Capabilities

Name	Function	Current service	Current FWS cope	Current WIP scope	Potential WIP scope	Availability Requirement	Narrative
Floodline	• Live Call Agents • Call plan link to Interactive Voice Response (IVR) • Assisted digital and non-digital service	Floodline	No	No	No	N/a	• England, Scotland and Wales • Will need integration with Natural Resources Wales (NRW) • Dependent on FWIS 5 • Dependent on BlueBox • Dependent on NRW data • Create a registration on behalf of a user • Access, view and update registrations
System monitoring	• Active monitoring of system capacity and performance • Message volume and progress	Service specific	Yes	Yes	Yes	High	• Needed to ensure that the service is running correctly and efficiently • Some real-time requirements • Certain key information should be visible to the Environment Agency in real time via dashboards / feeds
External Digital Services	• System Admin • System configuration • Registration	FWS	Yes	Yes	Yes	High	• Set up and configure functional groups and access to certain restricted data or reporting • Administer user accounts • Access to configurable parameters. Create and update flood warning message content

Name	Function	Current service	Current FWS cope	Current WIP scope	Potential WIP scope	Availability Requirement	Narrative
							• IVR interaction • Create a registration on behalf of a user • Access, view and update registrations • Maintain national data, for example flood warning areas • Manage system interactions • Test and functionality changes before release • And potentially others
Area Teams	• Registration • Limited Admin	FWS	Yes	Yes	Yes	High	• Create a registration on behalf of a user • Access, view and update registrations • Create some local data (for example flood warning areas
Summary views	• Displays views by Area name and Severity and Totals for England	FWIS 5	No	Yes	Yes	High	• Continue in FWIS 5 • Interactive (filterable) Dashboards for different audiences, for example general statistics on numbers of flood warnings in force or specific views on system KPIs such as availability and critical alarms

Name	Function	Current service	Current FWS cope	Current WIP scope	Potential WIP scope	Availability Requirement	Narrative
Feedback	• User feedback available direct to EA	Flood warning feedback dashboard	No	Yes	Yes	Medium	• England only • Dashboard • Datastudio
BlueBox	• EDS process to create Floodline data • uses OS addresses, • RoFRS, • External boundaries (e.g. EA Areas and Local Authorities)	BlueBox	No	No	Yes	Low	• Floodline dependency • Check for Flooding dependency • Incident Management Forecasting System dependency • Incident Management Threshold Database dependency • Includes NRW data • Direct contract with JBA
Export	• Export flood warning area details, as shapefile • Export property details for a target area • Export customer list for a target area	FWS	Yes	Yes	Yes	Medium	• Bulk exports by EA Admins: • England only, Wales only, combined • Flood Alert and Flood Warning • Individual flood warning area level exports by Area Teams, including shapefile, list of properties covered plus registration status, customer list

Name	Function	Current service	Current FWS cope	Current WIP scope	Potential WIP scope	Availability Requirement	Narrative

Reporting	• Multiple reports available including warnings issued, contacts, audit	FWS Reporting Database	Yes	Yes	Yes	High	• Currently limited to EA Administrators to support reporting and system maintenance activities
							• Could be self-service for Area Teams and others
							• Different levels of detail for different users
							• EDS require access to pre-configured reports or data views and ability to create bespoke reports and link data
							• Key EDS reporting areas are:
							  • Messages issued, including what was issued, when, to who, outcomes of individual messages
							  • Registration data
							  • Flood warning area and message data
							  • User data
							  • Audit data – individual actions performed on system
							  • IVR reporting

Public APIs Data Sharing	• Public APIs for flood warning information	Data Sharing Platform	No	No	No - not EDS	High	• Dependent on FWIS 5

Name	Function	Current service	Current FWS cope	Current WIP scope	Potential WIP scope	Availability Requirement	Narrative
Platform APIs							• Landmark are the suppliers, Swirrl are sub-contractors – currently being re-procured • Need to integrate
River level alerts	• Alerts for river level meeting a threshold	None	No	No	Tbc		• Potential future requirement • Feedback on Check for Flooding
Automation interfaces	• Telemetry • Forecasting	None	Yes	No	Yes	Medium	• Links to telemetry and forecasting for automated warnings in the future
Check For Flooding (support)	• Live flood warnings on GOV.UK	Check For Flooding	No	No	Yes	High	• Dependent on FWIS 5 • Dependent on FWFI • Dependency for 24/7 application support • Dependency for data and licence requirements
NaFRA and RoFRS	• Flood risk maps and categories	NaFRA RoFRS	No	Integrate	Yes	Medium	• Floodline dependency • Used to define flood warning area outlines
Flood Warning Validation Database	• Collects data on flood warnings and severe flood warnings issued to measure the overall quality of	JBA	No	Yes	Yes	Low	• Post event appraisal • Live feed required as warnings are issued

