

DRAINAGE AND WASTEWATER MANAGEMENT PLANS (DWMP)

INTEGRATED DELIVERY ALLIANCE (IDeA)

RISK BASED CATCHMENT SCREENING (RBCS) REVIEW AND STAKEHOLDER ENGAGEMENT METHODOLOGY

Intended Use

For reference by technical staff involved in reviewing the findings from the DWMP RBCS process, and staff involved in internal and external stakeholder engagement.



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RBCS REVIEW AND STAKEHOLDER ENGAGEMENT

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Contents

Overview of Guidance Document.....2
 Background.....2
 Input Data Provided by NWL2
RBCS Data Consolidation3
RBCS Review Document4
 Asset Data4
 Framework Indicators5
 RBCS Stakeholder Review..... 10
Stakeholder Engagement 12
 Internal NWL Stakeholder Engagement 12
 External Stakeholder Engagement..... 12
 NIDP 12
 Timescales..... 13
 Issue / Opportunity Recording 13

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RBCS REVIEW AND STAKEHOLDER ENGAGEMENT

OVERVIEW OF GUIDANCE DOCUMENT

This guidance document will summarise the processes to be undertaken to review the Risk Based Catchment Screening (RBCS) outputs for an L3 planning area. The methodology followed to produce the RBCS outputs is documented in 'RBCS Methodology v3' (Dec 2018).

This document will also outline the approaches to be followed to engage with internal and external stakeholders in order to gain an understanding of the historical issues and potential future opportunities within a catchment.

Background

A review of the RBCS outputs is required to ensure that there is an appropriate representation of key existing issues within catchments in the hydraulic model to be used in the Baseline Risk and Vulnerability Assessment (BRAVA) stage.

In addition to this, as recommended in the DWMP Framework documentation, efforts should be taken to engage with internal (NWL) stakeholders as well as external stakeholders to ensure that all historical issues and future opportunities are understood and represented (where appropriate) in the hydraulic model.

Input Data Provided by NWL

The following table documents the input data that is required as a minimum to enable the RBCS review and stakeholder engagement processes to be undertaken.

Input Data	Source	Details
RBCS analysis	NWL Asset Strategy via DWMP Technical Lead	Output from the RBCS process for L3 BRAVA prioritisation.
Regional datasets used in the RBCS	Various	All input data to the RBCS process provided by NWL.

RBCS DATA CONSOLIDATION

The detailed information related to all of the RBCS indicators has been collated into a single master spreadsheet for all of the L3 areas.

The “RBCS Overview” tab of the RBCS_ALL spreadsheet provides the overview for all L3 areas against each indicator, and whether the catchment has been triggered for BRAVA.

