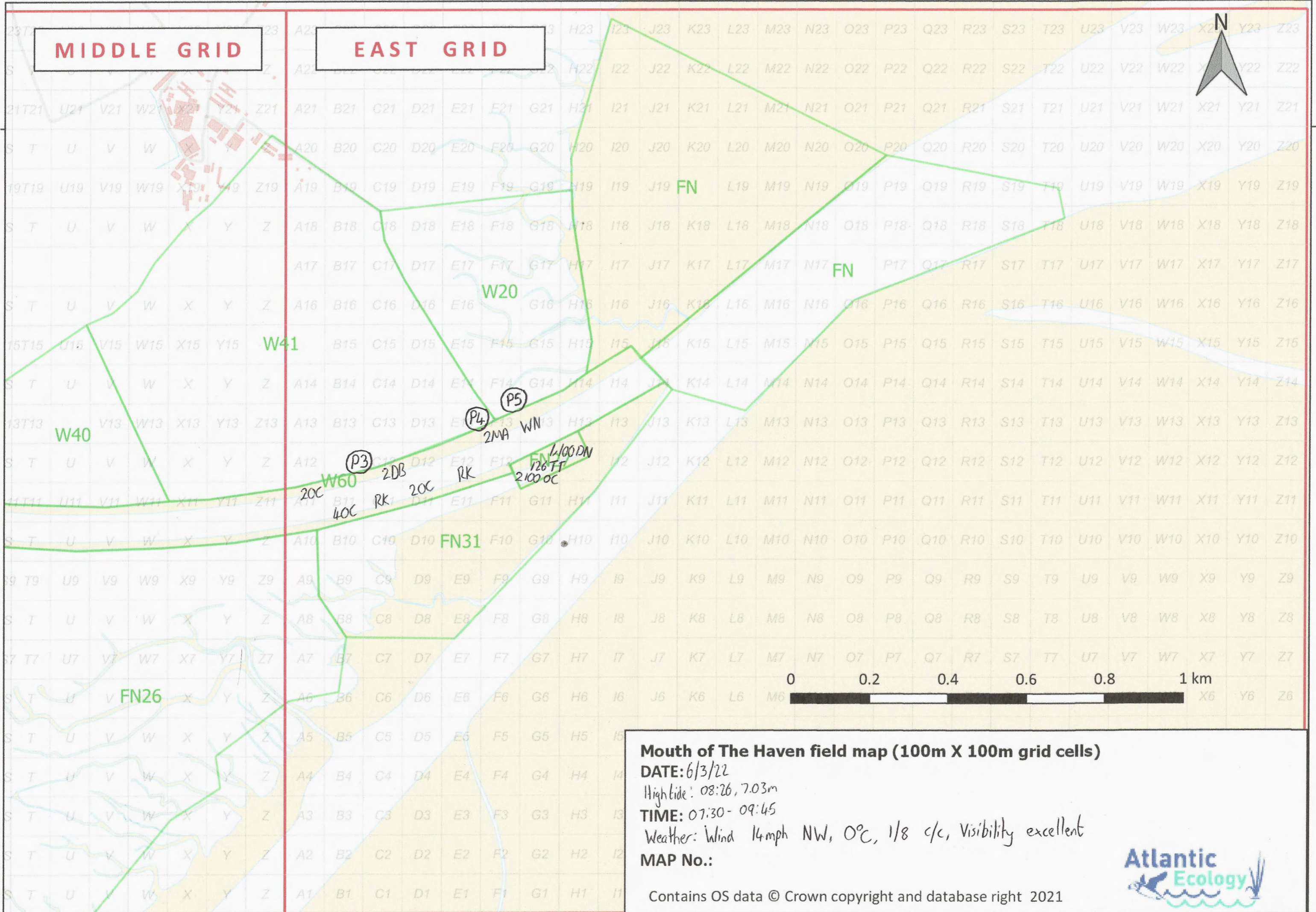
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99C

