

RWE Renewables UK Dogger Bank South (West) Limited

RWE Renewables UK Dogger Bank South (East) Limited

Dogger Bank South Offshore Wind Farms

Environmental Statement

Volume 7

Chapter 20 – Flood Risk and Hydrology

Figure 20-1 to Figure 20-6

June 2024

Application Reference: 7.20.1

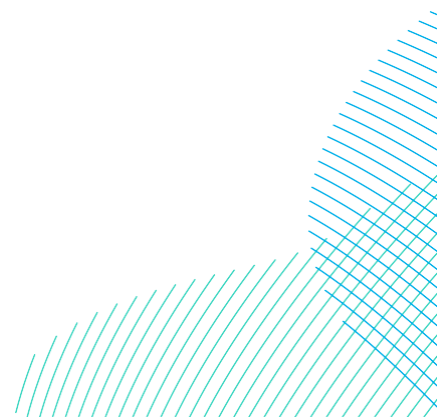
APFP Regulation: 5(2)(a)

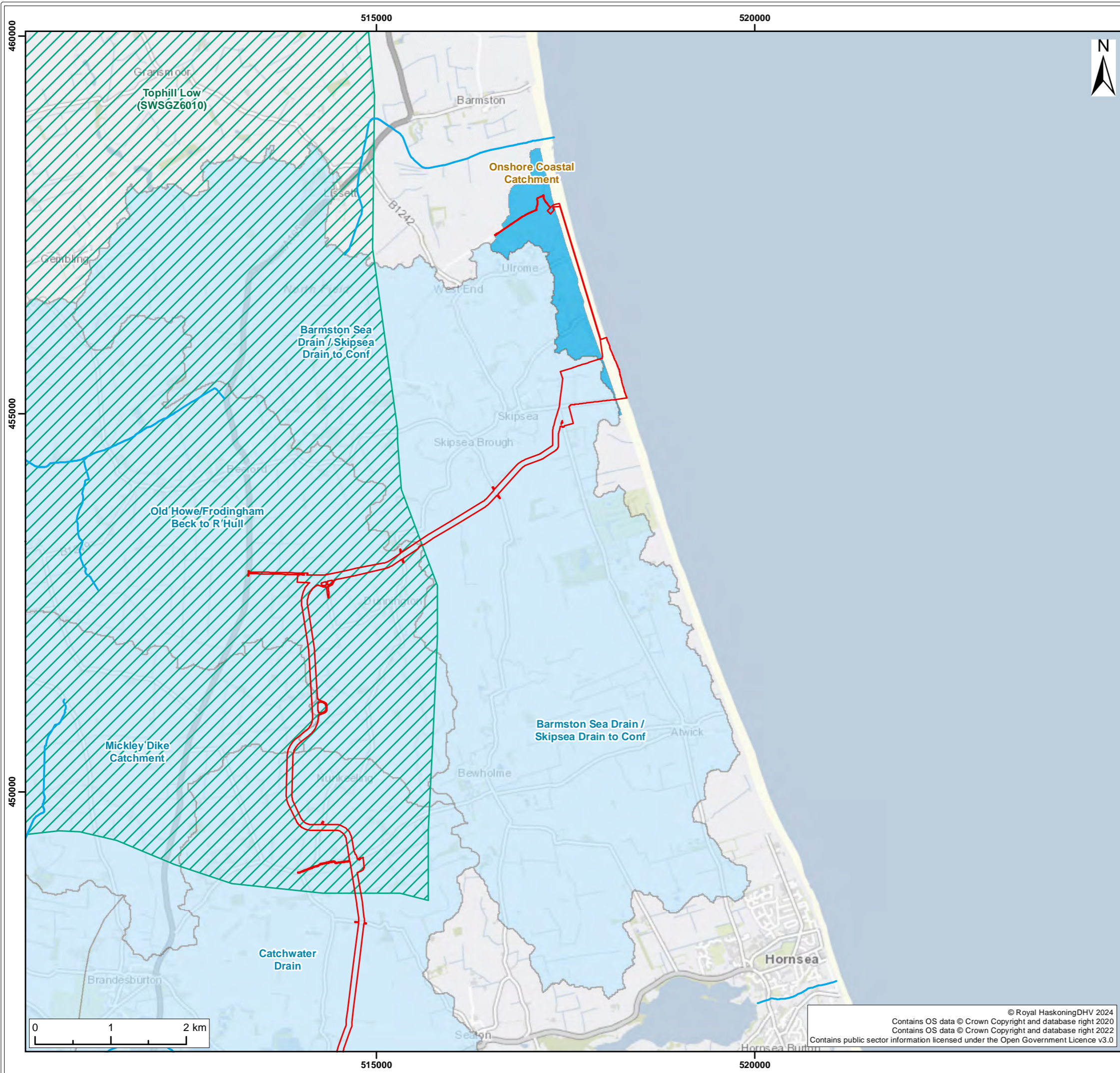
Revision: 01

Unrestricted



Company:	RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited	Asset:	Development		
Project:	Dogger Bank South Offshore Wind Farms	Sub Project/Package:	Consents		
Document Title or Description:	Environmental Statement – Chapter 20 – Figure 20-1 to Figure 20-6				
Document Number:	004300161-01	Contractor Reference Number:	PC2340-RHD-ON-ZZ-RP-Z-0103		
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Rev No.	Date	Status/Reason for Issue	Author	Checked by	Approved by
01	June 2024	Final for DCO Application	RHDHV	RWE	RWE





- Legend:
- Onshore Development Area
 - WFD River Water Body Catchment
 - Onshore Coastal Catchment
 - Drinking Water Safeguard Zone (Surface Water)
 - Statutory Main Rivers
 - Surface Water Abstraction Points

SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR
S4	P03	29/02/2024	Suitable for stage approval	SB	SF	ND
S3	P02	15/02/2024	Suitable for review & comment	SB	SF	ND
S2	P01	06/12/2023	Suitable for Information	SB	SF	ND

Title:
Surface Water Features

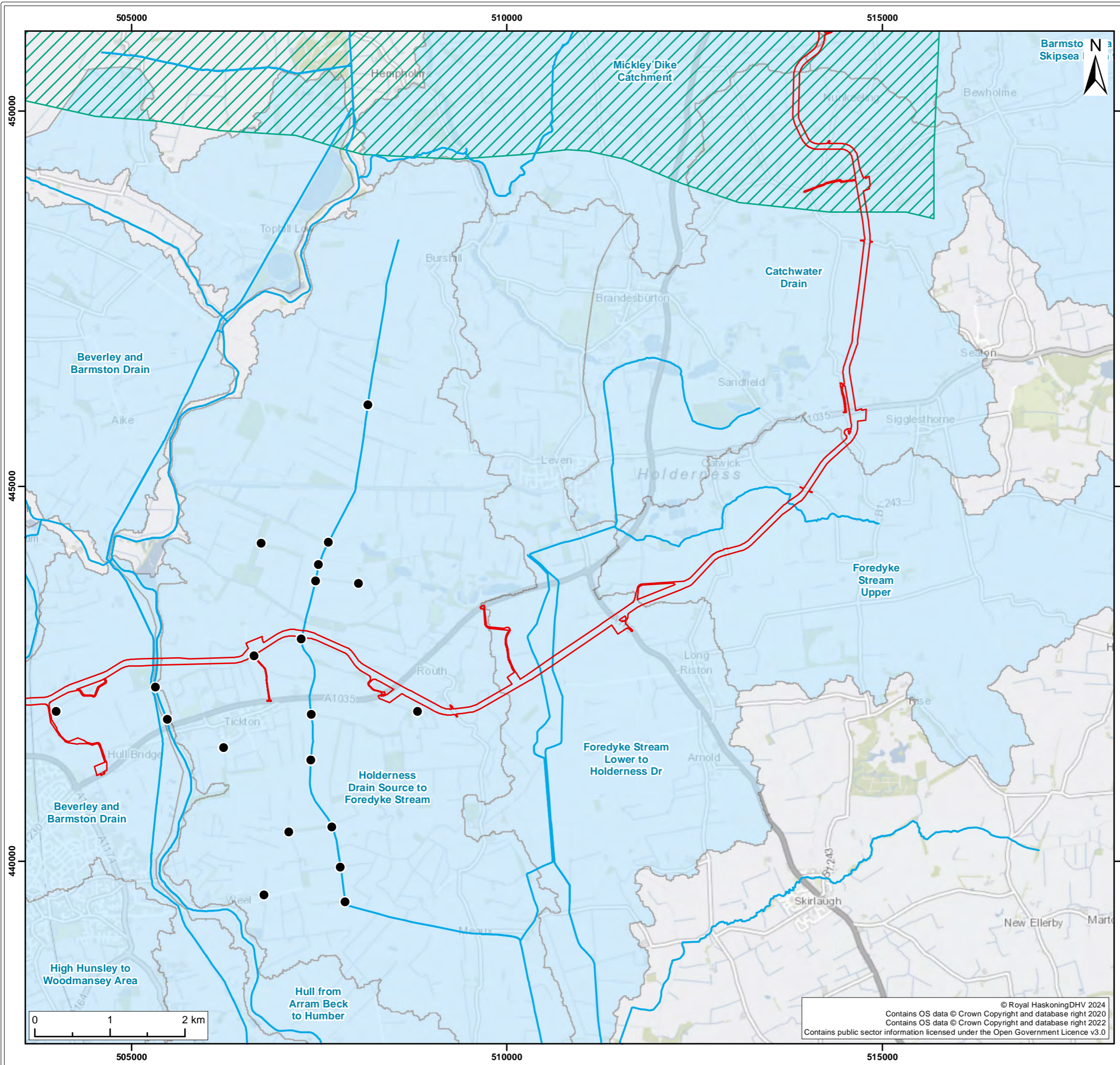
Figure: 20-1a Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0674

Co-ordinate system: British National Grid Page Size: A3 Scale: 1:50,000

Project: Dogger Bank South Offshore Wind Farms Report: Environmental Statement



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- Legend:
- Onshore Development Area
 - WFD River Water Body Catchment
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 - Surface Water Abstraction Points

