Detailed River Network (AfA036)

Dataset Description

The Detailed River Network (DRN) is the only large-scale, accurate and fully attributed digital river centreline covering England and Wales.

The DRN is captured from the water features theme of the OS MasterMap topographic layer and built into a network using automated rules. Other input datasets and extensive local Environment Agency staff knowledge has been used to augment the core geometry to incorporate critical spatial detail and attribution, such as flow direction and path, not available from the OS mapping and to verify the accuracy of the centreline itself

The dataset has full-feature network geometry cross-referenced with OS MasterMap following Digital National Framework principles.

Price Category: High

Attribute Name	Attribute Description
DRN Layer: Feature class description highlighting the structure of the layer and any associated domains (lookups) for individual attributes.	
OBJECTID	Internal ArcSDE unique Object identifier - not essential to the DRN.
SHAPE[1]	Geometry: Internal ArcSDE geometry link.
Length	Double: Auto-generated object length in metres.
DRN_ID	Text: Unique identifier.
VERSION	Short integer: Version number of the DRN object - integer value that increases by +1 when the object referenced by the DRN_ID is updated.
REASON	Text: Reason for object referenced by the DRN_ID being updated. Choice of: • New Object • Modified Geometry • Modified Attribution • Modified Geometry & Attribution • Object Modified (due to split) • Other
OSMMDATE	Date: Date of OS MasterMap Cross referenced feature association (Currency date of OS MasterMap feature that the DRN object was extracted from).
RIVERTYPE	Short integer: Description of DRN and the primary display field - river types as referenced from the drn_RiverType domain.
FLOWDIR[1]	Short integer: Direction of flow as defined by the object digitised direction.
PRIMFLOW[1]	Short integer: Identifies single routes from all sources to outflow points (the sea).
DRAINS	Text: Drains (Ditch, Reen, Rhyne, Drain etc) as identified using local area knowledge (Environment Agency staff) or from OS MasterMap annotation if appropriate. DRN section is identified as Drain YES or NO.
LEVELS	Short integer: Inferred level of DRN feature. DRN object lines crossing at different levels do not have a junction node and the *No Intersection* rule is in exception. For example a canal section that overlays a river section will get the Level of +1 while the river will be 0 any below surface features will be -1.
GEOMSOURCE[2]	Short integer: In feature metadata - Identifier of the main source information of the DRN geometry.
FLOWSOURCE[2]	Short integer: In feature metadata - Identifier of the main source

Attribute Name	Attribute Description
	information of the DRN Flow Direction information.
RIVERNAME	Text: River Name as from Ordnance Survey base-mapping (OS MasterMap) linked through to the whole river section when appropriate. When not available on base map Environment Agency staff knowledge used to derive name. Initial stage of data extraction is based upon OS MasterMap cartographic text within 100m of DRN lines
WELSHNAME	Text: Welsh River Name as from Ordnance Survey base-mapping (OS MasterMap) linked through to the whole river section when appropriate. When not available on base map Environment Agency staff knowledge used to derive name. Initial stage of data extraction is Based upon OS MasterMap cartographic text within 100m of DRN lines.
ALTNAME	Text: Alternative River Name if know from local knowledge (Environment Agency staff) linked through to the whole river section when appropriate.
FRMMAINRIV[3]	Text: Identifier for the Flood Risk Management Statutory (sealed) Main River (Defra and Welsh Assembly Government statutory Main River). In that the DRN section is identified as FRM Main River YES or No. Identifies mainly RIVERTYPE = 1 plus any RIVERTYPE(s) that are not = 1 but are also Main River (for example: 4 - Lake).
WCRS_REF	Text: Watercourse reference number - corresponding to Environment Agency Flood Risk Management (FRM) coding.
WCRS_NAME	Text: Watercourse Name - corresponding to Environment Agency Flood Risk Management (FRM) WRCS_REF watercourse identifier.
FRMSTATUS	Short integer: Identifier of the statutory status (or stage within process in obtaining) of the FRMMAINRIV attribute
REGIONNR	Short integer: Number corresponding to the Environment Agency "water management" Region that the DRN object is within. Corresponding to the FRM region numbers held on the current FRM Main river layer - these will be updated in the future (potentially by DRN full release) to the standard Environment Agency numerical region codes. Scotland has been included for completeness.
CATCHNAME	Text: Catchment Name as identified by Environment Agency local area teams. Note: Will only be tagged as undetermined at initial release.
CATCHID	Text: Unique ID representing the Catchment that is named in the CATCHNAME attribute. Note: Will only be tagged as undetermined at initial release.
BASENAME	Text: Unique ID representing the dataset production level units (approximate to larger river basins).
NAFRA	Short Integer: Identifier tag to show if section has been included in current NaFRA modelling. Note: Will only be tagged as undetermined at initial release.
PERSIST	Short integer: Hydrological persistence of the section of water. The information will be defined by local Environment Agency staff knowledge. Note: Will only be tagged as undetermined at initial release.
ORIGIN	Short integer: The Hydrological Origin of the section of water. The information will be defined by local Environment Agency staff knowledge. Descriptions are based on Water Framework Directive (WFD) definitions. Note: Will only be tagged as undetermined at initial release.
EA_WB_ID	Text: The Environment Agency Water Framework Directive waterbody unique identifier. Identifies the Waterbody “catchment” that the DRN section is within.