Name	Function	Current service	Current FWS cope	Current WIP scope	Potential WIP scope	Availability Requirement	Narrative
	our flood warning service • Results inform the actions required to improve individual flood warnings and the service as a whole						
Fulfilment	• Sends administrative letters or emails to user, for registration or changes	Notify/FWS	Yes	Yes	Yes	Low	• • Email used if possible, letter used where no email address given • Used to confirm registration, update, password reset or cancellation • Content of update and cancel notifications varies depending on reason (configured by EDS) • Also used for (internal) user password resets • Future potential to use for annual reminder of registration
Ordnance Survey Data Hub (mapping)	• Display OS maps	OS Data Hub	No	Integrate	Integration	High	• Used by TFWS and FWS

Name	Function	Current service	Current FWS cope	Current WIP scope	Potential WIP scope	Availability Requirement	Narrative
Emergency Alerts	• Alerts to mobile devices connected to specific mobile towers	FWS	Yes	Yes	Yes	High	• Issued via message sending capability • Currently uses Notify
Manual update	• Contingency update when FWS not available or unable to connect	FWIS 5	No	Integrate	Yes	High	• Continue in FWIS 5 • Does not access FWS • Updates systems, does not issue warning to contacts • Integrate into hub
Contingency Access	• Via iPad using a token	FWS	Yes	Yes	Yes	High	• Allows access to FWS without access to EA network • Specific IP address for iPad users • Token installed to iPad
Issue Warning app	• Issues warnings to contacts and systems	FWS	Yes	Yes	Yes	High	• Link to message sending capability • Duty Officers
IVR	• Plays real-time information for warnings in force	FWS	Yes	Yes	Yes	High	• Integrate with Floodline call plan • Integrate with Twilio feedback module • Live warning in force feed required
Single Registration App	• Allows contacts to be registered	Online Registration FWS	Yes	Yes	Yes	High	• Floodline, Area Teams and EDS need access

Name	Function	Current service	Current FWS cope	Current WIP scope	Potential WIP scope	Availability Requirement	Narrative
	to receive warnings						
Flood Area app (Flood warning Area upload process)	• FIM Teams create flood warning areas – update • EDS collate and distribute	FWS	No	Yes	Yes	Medium	• Area inputs • EDS exports • Distribution to system owners
OS Data Hub (Address API)	• Access to current addresses from OS • Links to other locations via features lookup	OS	No	Integrate	No	N/a	• Needed for individuals and organisations • Link to EDW • Include non-addressable locations
Text to speech	• Convert text produced as warnings are issued to speech	FWS Amazon Polly	Yes	Yes	Yes	High	• Feeds into telephone and IVR channels • Uses area specific lexicon to refine pronunciation
EDW	• Automatic partial registration of contacts (phone and sms only)						• Contact details from major telephony operators for non-registered addresses in flood warning areas, matched against the billing address for the property or OSAPR • Includes landline • Data obfuscation in the UI

Name	Function	Current service	Current FWS cope	Current WIP scope	Potential WIP scope	Availability Requirement	Narrative
							• Business rules to further protect contact data • Welcome messages for all new contacts • Telephone Operators managed as 3rd parties on behalf on the Agency
	• MNOs	EDW	Yes	Yes	Yes	Low	
	• Landline	EDW	Yes	Yes	Yes	Low	
Social media	• Posting message to relevant apps	None	No	No	Yes	Low	• Current most used apps • Flexibility to add new apps • Could be a channel from Message sending
Payment processing	• For organisations	Manual	No	Yes	No	Low	• Charging scale(s) highly likely to be needed • Charging policy to be agreed • Gov Pay is a potential solution (depending on payment volumes)
Message sending	• Messages sending • Multiple channels						• Single message sending application to be used for all message capabilities and channels
	• Email	Notify	Yes	Yes	Yes	High	
	• SMS	Notify	Yes	Yes	Yes	High	
	• Telephone	FWS	Yes	Yes	Yes	High	

Name	Function	Current service	Current FWS cope	Current WIP scope	Potential WIP scope	Availability Requirement	Narrative
	• Letters	Notify	Yes	Yes	Yes	Low	
CAP XML aggregator	• Used for Google Public Alerts and IMFS	CAP XML	No	Yes	Yes (tbc)	High	• Google Public Alerts • No manual update • IMFS may benefit from a direct data feed (e.g. from FWIS) https://ea-cap-xml.prd.defra.cloud/messages.atom
Easimap	• Displays flood warning areas and live status	Easimap	No	No	No	N/a	• Dependent on FWIS 5
Natural Resources Wales (NRW)	• NRW replacement for FWS	FWS	Yes	No	No	N/a	• Maintain awareness • Floodline dependency • Live and static data needed for Floodline • Static data needed for EDW(?)