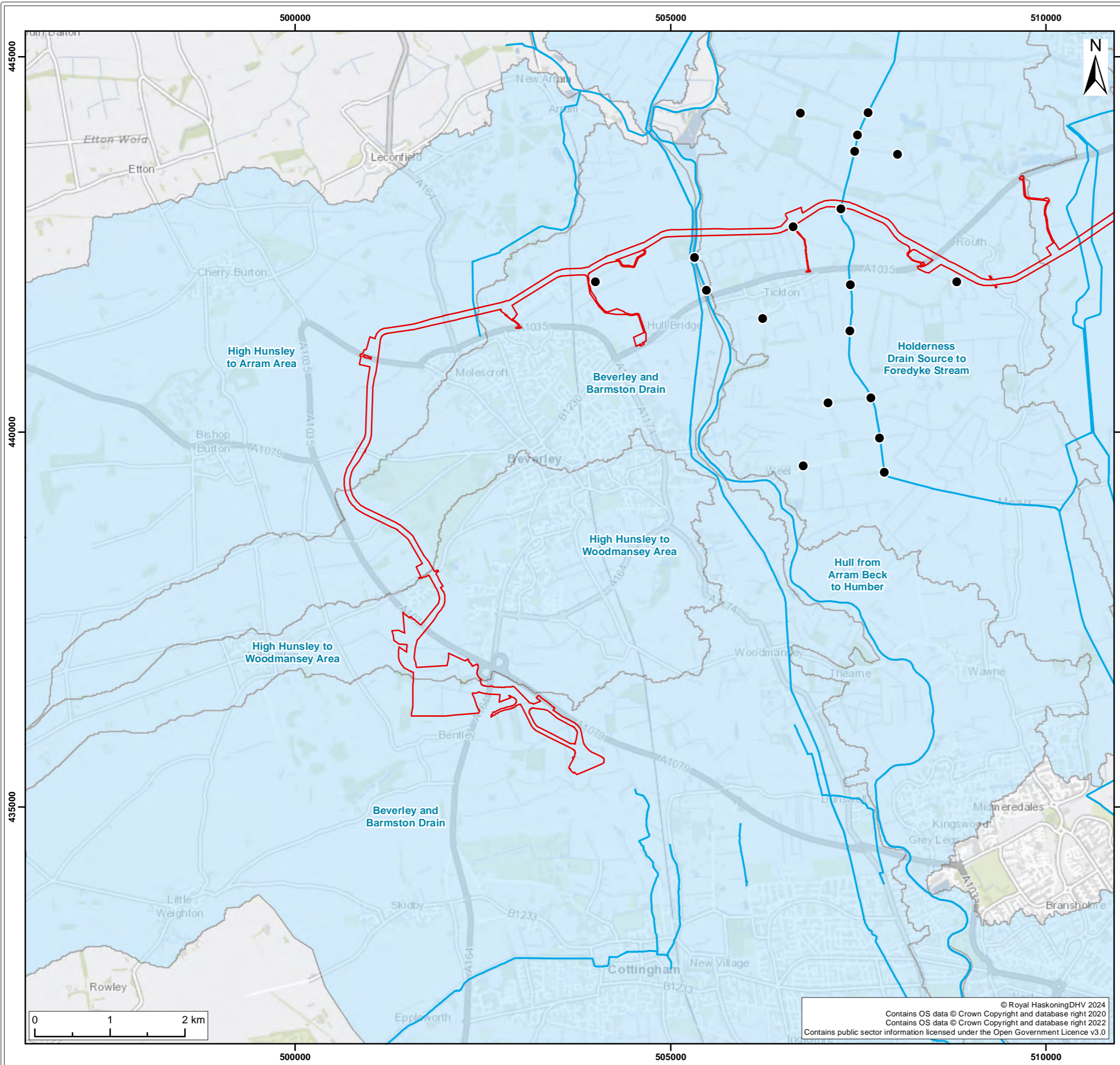
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S2	P01	06/12/2023	Suitable for Information	SB	SF	ND

Title:
Surface Water Features

Figure: 20-1b	Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0674	
Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:50,000
Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement	

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- Legend:
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 - WFD River Water Body Catchment
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S2	P01	06/12/2023	Suitable for Information	SB	SF	ND

Title:
Surface Water Features

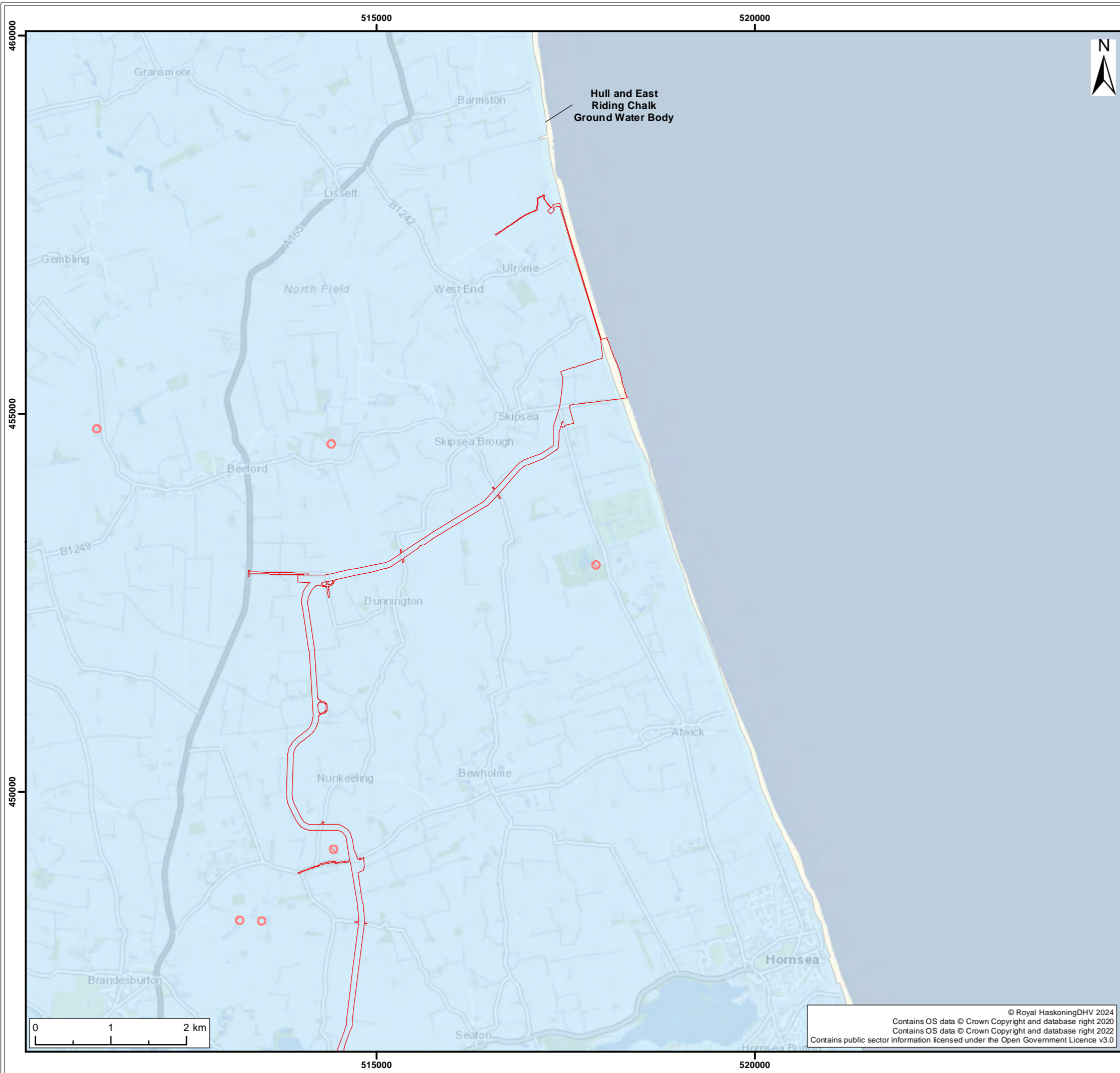
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Legend:

- Onshore Development Area
- Drinking water Safeguard Zone (Groundwater)
- ▲ Groundwater Abstractions
- WFD Ground Water Body

Source Protection Zone

- SPZ1
- SPZ2
- SPZ3

Note : The isolated red circles are individual SPZ1 boreholes

S4	P04	04/04/2024	Suitable for stage approval	SB	SF	ND
S4	P03	29/02/2024	Suitable for stage approval	SB	SF	ND
S3	P02	15/02/2024	Suitable for review & comment	SB	SF	ND
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SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Ground Water Features