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MIDDLE GRID

EAST GRID

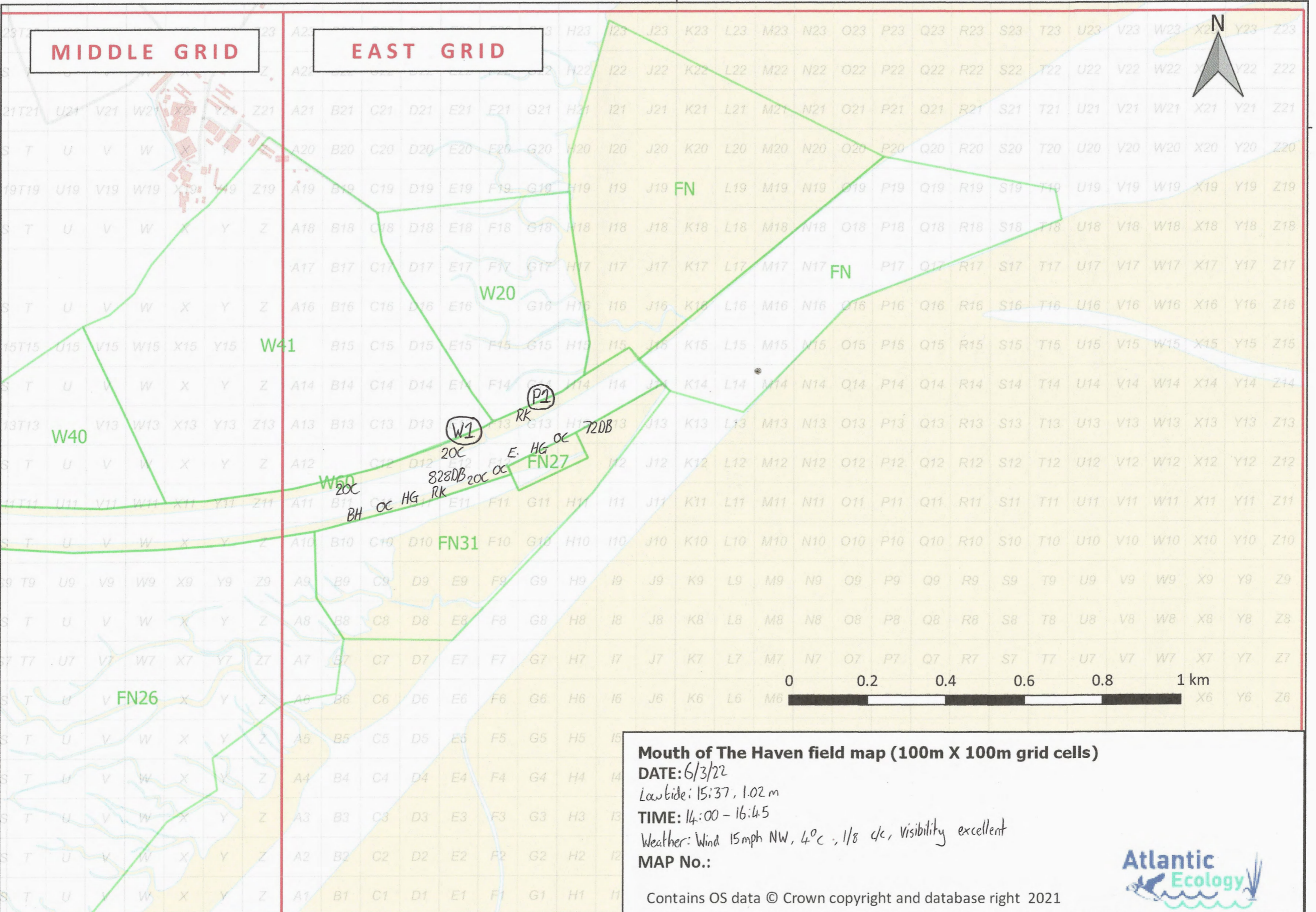


Mouth of The Haven field map (100m X 100m grid cells)
DATE: 6/3/22
 High tide: 08:26, 7.03m
TIME: 07:30 - 09:45
 Weather: Wind 14mph NW, 0°C, 1/8 c/c, Visibility excellent
MAP No.:
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MIDDLE GRID