L3 Ref		Name	DWMP L2 SPA	C23st Pipe Metric	Population	1. Coldest Climate (Tier 2)	2. Risk of acid rain	3. Discharge to sensitive water (part A)	4. Discharge to sensitive water (part B) (Tier 2)	5. SDAF	6. CAF	7. Internal River Flooding	8. External River Flooding	9. Pollution Incidents	10. VETW compliance	11. VETW DWT compliance	12. Stone outfalls	13. Disks (RMA system)	14. Planned residential development	15. WMP	16. Sewer Collapses	17. Sewer Blockages	18. Customer complaint (Tier 2)	19. SPS capacity (Tier 2)	20. Odour (Tier 2)	Number of Indicators Breached (Excl Blockage & Collapse)	Single Indicator Breach is Tier 1?	Proceed BRAVA
04-001	Alnwick	Northumberland	Enhanced	3,131																					3	NO	YES	
04-002	Amble & Warkworth	Northumberland	Enhanced	8,538																						6	NO	YES
04-003	Billbottle	Northumberland	Enhanced	1,893																						6	NO	YES
04-004	Acklington & Toston	Northumberland	Enhanced	636																						4	NO	YES
04-005	Falton	Northumberland	Enhanced	2,334																						7	NO	YES
04-006	Newton on the Moor	Northumberland	Initial	123																						2	NO	YES
04-007	Raebolt	Northumberland	Initial	13																						1	NO	NO
04-008	Hampthorpe	Northumberland	Initial	70																						1	NO	NO
04-009	Rothbury	Northumberland	Enhanced	2,547																						8	NO	YES
04-010	Dunston	Northumberland	Initial	503																						4	NO	YES
04-011	Whittingham	Northumberland	Initial	235																						3	NO	YES
04-012	Powburn	Northumberland	Initial	223																						5	NO	YES
04-013	Eglington	Northumberland	Initial	134																						3	NO	YES
04-014	Hawthorn	Northumberland	Initial	145																						1	NO	NO
04-015	Ganton	Northumberland	Initial	292																						2	NO	YES
04-016	Bladon	Rural Time	Initial	86																						1	NO	NO
04-017	Haggle	Northumberland	Initial	47																						1	NO	NO
04-018	Wetherston	Northumberland	Initial	119																						3	NO	YES
04-019	Alnston	Northumberland	Initial	39																						2	NO	YES
04-020	Wiggas	Northumberland	Initial	41																						1	NO	NO
04-021	Hawwood	Northumberland	Initial	39																						9	NO	NO
04-022	Embleton Terrace	Northumberland	Initial	77																						1	NO	NO
04-023	Swaen	Northumberland	Initial	57																						2	NO	YES
04-024	Thurston Brook Works	Northumberland	Initial	47																						1	NO	NO
04-025	Loughoughton & Boulton	Northumberland	Initial	1,348																						5	NO	YES
04-026	Leaburn	Northumberland	Initial	1,027																						4	NO	YES
04-027	Embleton	Northumberland	Initial	1,266																						2	NO	YES
04-028	Derweth	Northumberland	Initial	63																						1	NO	NO
04-029	Crafter South	Northumberland	Initial	243																						2	NO	YES
04-030	Dunstan	Northumberland	Initial	119																						3	NO	YES
04-031	Penningson	Northumberland	Initial	152																						2	NO	YES
04-032	Alnmouth	Northumberland	Initial	895																						2	NO	YES
04-033	Crafter North	Northumberland	Initial	33																						1	NO	NO
04-034	Whiteadder	Northumberland	Initial	11																						1	NO	NO
04-035	Berwick	Northumberland	Enhanced	15,172																						16	NO	YES
04-036	Woker	Northumberland	Initial	2,290																						7	NO	YES
04-037	Millfield	Northumberland	Initial	243																						5	NO	YES
04-038	Charton	Northumberland	Initial	221																						4	NO	YES
04-039	Corrigan Feed	Northumberland	Initial	289																						2	NO	YES
04-040	Branston	Northumberland	Initial	120																						3	NO	YES
04-041	Wark	Northumberland	Initial	137																						1	NO	NO
04-042	Egal	Northumberland	Initial	53																						2	NO	YES
04-043	Crোধam	Northumberland	Initial	79																						2	NO	YES
04-044	Donaldson Lodge	Northumberland	Initial	55																						1	NO	NO
04-045	Seahouses	Northumberland	Enhanced	2,886																						2	NO	YES

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RBCS REVIEW AND STAKEHOLDER ENGAGEMENT

RBCS REVIEW DOCUMENT

The RBCS Review should be documented using the template spreadsheet, which is saved on the NWL DWMP SharePoint site. An example of a completed template has also been saved for reference, to ensure that consistent outputs are generated.

The review sheet should be named as follows:

- XX-DXX_RBCS Review.xlsm;
- XX-DXX is the L3 drainage area reference;
- Example: 01-D32_RBCS Review.xlsm.

An RBCS Review output should be produced for each L3 that has been identified as requiring a BRAVA, and a review of each indicator should be documented, as described in the following sections.

Asset Data

The **RBCS_ALL** spreadsheet lists the known Storm overflows, SPSs and STWs in “NW_GIS_CSO,” “NW_GIS_SPS” and “NW_GIS_WWTW” for each L3 area. This data should be extracted for the respective L3 catchment that is under review and logged in “L3 Assets” in the RBCS Review summary document. Any additional details for the outfall of assets can be taken from NWL GIS or the hydraulic model.

Framework Indicators

The indicators, and the method of assessment, that will have been assessed during the RBCS stage are outlined in the RBCS Methodology. The approach to be followed to assess the results of each of the indicators is covered in the following sections.