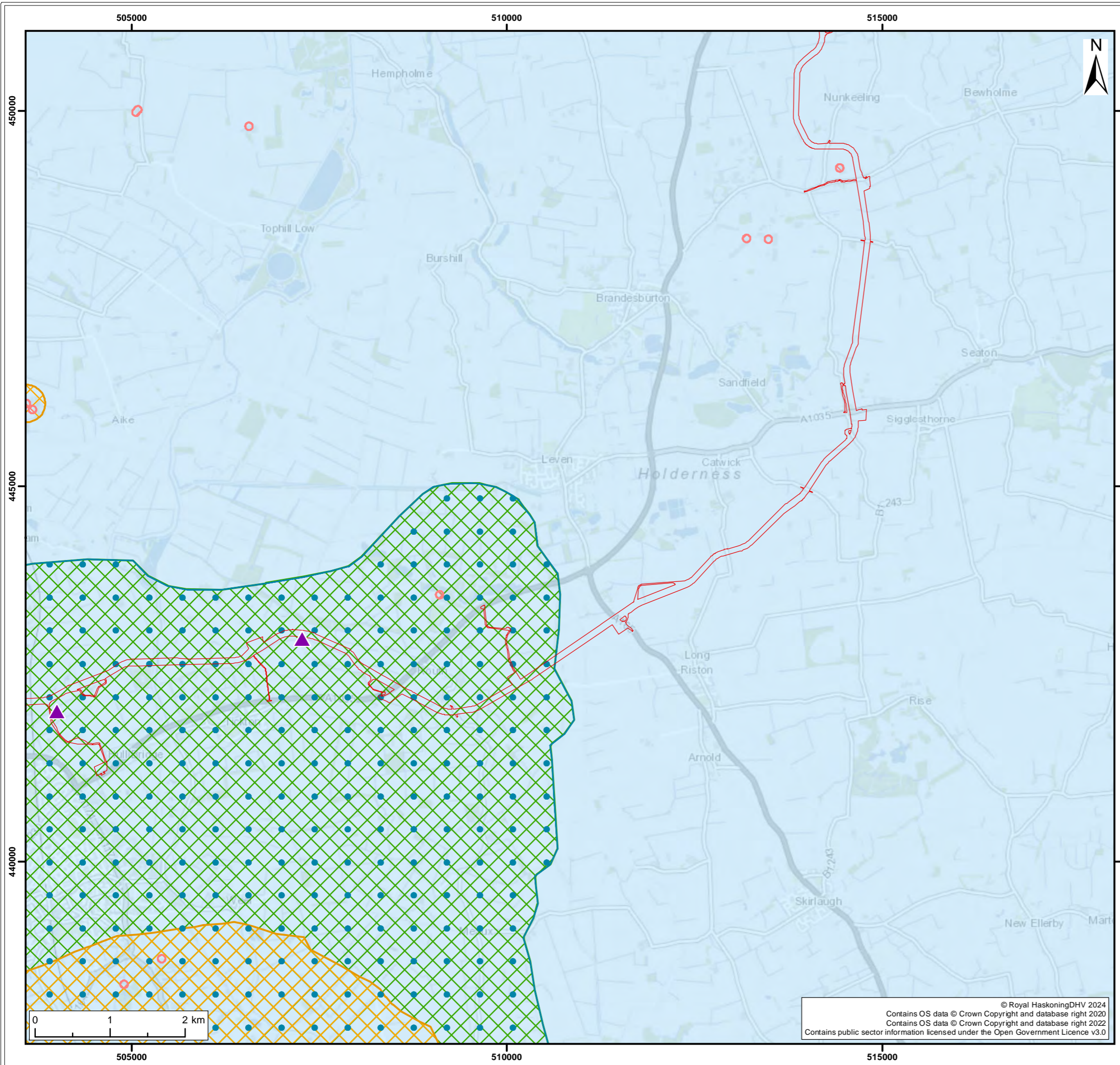
Figure: 20-2a Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0675

Co-ordinate system: British National Grid Page Size: A3 Scale: 1:50,000

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- Legend:**
- Onshore Development Area
 - Drinking water Safeguard Zone (Groundwater)
 - ▲ Groundwater Abstractions
 - WFD Ground Water Body
- Source Protection Zone**
- SPZ1
 - SPZ2
 - SPZ3

Note : The isolated red circles are individual SPZ1 boreholes

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S2	P01	06/12/2023	Suitable for Information	SB	SF	ND

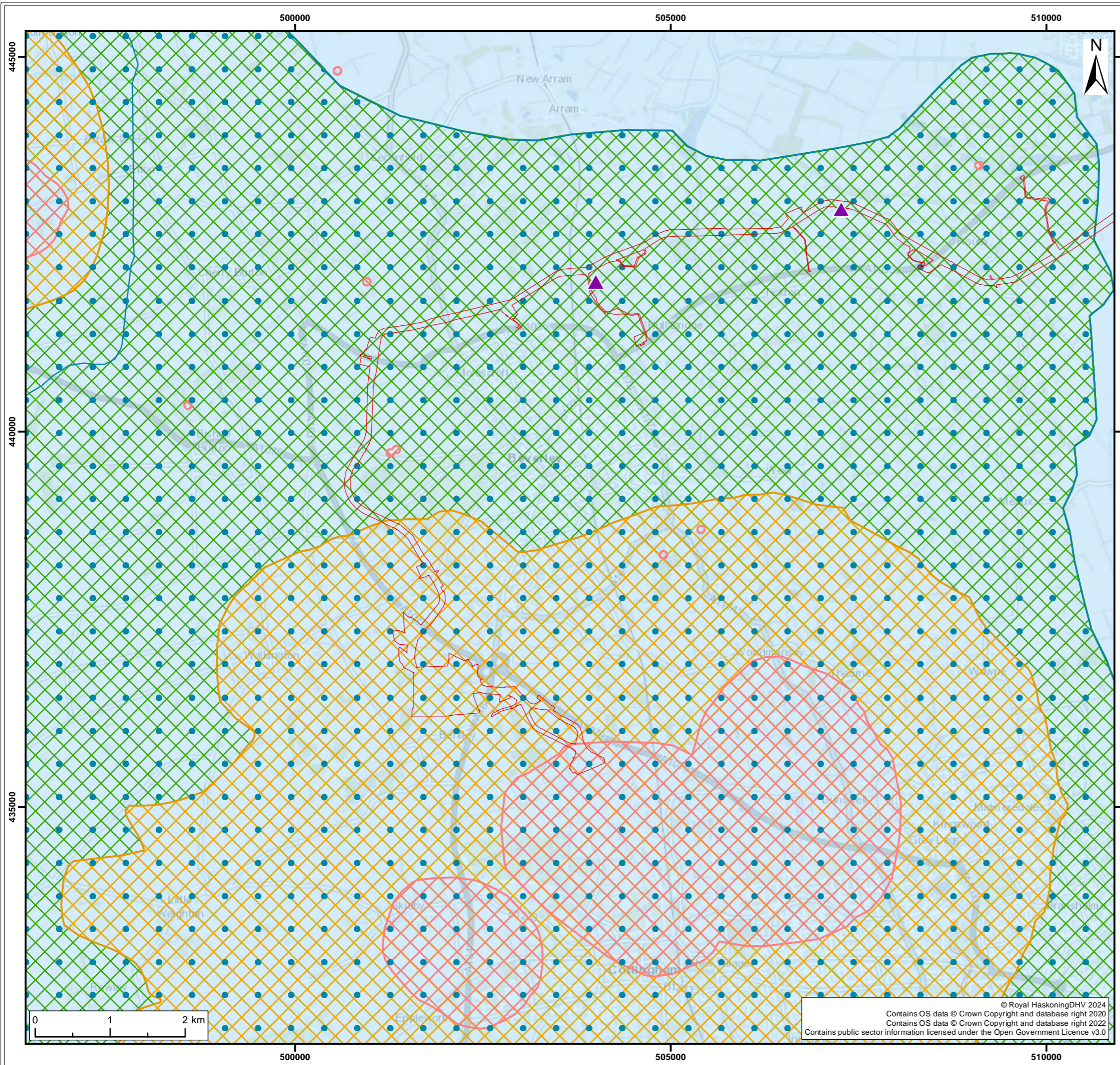
Title:
Ground Water Features

Figure: 20-2b Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0675

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:50,000
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Legend:

- Onshore Development Area
- Drinking water Safeguard Zone (Groundwater)
- ▲ Groundwater Abstractions
- WFD Ground Water Body

Source Protection Zone

- SPZ1
- SPZ2
- SPZ3

Note : The isolated red circles are individual SPZ1 boreholes

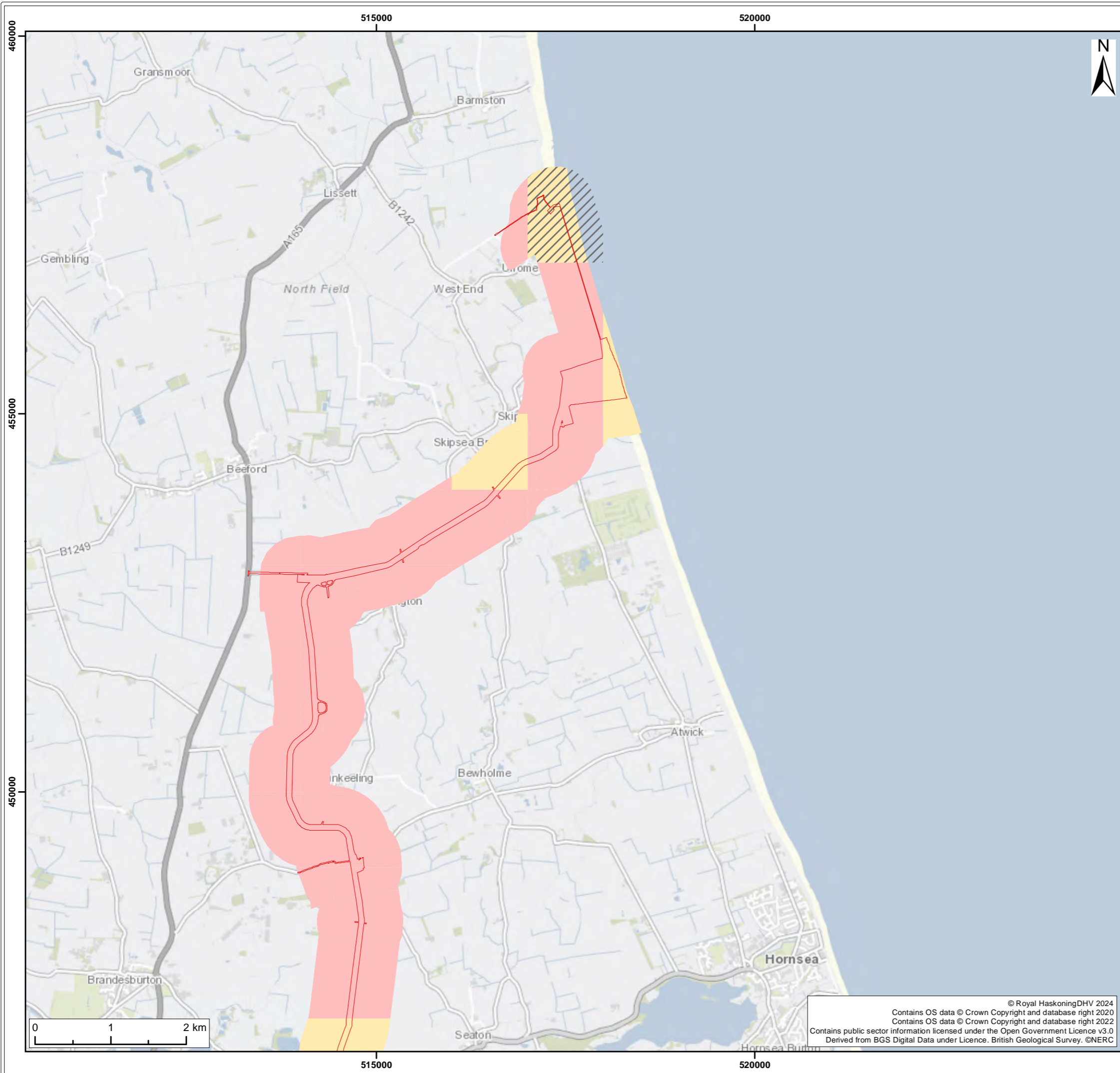
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S2	P01	06/12/2023	Suitable for Information	SB	SF	ND
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Ground Water Features