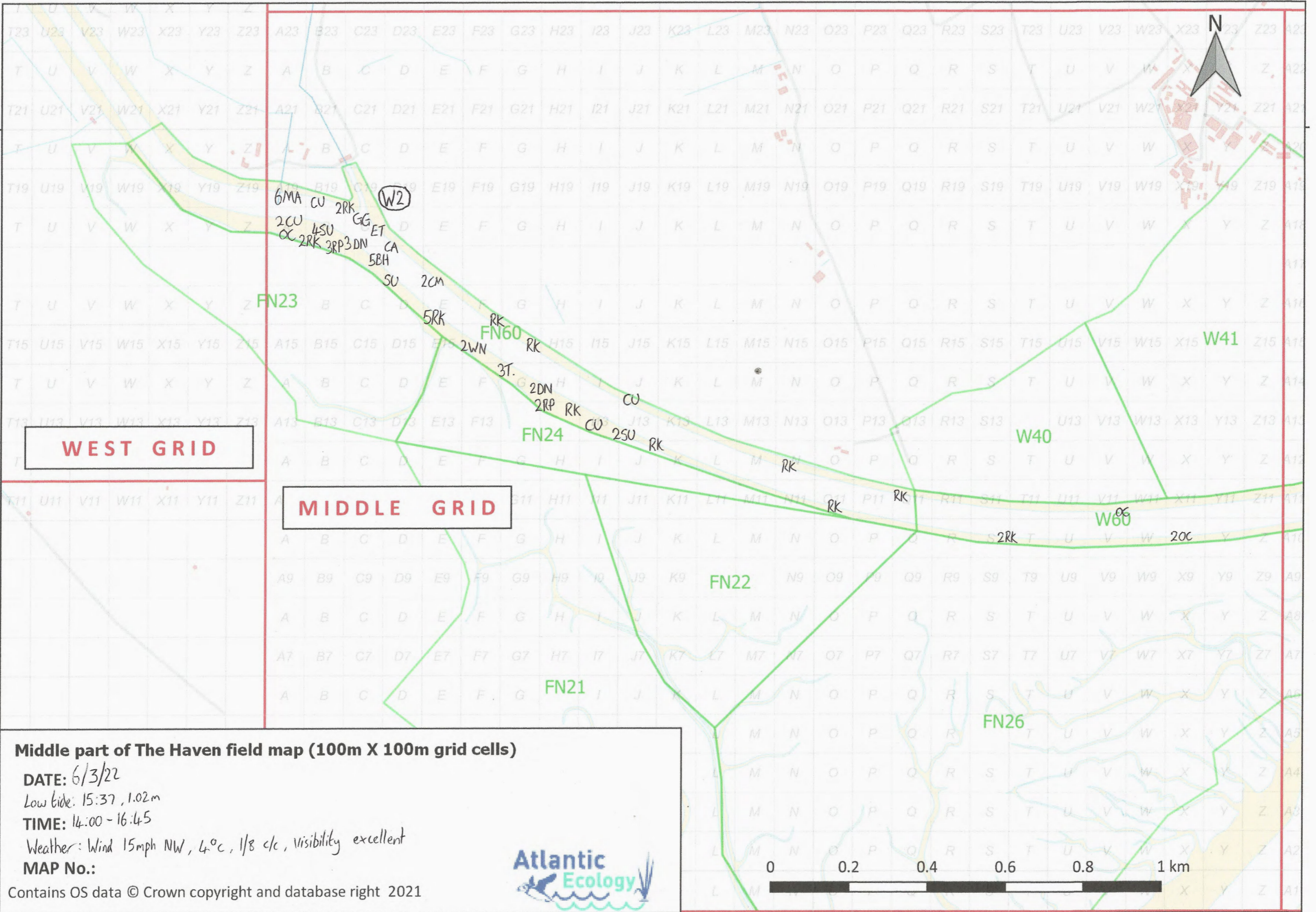
EAST GRID



Mouth of The Haven field map (100m X 100m grid cells)
DATE: 6/3/22
 Low tide: 15:37, 1.02 m
TIME: 14:00 - 16:45
 Weather: Wind 15mph NW, 4°C, 1/8 dc, visibility excellent
MAP No.:

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WEST GRID

MIDDLE GRID

Middle part of The Haven field map (100m X 100m grid cells)