Catchment Characterisation (Tier Two)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary, from data collated in the RBCS_ALL spreadsheet.

Catchment Characterisation Indicators	
L3 Ref:	
Name:	
DWMP L2 SPA:	
1. Catchment Topography	YES
2. Rapid Response	YES
3. Unknown Asset Data	NO
4. Combined Drainage	NO
5. Flood Risk	YES
6. Sewer Blockages	YES
7. Urban Density	NO
8. Proximity to Sea or River	YES
9. Large Complex Networks	YES
10. Dependence on Pumping	YES
11. Proximity to Water Table	NO
12. Growth (Unplanned)	NO
13. Flood Risk Managed by others	YES
14. Growth (Planned)	YES
15. Slow Response	YES
16. No key issues identified	NO
L3 Failed Catchment Characterisation Indicator?	YES
Number of RBCS Indicators Triggered	10

Bathing and Shellfish Water (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet.

Asset Name	CSO PLR	Site Name	No of Years of Monitoring	Average 12/24hr spill events per BW season	Comments	Model details i.e. How much survey data? What is the confidence around the storm overflow?	Survey required in the area?

Sensitive Waters Part A (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, listing asset names discharging to the sensitive water.

Asset Name (Discharging to Sensitive Water)	Sensitive Water Name

Sensitive Water Part B (Tier Two)

There are no locations where this indicator has been triggered in the NWL region.

Storm Overflow Assessment Framework Indicator (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, listing storm overflows failing the above criteria.

Asset Name	WINEPID	Water-body	Scheme Name	PLR	2013 spills	2014 spills	2015 spills	2016 spills	2017 spills	Ave Spills	SSSI Proximity

Capacity Assessment Framework (CAF) (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet.

L3 Ref	Name	C21st Pipe Metric	Foul Combined Risk Level	Storm Risk Level	CAF Indicator Breached?

Internal Flooding (Tier One)

All the RBCS data and information related to Internal Flooding can be found on SharePoint; [SharePoint LINK](#).

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, listing the internal flooding locations.

Plus 2 Ref (Contact_Ref)	Address_Reference	X	Y	Extreme_Event	Cause Group	AR	Address

External Flooding (Tier One)

All the RBCS data and information related to External Flooding can be found on SharePoint; [SharePoint LINK](#).

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, listing the external flooding locations.

DWMP

RBCS REVIEW AND STAKEHOLDER ENGAGEMENT

Plus 2 Ref (Contact_Ref)	Address_Reference	X	Y	Extreme_Event	Cause Group	AR	Address

Pollution Incidents (Category 1,2,3) (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, summarizing the pollution incident locations.

Asset	Event No.	Reported Date and Time	Location	Water Env. Impact Level Code	Self- Report	Premises (Tier 2)	Compliant (Y/N)?	Notification Details	Current Status

WwTW Quality Compliance (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet.

L3 Ref	Name	DWMP L2 SPA	C21st Pipe Metric	WwTW Failing Quality compliance?

WwTW Dry Weather Flow Compliance Indicator (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet.

L3 Ref	Name	DWMP L2 SPA	C21st Pipe Metric	WwTW Failing DWF compliance?

The consent data should also be documented as per below table,

Locatio n	Consent l/s m3/d	90%ile l/s	90%ile m3/d	No. of 0 Reading s	No. less than %	No. of Blan k	Data Uncertain ty	Pass/Fai l 80%ile	Pass/Fail 90%ile	MI P S ID	% Reading s > Consent

Storm Overflows (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, summarizing all the storm overflow locations failing above criteria.

RBCS REVIEW AND STAKEHOLDER ENGAGEMENT

Asset Name	PLR	MIPS name	2012	2013	2014	2015	2016	2017	2018 (end of August)	Valid years	Average	Criterion	Triggered?

Also list the unconsented storm overflows within the L3 under investigation,

Asset Hierarchy Name	PLR	Candidate Name	CP0 Issue Title

Other RMA Systems (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet.