Figure: 20-2c Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0675

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- Legend:
- Onshore Development Area
 - Soluble Rock Risk
 - Groundwater Vulnerability**
 - Secondary superficial aquifer - High Vulnerability
 - Secondary superficial aquifer - Medium Vulnerability

S3	P02	15/02/2024	Suitable for Information	SB	SF	ND
S2	P01	06/12/2023	Suitable for Information	SB	SF	ND
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Groundwater Vulnerability

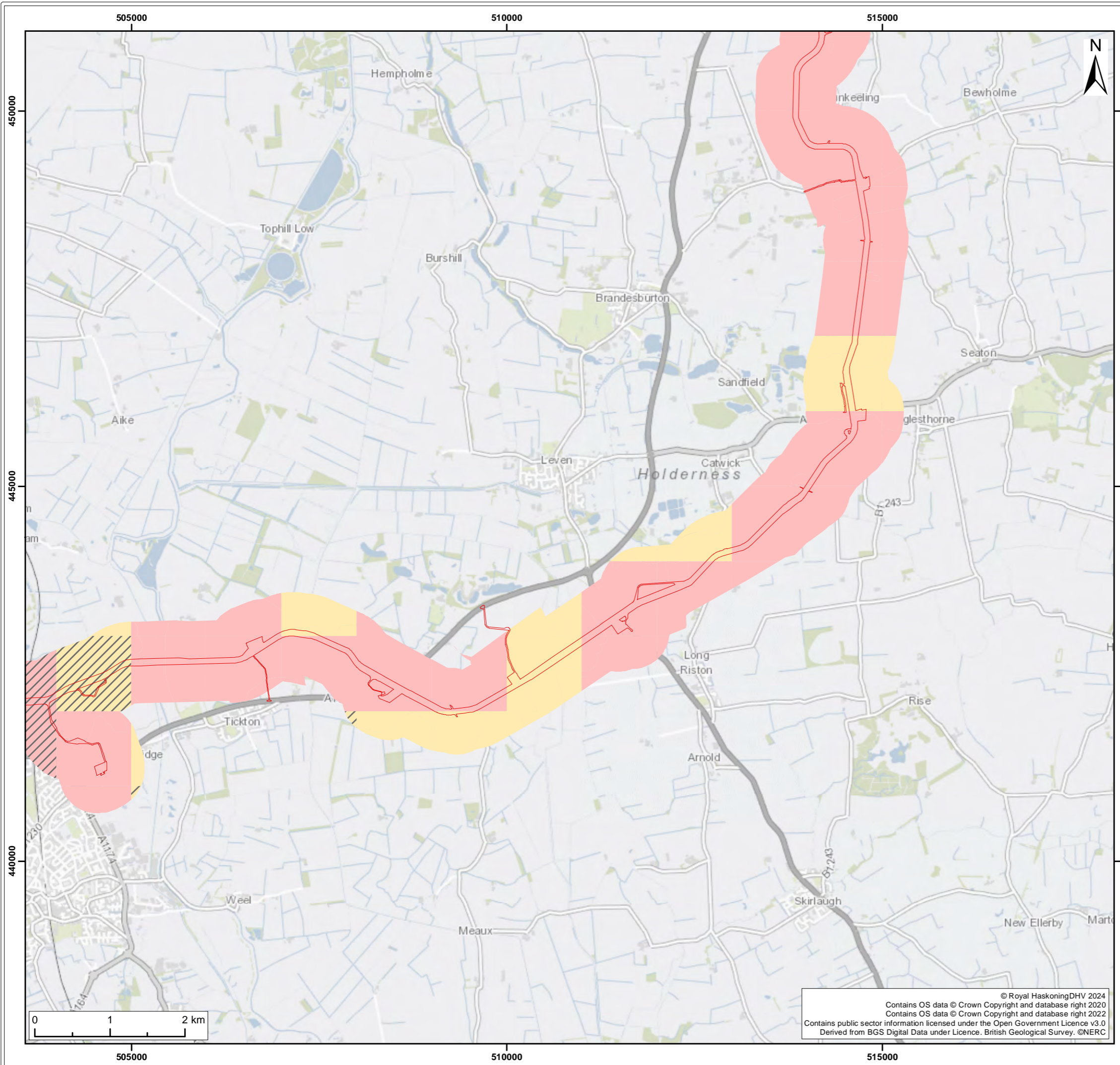
Figure: 20-3a Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0676

Co-ordinate system: British National Grid Page Size: A3 Scale: 1:50,000

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- Legend:
- Onshore Development Area
 - Soluble Rock Risk
 - Groundwater Vulnerability**
 - Secondary superficial aquifer - High Vulnerability
 - Secondary superficial aquifer - Medium Vulnerability

S3	P02	15/02/2024	Suitable for Information	SB	SF	ND
S2	P01	06/12/2023	Suitable for Information	SB	SF	ND
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Groundwater Vulnerability

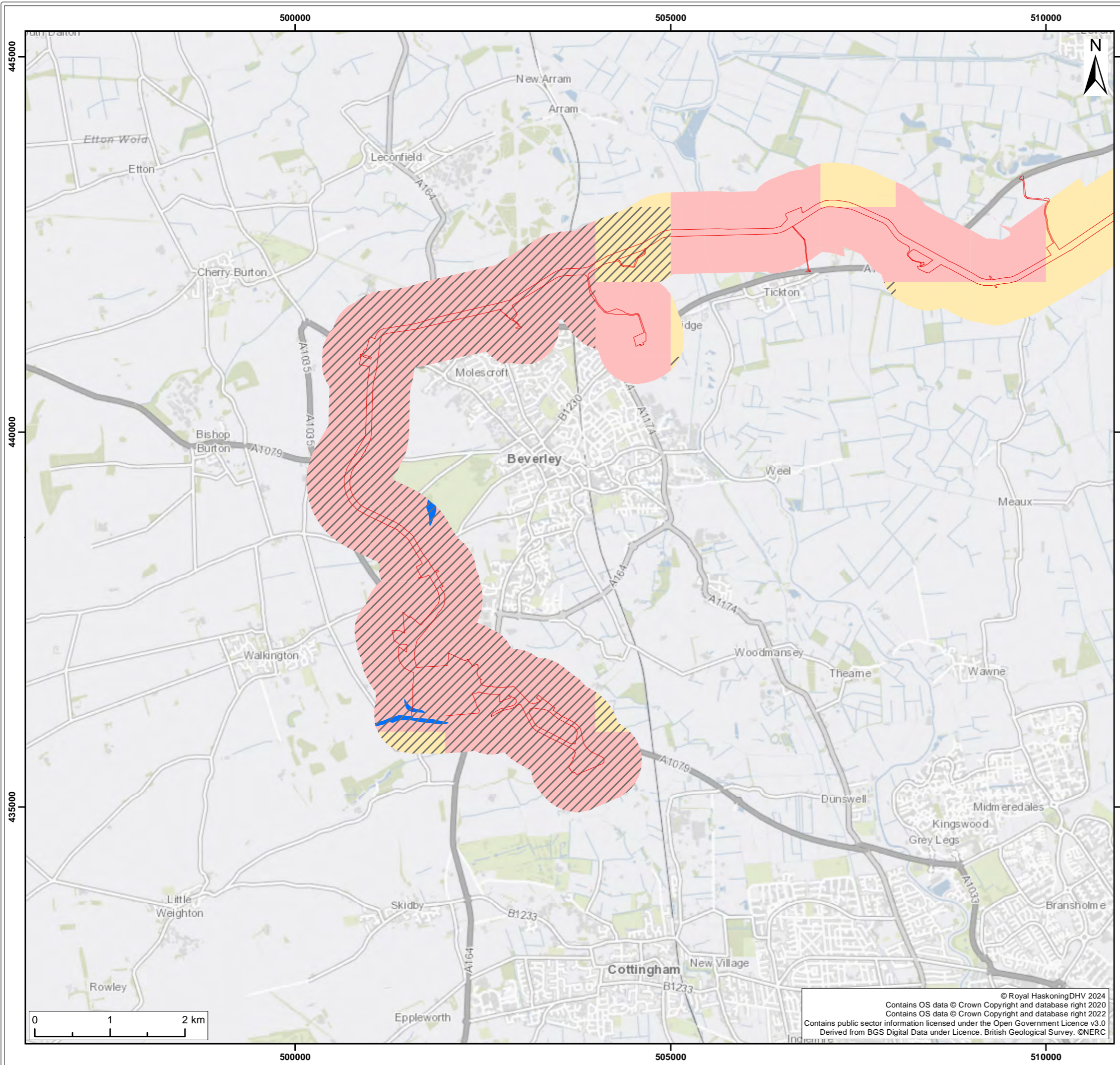
Figure: 20-3b Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0676

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:50,000
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Legend:

- Onshore Development Area
- Soluble Rock Risk

Groundwater Vulnerability

- Secondary superficial aquifer - High Vulnerability
- Secondary superficial aquifer - Medium Vulnerability
- Principal bedrock aquifer - Low Vulnerability

SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR
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S2	P01	06/12/2023	Suitable for Information	SB	SF	ND