Attribute Name	Attribute Description
EA_WB_TAG	Short integer: The Environment Agency Water Framework Directive waterbody display network identifier. Note: Will only be tagged as undetermined at initial release.
FROMNODE	Text: Unique identifier of the “Upstream” Node (DRNnodes) for the section
TO NODE	Text: Unique identifier of the “Downstream” Node (DRNnodes) for the section
DRN Nodes Layer: Feature class description highlighting the structure of the layer and any associated domains (lookups) for individual attributes. DRN Nodes of the DRN feature class.	
OBJECTID	Internal ArcSDE unique Object identifier - not essential to the DRN.
SHAPE	Geometry: Internal ArcSDE geometry link.
DRN_ID	Text: Unique identifier.
VERSION	Short integer: Version number of the DRN object - integer value that increases by +1 when the object referenced by the DRN_ID is updated.
REASON	Text: Reason for object referenced by the DRN_ID being updated. Choice of: • New Object • Modified Geometry • Modified Attribution • Modified Geometry & Attribution • Object Modified (due to split) • Other
OSMMDATE	Date: Date of OS MasterMap Cross referenced feature association (Currency date of OS MasterMap feature that the DRN object was extracted from).
NODETYPE	Short integer: Description of DRN Nodes and the node types as referenced from the drn_NodeType domain.
BASENAME	Text: Unique ID representing the dataset production level units (approximate to larger river basins).
FRMSTATUS	Short integer: Identifier of the statutory status (or stage within process in obtaining) of the FRMMAINRIV attribute
DRN Offline Drainage Features Layer: Feature class description highlighting the structure of the layer and any associated domains (lookups) for individual attributes. DRN offline drainage features do not have an associated DRN Nodes feature class. [Water features from OS MasterMap that does not connect into the river network and are generally of limited length.]	
OBJECTID	Internal ArcSDE unique Object identifier - not essential to the DRN.
SHAPE	Geometry: Internal ArcSDE geometry link.
LENGTH	Double: Auto-generated object length in metres.
DRN_ID	Text: Unique identifier.
VERSION	Short integer: Version number of the DRN object - integer value that increases by +1 when the object referenced by the DRN_ID is updated.
REASON	Text: Reason for object referenced by the DRN_ID being updated. Choice of: • New Object • Modified Geometry • Modified Attribution • Modified Geometry & Attribution • Object Modified (due to split) • Other
OSMMDATE	Date: Date of OS MasterMap Cross referenced feature association (Currency date of OS MasterMap feature that the DRN object was extracted from).
RIVERTYPE	Short integer: Description of DRN and the primary display field - river types as referenced from the drn_RiverType domain.

Attribute Name	Attribute Description
REGIONNR	Short integer: Number corresponding to the Environment Agency "water management" Region that the DRN object is within. Corresponding to the FRM region numbers held on the current FRM Main river layer - these will be updated in the future (potentially by DRN full release) to the standard Environment Agency numerical region codes. Scotland has been included for completeness.
CATCHNAME	Text: Catchment Name as identified by Environment Agency local area teams. Note: Will only be tagged as undetermined at initial release.
NAFRA	Short Integer: Identifier tag to show if section has been included in current NaFRA modelling. Note: Will only be tagged as undetermined at initial release.
BASENAME	Text: Unique ID representing the dataset production level units (approximate to larger river basins).
CATCHID	Text: Unique ID representing the Catchment that is named in the CATCHNAME attribute. Note: Will only be tagged as undetermined at initial release.