DATE: 6/3/22

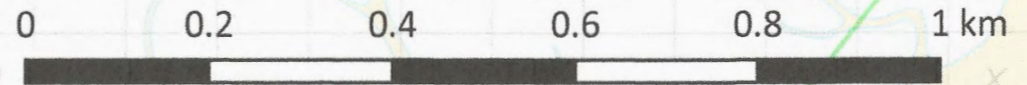
Low tide: 15:37, 1.02m

TIME: 14:00 - 16:45

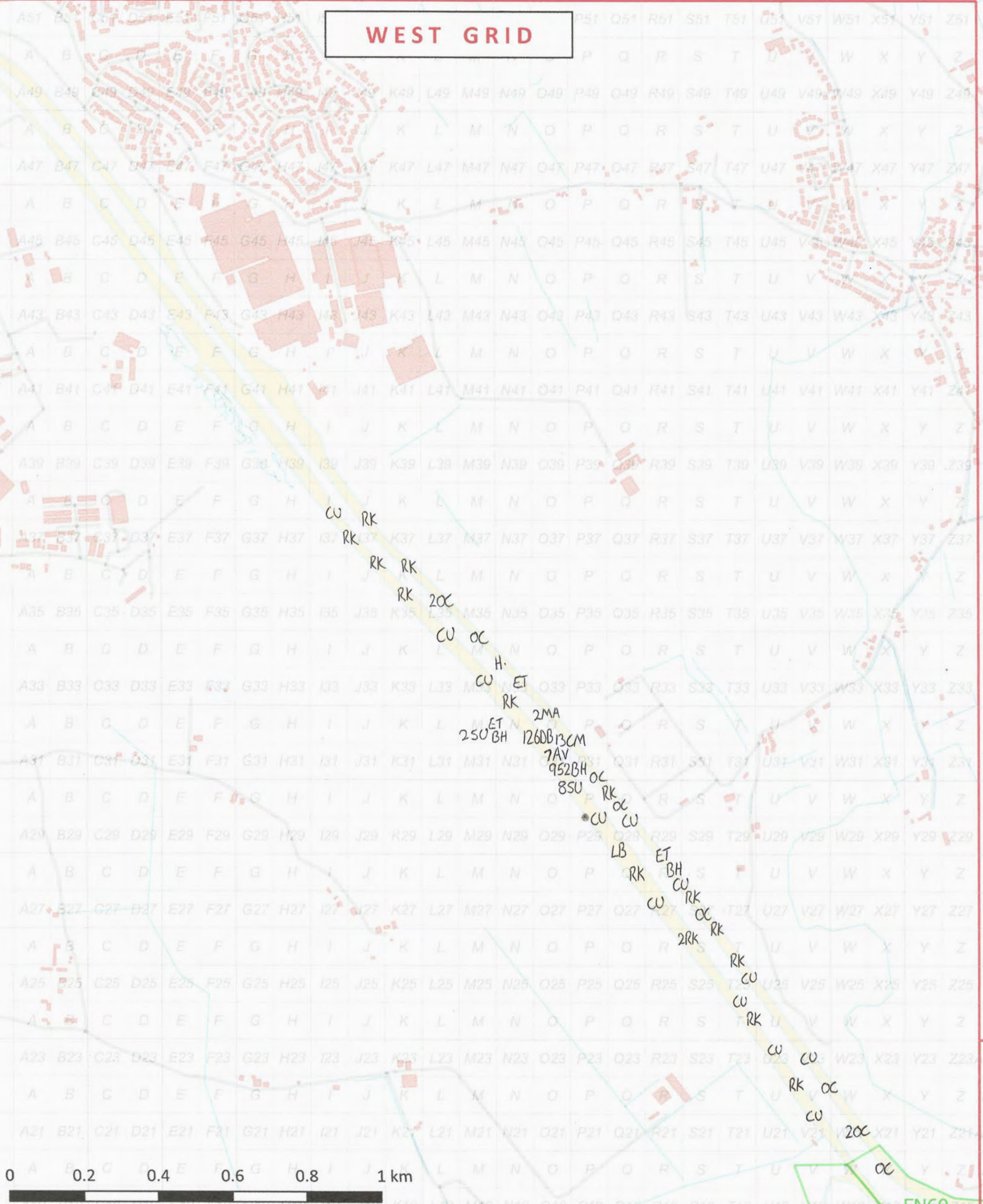
Weather: Wind 15mph NW, 4°C, 1/8 c/c, visibility excellent

MAP No.:

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WEST GRID



Noert-west end of The Haven field map (100m X 100m grid cells)

DATE: 6/3/22

Low tide: 15:37, 1.02m

TIME: 14:00-16:45

Weather: Wind 15mph. NW, 4°C, 1/8 c/c, Visibility excellent

MAP No.:

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