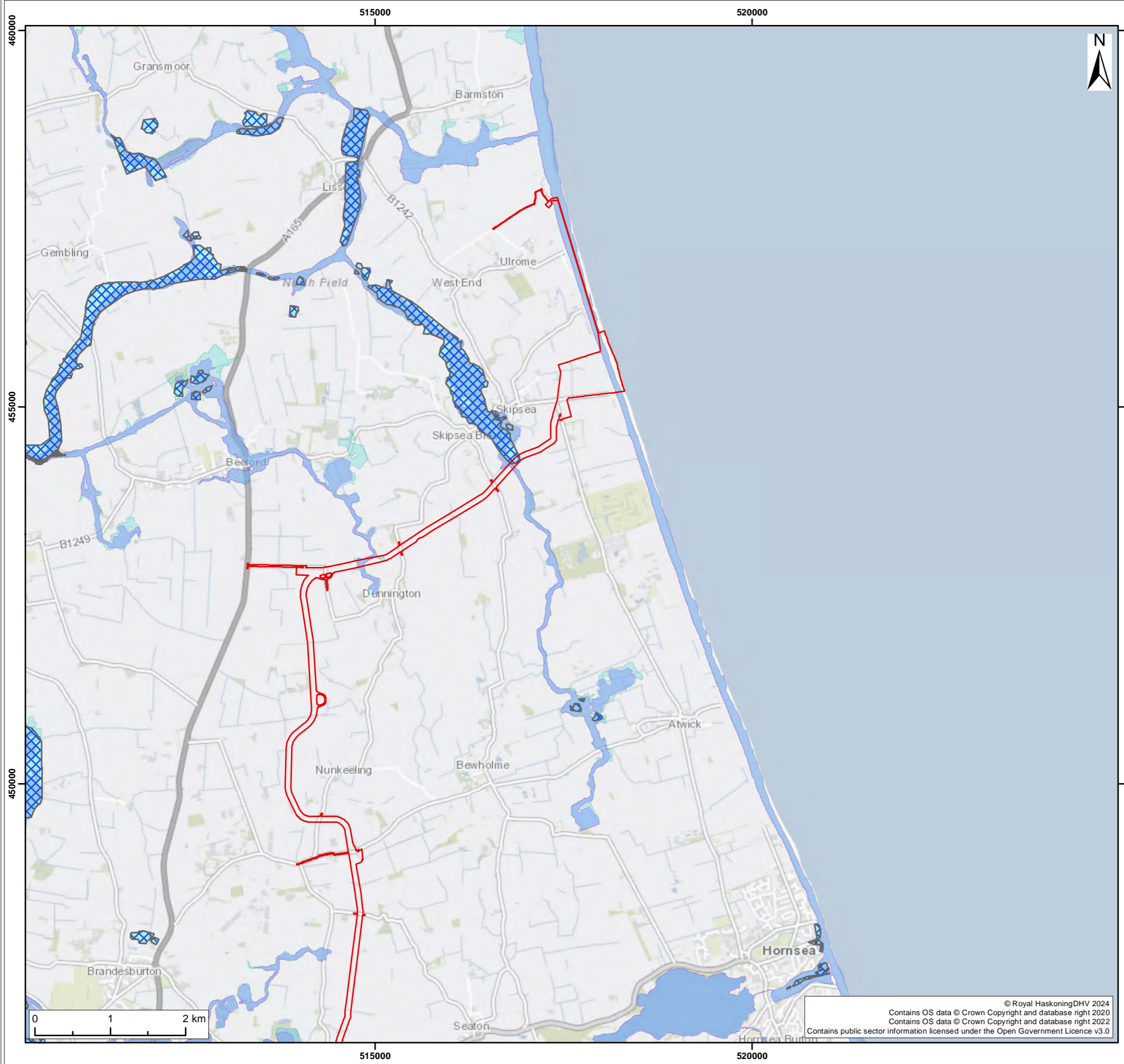
Title:
Groundwater Vulnerability

Figure: 20-3c Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0676

Co-ordinate system: British National Grid Page Size: A3 Scale: 1:50,000

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- Legend:
- Onshore Development Area
 - Flood Zone 2
 - Flood Zone 3
 - Historic Flood Extent

Note:
 All areas not shown as being located in either flood zone 2 or 3 are classed as flood zone 1 (when considering fluvial and tidal flood risk)

SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR
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S2	P01	06/12/2023	Suitable for Information	SB	SF	ND

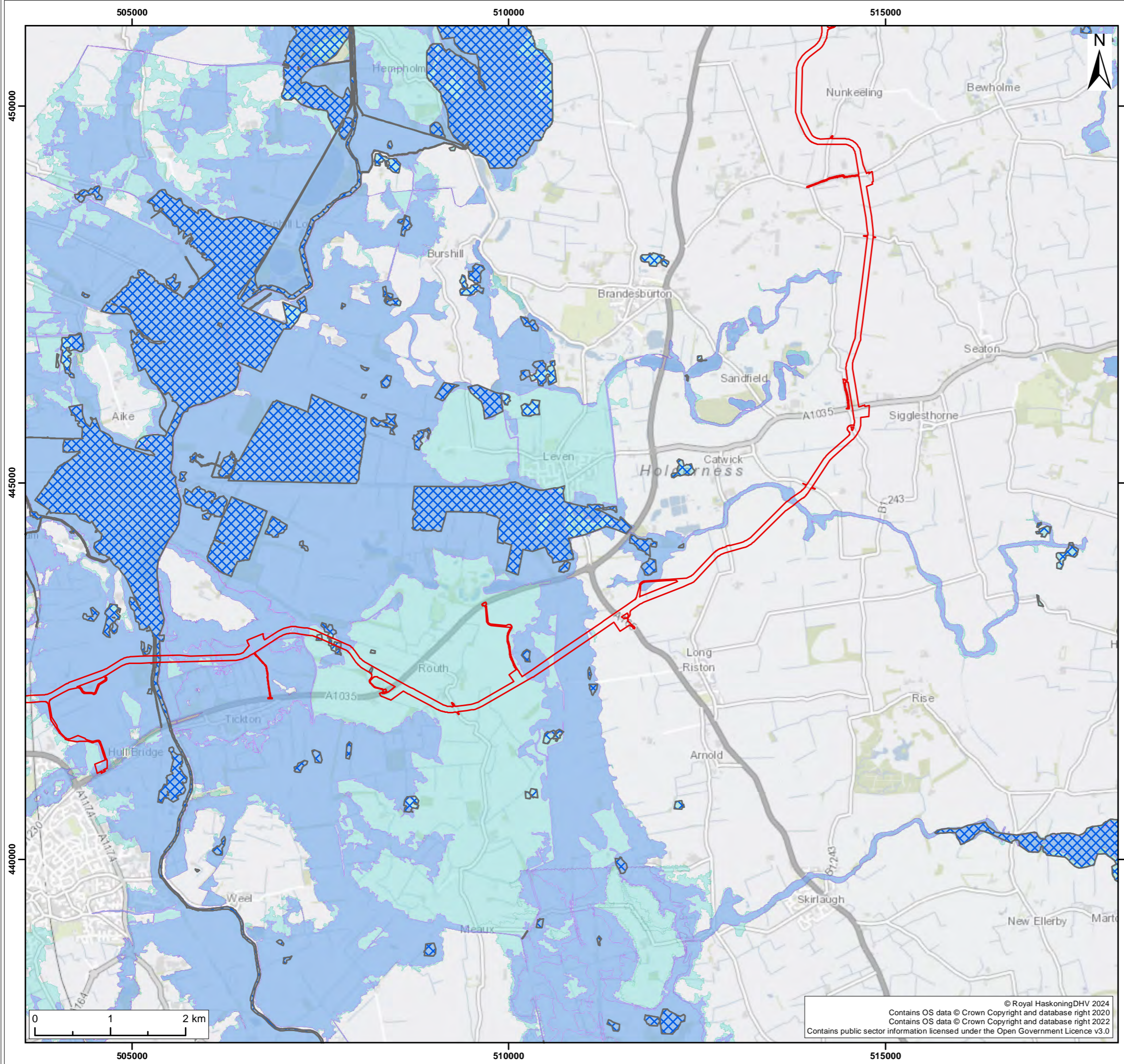
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Figure: 20-4a Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0677

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- Legend:
- Onshore Development Area
 - Flood Zone 2
 - Flood Zone 3
 - Historic Flood Extent

Note:
 All areas not shown as being located in either flood zone 2 or 3 are classed as flood zone 1 (when considering fluvial and tidal flood risk)

SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR
S3	P02	16/02/2024	Suitable for Information	SB	SF	ND
S2	P01	06/12/2023	Suitable for Information	SB	SF	ND

Title:
 Environment Agency Flood Zones and Historic Flood Extent

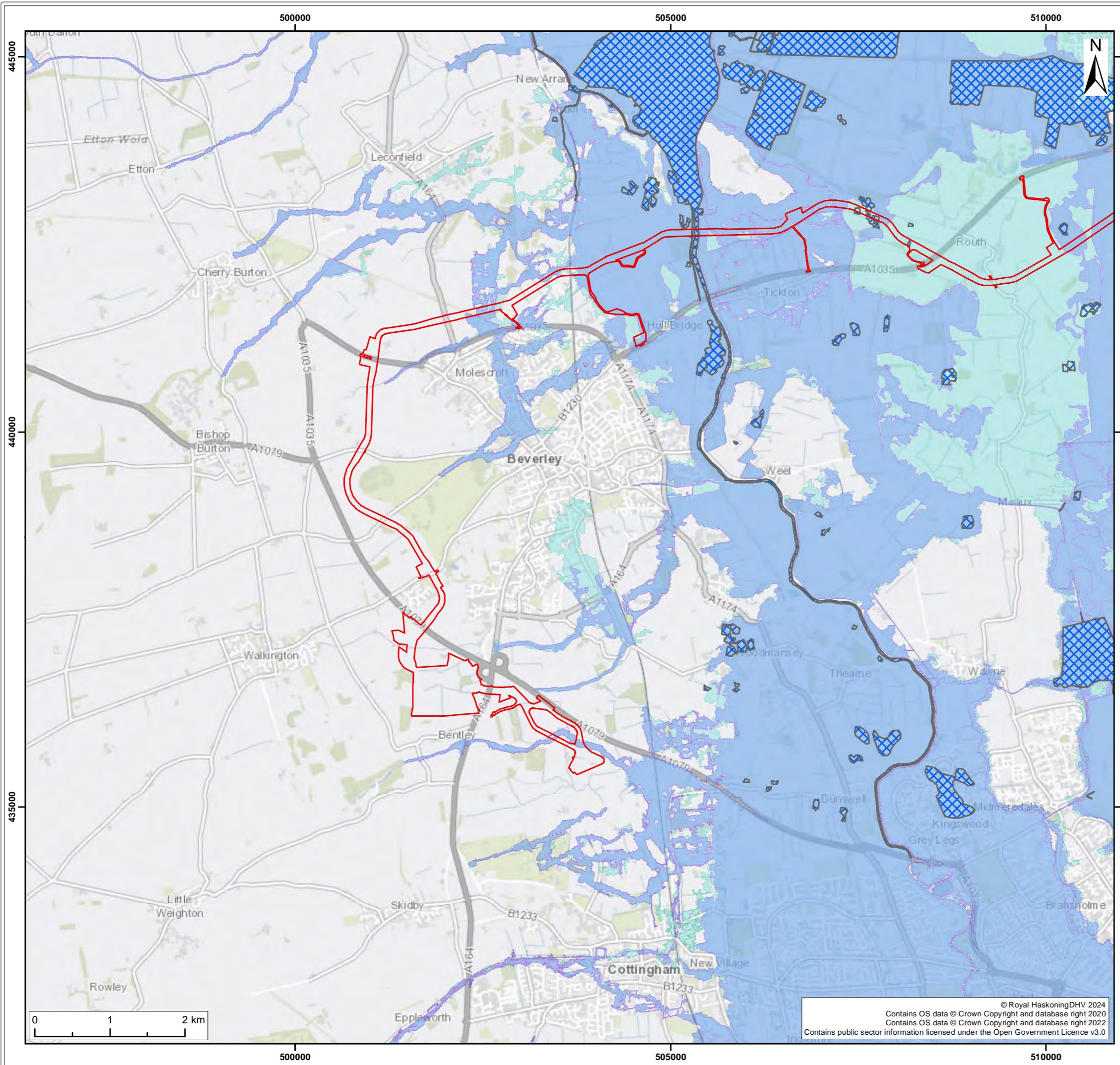
Figure: 20-4b Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0677