Satellite services – consider dependencies

Name	Function	Current service	Current FWS scope	Current WIP scope	Potential WIP scope	Availability Requirement	• Narrative
Data Distribution Service (DDS)	• Passes data to internal services (telemetry and forecasting)	DDS	No	No	No	N/a	• No WIP dependency
Flood Warnings for Infrastructure (FWFI) hub	• Passes data to external users (telemetry and forecasting)	FWFI	No	No	No	N/a	• No WIP dependency • Legacy application Programme • NRW telemetry
Flood Warning Information System (FWIS 5)	• Area and Severity views • Collates all warnings in force • Allows manual updates to warnings	FWIS 5	No	No	Yes	High	• Consider at a later stage • Could be used as basis for WIP "hub" to reduce risk • Impacts on downstream systems – time and money • Some elements may be included in components above, e.g. Manual update and Summary views

Glossary of services

Acronym	Name	Description
BlueBox	BlueBox	BlueBox is a data management service, which uses multiple geographic datasets to provide information for use by the Floodline Call Agents. BlueBox incorporates data import and export functions as well as geo-spatial queries. Data includes:- • Flood warning area polygons • EA area boundaries • Local authority boundaries • Addresses • Flood risk areas (RoFRS)
CFF	Check For Flooding	Live flood warnings on GOV.UK Check for flooding in England
CAP XML Atom	Common Alerting Protocol	Used for Google Public Alerts and IMFS
Easimap	Easimap	Internal EA mapping service which displays flood warning areas and live status
Emergency Alerts	Emergency Alerts	Sends alerts to mobile devices connected to specific mobile towers without the need to register the mobile number Emergency Alerts
EDW	Extended Direct Warnings	Process used to obtain mobile phone numbers for addresses which do not have a register contact in FWS.
EDS	External Digital Services	National EA team which manages flood warning services.
FR Team	Flood Resilience Team	Internal EA Team based in operational areas responsible for maintaining flood warning details and procedures.

Acronym	Name	Description
FWFI	Flood Warning for Infrastructure hub	Used to distribute our telemetry and forecast data between our systems and external users.
FWIS	Flood Warning Information System	FWIS receives messages when flood warnings are issued from the Flood Warning System (FWS). Used internally by EA staff to view flood warnings in force FWIS 5 also provides a contingency method for Duty Officers to update flood warning information, which is then passed to other systems: • Check for flooding in England • Floodline call agents • Easimap • Flood API on data.gov.uk
FWS	Flood Warning System	Used by area Flood Resilience teams and flood warning duty officers to provide flood warnings to the public, professional partners and the media across England and Wales. It is used by Floodline staff to register customers in addition to customers being able to register themselves online. It uses phone, mobile, text messages and digital channels to send warning messages simultaneously.
FWVDB	Flood Warning Validation Database	Collects data on flood warnings and severe flood warnings issued to measure the overall quality of our flood warning service. Results inform the actions required to improve individual flood warnings and the service as a whole.
Floodline	Floodline	Live Call Agent service providing flood related information to callers. Call plan links to Interactive Voice Response (IVR). Assisted digital and non-digital service.
GOV.UK	GOV.UK	UK Government website.

Acronym	Name	Description
IMFS	Incident Management Forecasting System	Flood forecasting system used by Area forecasting duty officers, Local Forecasting Centres and the Flood Forecasting Centre. Forecasts are shared easily to inform planning and response.
IVR	Interactive Voice Response	Access via the Floodline call plan where callers can listen to a voice message giving information on flood warnings currently in force
LTFRI	Long Term Flood Risk Information	Website giving information for: • the long term flood risk for an area in England • the possible causes of flooding • how to manage flood risk Check the long term flood risk for an area in England
MNO	Mobile Network Operator	Mobile Network Operator
NaFRA RoFRS	National Flood Risk Assessment Risk of Flooding from Rivers and Sea	Data which shows the percentage chance of flooding each year for the area of land your property is within, taking into account the presence of flood defences. Used on LTFRI
NRW	Natural Resources Wales	Welsh Government Sponsored Body responsible for ensuring that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.
DDS	Data Distribution Service (DDS)	Internal EA system which passes data to internal services (telemetry and forecasting)