DA Name	Programme Year Stage 1	Programme Year Stage 2	LLFA

National Proct Number	Project Name	Program Year Stage 2	Lead Risk Management Authority - Name	Risk Source	Gateway 1 (Business Case/Justification)	Gateway 3 (Contract Award/Investment Decision)	Start of construction	Gateway 4 (Readiness for Service)	Total Project Expenditure - PROJECT TOTAL	LLFA LOCATION (AREA)

Planned Residential Development (Tier One)

The RBCS data and SHLAA data should be compared and the details should be mentioned in the overview column.

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, enlisting planned residential developments.

DA_Ref	Name	Population_Aug17	Rounded Pop	Population 2031	Population increase	Population increase %	Additional Houses	Trigger %	Triggered?

WINEP (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, briefing all the WINEP sites.

Assumed Asset Name (try and establish name is possible from data or GIS/InfoNet/model)	WINEPID	Scheme Name	Name of Waterbody	Water Body Type	WFD Operational Catchment	Driver Code (Primary)	Measure Type	Completion Date (DD/MM/YYYY)	Investigation Scope

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RBCS REVIEW AND STAKEHOLDER ENGAGEMENT

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Sewer Collapses (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, listing all the sewer collapses incidents.

Plus 2 Ref	Defect Type	WIP ID	Date Completed	Maintenance Type

Sewer Blockages (Tier One)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, listing all the sewer blockage incidents.

Plus 2 Ref	Blockage Cause	Cleared	Pipe Size	Completion Date	Flooding Evidence	Pollution to Watercourse	AR Year

If only the sewer collapses and/or blockages indicators are triggered, then at present this is to be treated as if no indicators are triggered. There is no requirement to undertake the DWMP baseline risk and vulnerability assessment (BRAVA) and problem characterisation process steps, and current planning approaches to risk assessment and option development and appraisal are to be continued.

Customer Complaints (Tier Two)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, listing all the customer complaints data, Flood Action Groups and Water Range Routes.

Flood Action Groups

Flood Action Group Y/N?	Action Group Name

Water Ranger Routes

Water Ranger Route Y/N?	Route Name	Approximate route distance (metres)	Associated water bodies

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RBCS REVIEW AND STAKEHOLDER ENGAGEMENT

Customer Complaints

Plus 2 Ref (Contract Ref)	Name and Address	PRN	Contract Type	Logged	Response Activity

SPS Capacity (Tier Two)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, listing all SPS assets which fail above criteria.

Asset Name	PLR	Pump Starts/day	Seconds run/day	Comments

Odour (Tier Two)

If this indicator is triggered for a catchment, the tabulated information below should be populated in the respective RBCS Review summary from data collated in the RBCS_ALL spreadsheet, listing all the odour complaints.

ID	Property ID	Cause	Date Opened	Address

RBCS Stakeholder Review

The findings from the RBCS Review, for the indicators that are triggered, should be summarized in an overview sheet with an accompanying plan showing the location of the indicator breaches. This review will form the basis of the initial stakeholder review. The information should be presented in following format;