Co-ordinate system: British National Grid Page Size: A3 Scale: 1:50,000

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- Legend:
- Onshore Development Area
 - Flood Zone 2
 - Flood Zone 3
 - Historic Flood Extent

Note:
 All areas not shown as being located in either flood zone 2 or 3 are classed as flood zone 1 (when considering fluvial and tidal flood risk)

SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR
S3	P02	16/02/2024	Suitable for Information	SB	SF	ND
S2	P01	06/12/2023	Suitable for Information	SB	SF	ND

Title:
 Environment Agency Flood Zones and Historic Flood Extent

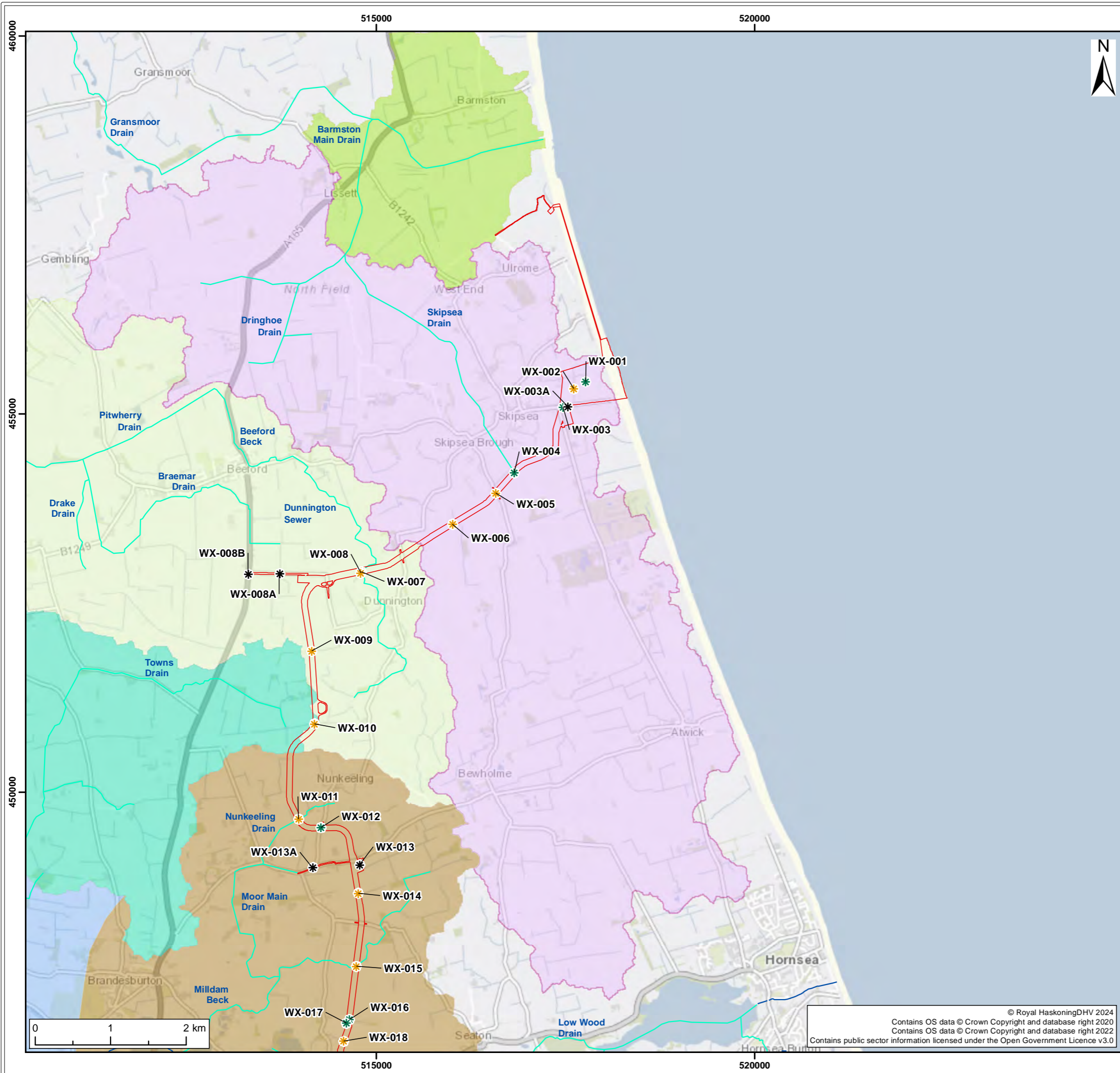
Figure: 20-4c Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0677

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- Onshore Development Area
 - Environment Agency Main River
 - Ordinary Watercourse
- Watercourse Crossing Methodology**
- * Trenchless * Open Cut Trenching * Infilled * Culvert Crossing
- Water Body Catchments**
- Barmston Sea Drain / Skipsea Drain to Conf
 - Beverley and Barmston Drain
 - Catchwater Drain
 - Foredyke Stream Lower to Holderness Dr
 - Foredyke Stream Upper
 - High Hunsley to Arram Area
 - High Hunsley to Woodmansey Area
 - Holderness Drain Source to Foredyke Stream
 - Hull from Arram Beck to Humber
 - Mickley Dike Catchment
 - Old Howe/Frodingham Beck to R Hull

S4	P04	30/04/2024	Suitable for stage approval	JH	SB	SF
S4	P03	03/04/2024	Suitable for stage approval	JH	SB	SF
S3	P02	29/02/2024	Suitable for review & comment	JH	SB	SI
S2	P01	15/02/2024	Suitable for Information	JH	SB	SI
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Watercourse Crossings (Main Rivers and ordinary watercourses)

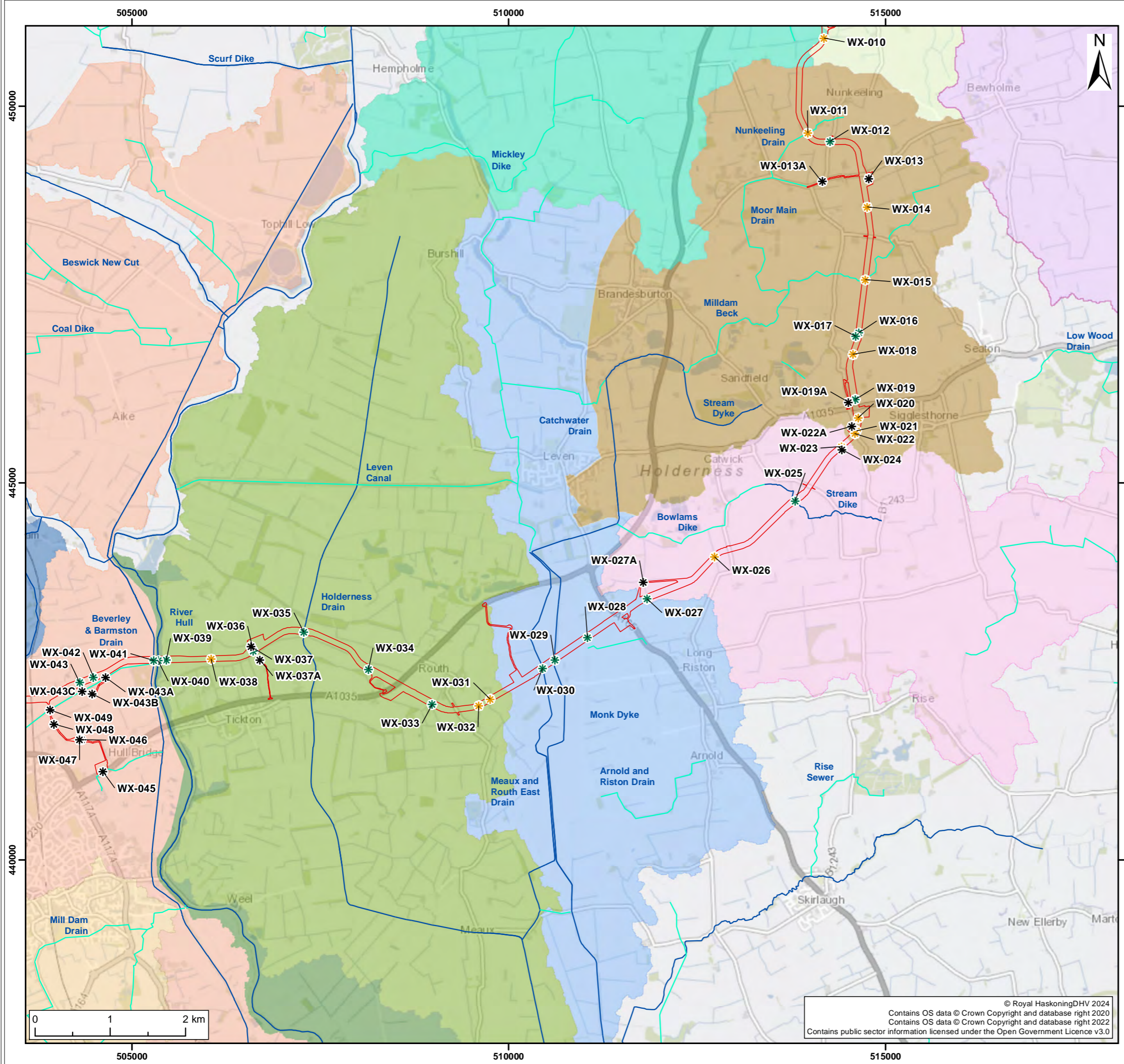
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- Onshore Development Area
 - Environment Agency Main River
 - Ordinary Watercourse
- Watercourse Crossing Methodology**
- * Trenchless
 - * Open Cut Trenching
 - * Infilled
 - * Culvert Crossing
- Water Body Catchments**
- Barmston Sea Drain / Skipsea Drain to Conf
 - Beverley and Barmston Drain
 - Catchwater Drain
 - Foredyke Stream Lower to Holderness Dr
 - Foredyke Stream Upper
 - High Hunsley to Arram Area
 - High Hunsley to Woodmansey Area
 - Holderness Drain Source to Foredyke Stream
 - Hull from Arram Beck to Humber
 - Mickley Dike Catchment
 - Old Howe/Frodingham Beck to R Hull

S4	P04	30/04/2024	Suitable for stage approval	JH	SB	SF
S4	P03	03/04/2024	Suitable for stage approval	JH	SB	SF
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S2	P01	15/02/2024	Suitable for Information	JH	SB	SI
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Watercourse Crossings (Main Rivers and ordinary watercourses)

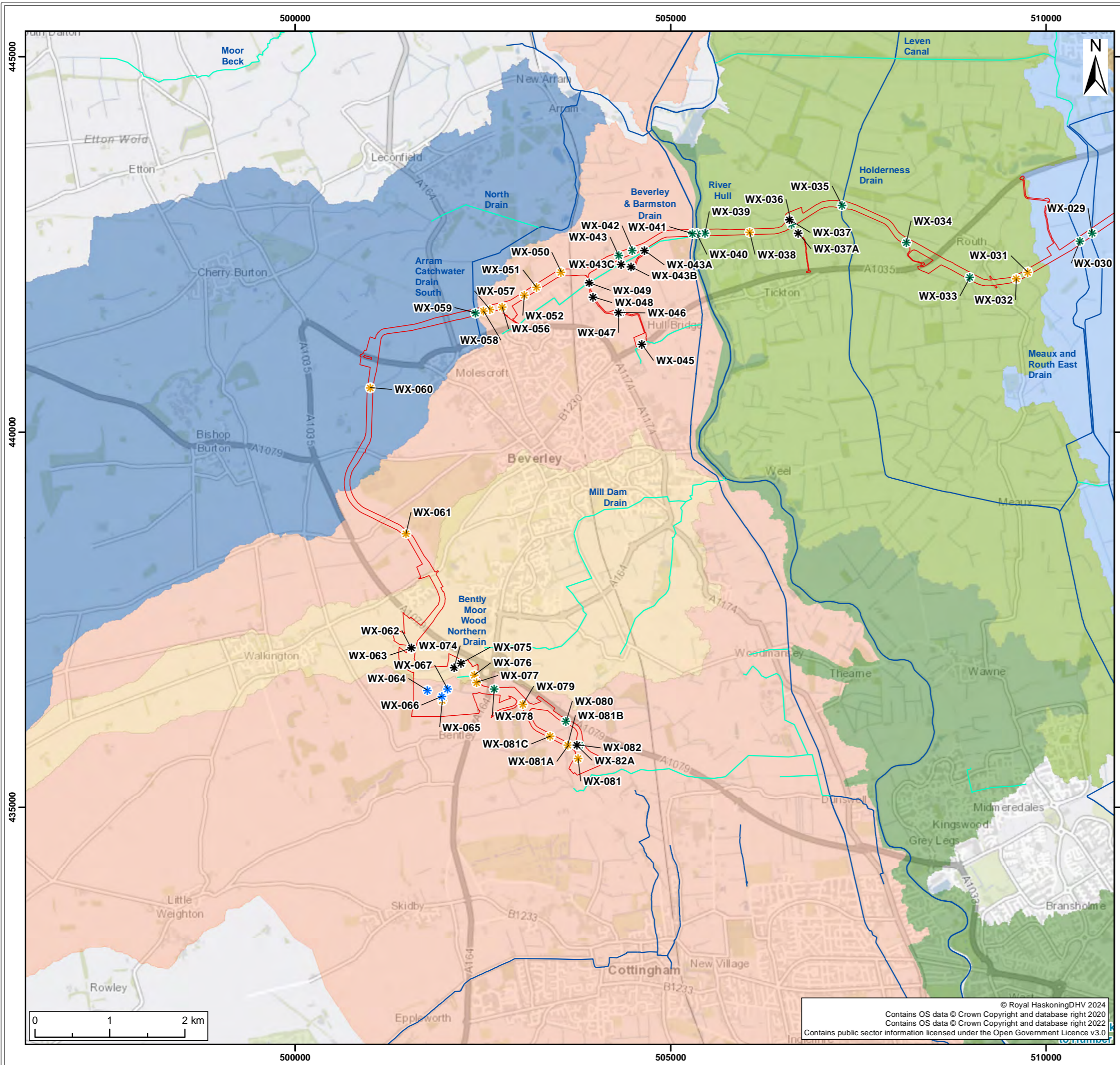
Figure: 20-5b Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0715

Co-ordinate system: British National Grid Page Size: A3 Scale: 1:50,000

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- Watercourse Crossing Methodology**
- * Trenchless
 - * Open Cut Trenching
 - * Infilled
 - * Culvert Crossing
- Water Body Catchments**
- Barmston Sea Drain / Skipsea Drain to Conf
 - Beverley and Barmston Drain
 - Catchwater Drain
 - Foredyke Stream Lower to Holderness Dr
 - Foredyke Stream Upper
 - High Hunsley to Arram Area
 - High Hunsley to Woodmansey Area
 - Holderness Drain Source to Foredyke Stream
 - Hull from Arram Beck to Humber
 - Mickley Dike Catchment
 - Old Howe/Frodingham Beck to R Hull

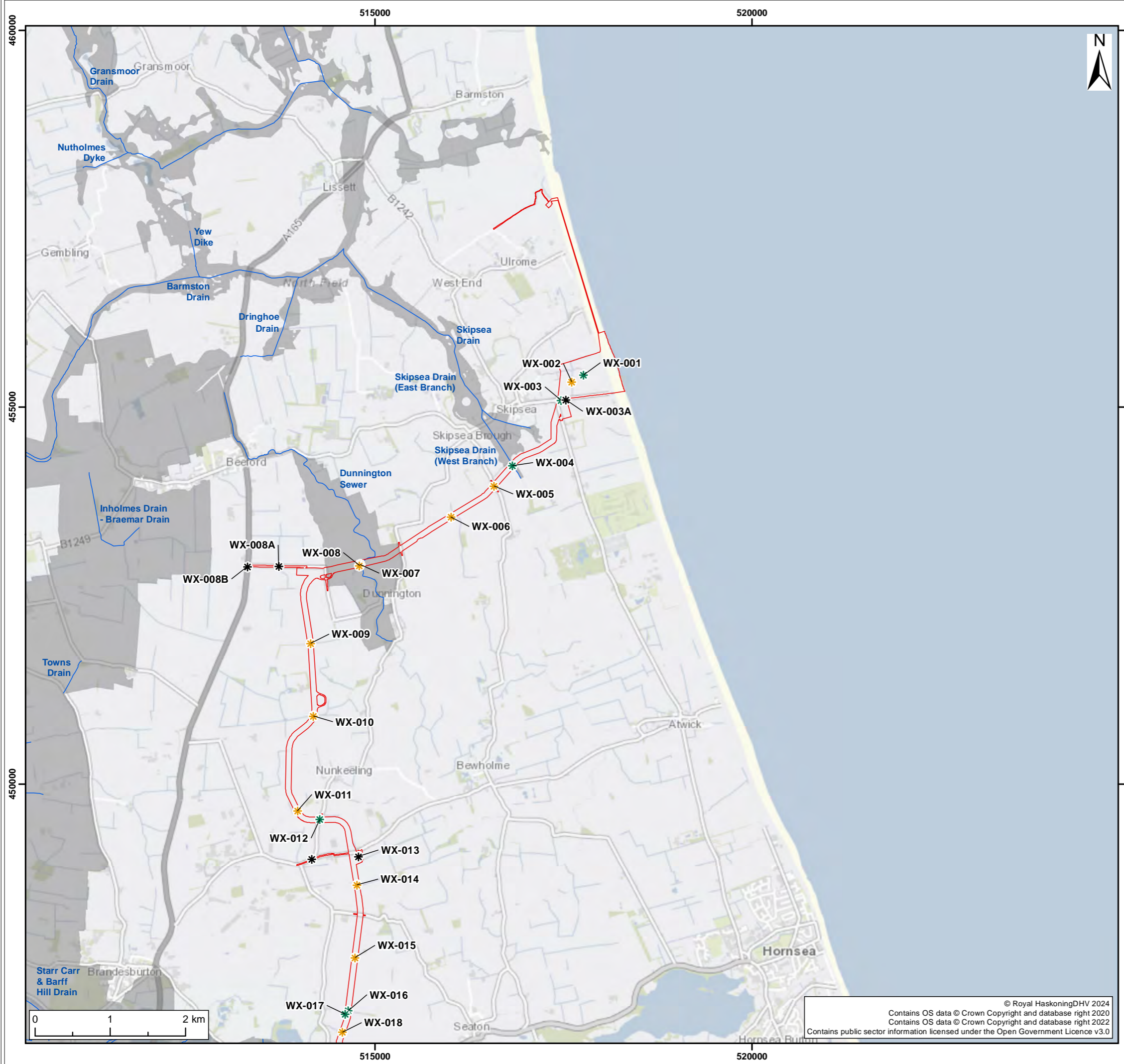
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S2	P01	15/02/2024	Suitable for Information	JH	SB	SI
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Watercourse Crossings (Main Rivers and ordinary watercourses)

Figure: 20-5c	Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0715	
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- Legend:**
- Onshore Development Area
 - Beverley and North Holderness Internal Drainage Board Catchment Area
 - Beverley and North Holderness Internal Drainage Board Maintained Drains

- Watercourse Crossing Methodology**
- * Trenchless
 - * Infilled
 - * Open Cut Trenching
 - * Culvert Crossing

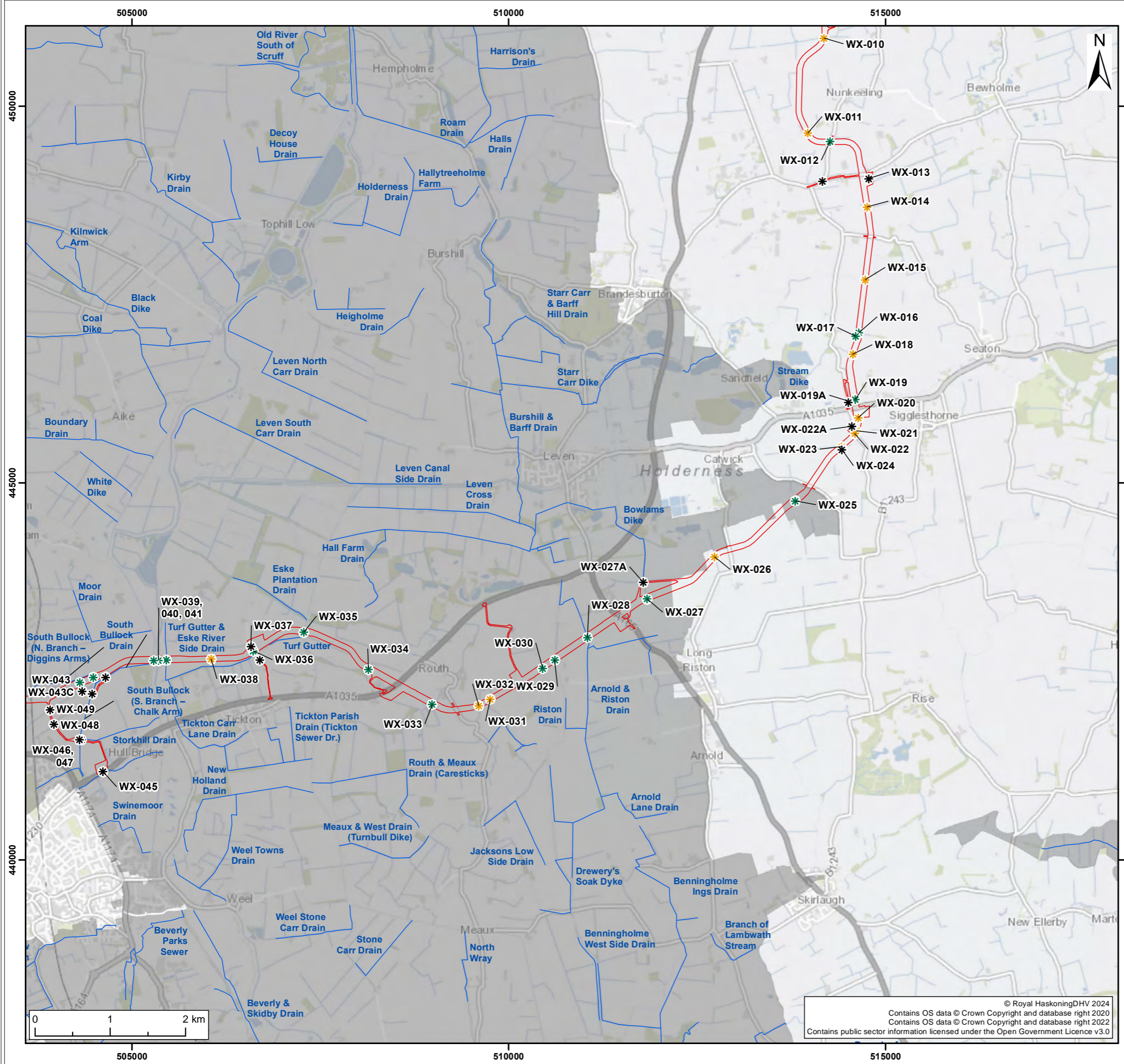
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S2	P01	15/02/2024	Suitable for Information	JH	SB	SF
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
IDB Catchment Area and IDB Maintained Drains

Figure: 20-6a	Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0716	
Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:50,000
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- Legend:**
- Onshore Development Area
 - Beverley and North Holderness Internal Drainage Board Catchment Area
 - Beverley and North Holderness Internal Drainage Board Maintained Drains
- Watercourse Crossing Methodology**
- * Trenchless
 - * Infilled
 - * Open Cut Trenching
 - * Culvert Crossing

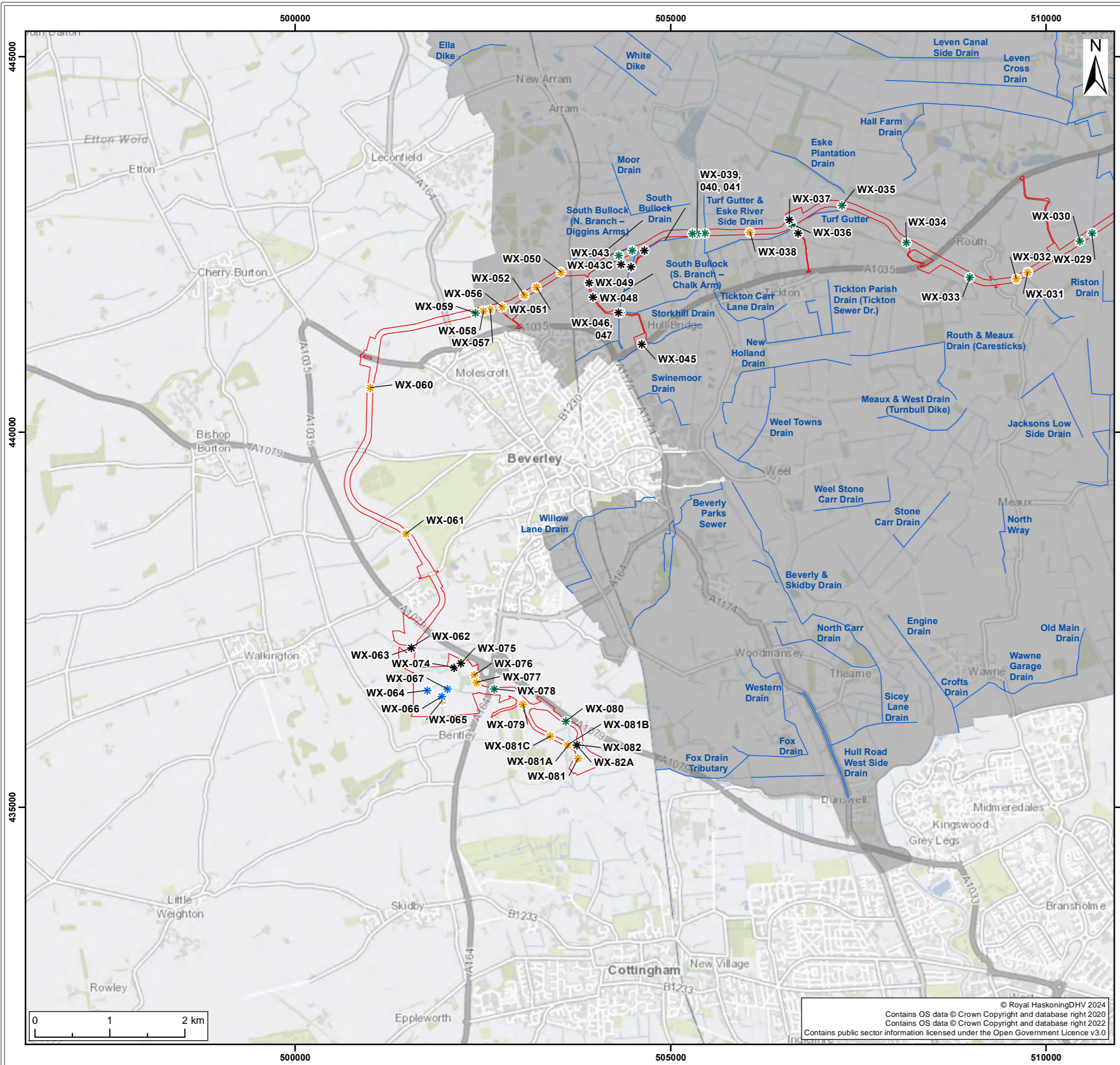
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S4	P03	03/04/2024	Suitable for stage approval	JH	SB	SF
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S2	P01	15/02/2024	Suitable for Information	JH	SB	SF

Title:
IDB Catchment Area and IDB Maintained Drains

Figure: 20-6b	Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0716	
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- Legend:**
- Onshore Development Area
 - Beverley and North Holderness Internal Drainage Board Catchment Area
 - Beverley and North Holderness Internal Drainage Board Maintained Drains
- Watercourse Crossing Methodology**
- * Trenchless
 - * Infilled
 - * Open Cut Trenching
 - * Culvert Crossing

SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR
S4	P04	30/04/2024	Suitable for stage approval	JH	SB	SF
S4	P03	03/04/2024	Suitable for stage approval	JH	SB	SF
S3	P02	29/02/2024	Suitable for review & comment	JH	SB	SF
S2	P01	15/02/2024	Suitable for Information	JH	SB	SF

Title:
IDB Catchment Area and IDB Maintained Drains

Figure: 20-6C Drawing No: PC2340-RHD-ON-ZZ-DR-Z-0716

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:50,000
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Project: Dogger Bank South Offshore Wind Farms	Report: Environmental Statement
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