RBCS Review Summary						L3 and RBCS Overview	
L3 Ref:	11-D63	Name:	Long Newton		System:	11	<p>RBCS Overview Long Newton L3 is located in the Teesside L2. Covers an area of approximately 81 Ha with a population of 801. Majority of catchment is separate with a main combined sewer taking flow via gravity to Long Newton STW. 1 CSO, 1 SPS and 1 STW. There is one minor watercourse in the catchment, Lustrum Beck.</p> <p>4 RBCS Indicators have been triggered:</p> <p>RBCS 01 Catchment Characterisation: 3. Unknown Asset Data 4. Combined Drainage 14. Growth (Planned) 15. Slow Response</p> <p>RBCS 05 SOAF: There is one high spiller, located at Long Newton CSO 1 (NZ38169604) which is near Long Newton STW. 37.2 average recorded spills over 5 years (within 10% of SOAF spill frequency)</p> <p>RBCS 14 Planned Residential: RBCS indicates a 120 population increase (15%). No SHLAA polygons were available at the time of review.</p> <p>RBCS 15 WINEP: 4 WINEP drivers identified relating to the Lustrum Beck and the STW. One phosphorous driver (end 2024) and the other 3 relating to Intermittent discharge with completion dates of 2021, 2022 and 2025. No investigation scope available from RBCS data.</p> <p>RBCS 16 Sewer Collapse: There is one sewer collapse which is located on Darlington Road.</p>
DWMP L2 SPA:	Teesside	C21st Pipe Metric	Initial	Pop:	801		
1	Catchment Characterisation (Tier 2)				YES	Link	
2	Bathing or shellfish waters				NO	Link	
3	Discharge to sensitive waters (part A)				NO	Link	
4	Discharge to sensitive receiving (part B) (Tier 2)				NO	Link	
5	SOAF				YES	Link	
6	CAF				NO	Link	
7	Internal Sewer Flooding				NO	Link	
8	External Sewer Flooding				NO	Link	
9	Pollution Incidents				NO	Link	
10	WwTW Q compliance				NO	Link	
11	WwTW DWF compliance				NO	Link	
12	Storm overflows				NO	Link	
13	Other RMA systems				NO	Link	
14	Planned residential development				YES	Link	
15	WINEP				Yes	Link	
16	Sewer Collapses				YES	Link	
17	Sewer Blockages				NO	Link	
18	Customer complaints (Tier 2)				NO	Link	
19	SPS capacity (Tier 2)				NO	Link	
20	Odour (Tier 2)				NO	Link	
Number of Indicators Breached (Excl Blockage & Collapse)					4		
Single Indicator Breach is Tier 1?					NO		
Proceed to BRAVA?					YES		

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RBCS REVIEW AND STAKEHOLDER ENGAGEMENT

STAKEHOLDER ENGAGEMENT

Stakeholder input into the RBCS Review process is key to ensuring existing issues and potential opportunities within an L3 planning area are understood.

Internal NWL Stakeholder Engagement

A PDF version of the RBCS Review sheet will be issued to a selection of internal NWL stakeholders informing them of the outcome of the RBCS stage, and to give them an opportunity to validate the issues that have been identified. Internal NWL stakeholders with an interest in the DWMP process will include representatives from;

- Asset Strategy;
- Asset Planning;
- Business and Solutions Support (Flooding/Pollution);
- Network Operations;
- Production (STW/SPS/Interceptor) Managers and Operatives.

Only L3 planning areas with **four or more** RBCS triggers breached will be issued for review. The reasoning for this is to ensure the engagement is focussed on L3 areas where there are likely to be a number of issues, rather than isolated problems. Stakeholders should be advised that if any notable issues that they are aware of are not covered in any of the review areas, that they should highlight these during discussions.

Stakeholders will be asked to carry out the following tasks as part of their review;

- Review the RBCS Summary sheet and confirm that the assessment of the issues identified during the RBCS process is accurate;
- Review any clusters of flooding and pollution incidents and provide any information/knowledge with regards to any systematic issues. Detail regarding single isolated incidents would not be requested, but rather a consistent symptom of a system failure;
- Identify STWs/SPSs that currently experience issues with operation either under dry weather flow conditions and/or during storm events;
- Identify STWs/SPSs where there is a concern that any catchment growth/change would result in concern regarding the operation of the STW/SPS either under dry weather flow conditions and/or during storm events;
- Identify any recently completed schemes, or if any identified issues have been addressed through other measures;
- Annotate the PDF and map with any comments or reference any locations of emerging issues or areas of concern not identified during the RBCS process.

External Stakeholder Engagement

For stakeholders external to NWL, the same approach will be adopted. External stakeholders with an interest in the DWMP process include;

- Lead Local Flood Authorities (LLFA);
- Environment Agency (EA).

Engagement will be limited to representatives from these organisations initially. Face to face meetings with representatives from the LLFA and EA should be held to discuss and review issues and opportunities within all of the L3 areas under their jurisdiction.

NIDP

Any engagement undertaken as part of the DWMP process should complement any ongoing engagement undertaken as part of the Northumbria Integrated Drainage Partnership (NIDP) Strategic Studies.

The Stage 1 and Stage 2 Strategic Studies involve a comprehensive data collection exercise to identify issues and opportunities within catchments. The engagement undertaken as part of the DWMP is not intended to be of a similar level of detail, and instead will look to highlight any significant ('headline') issues and opportunities.

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RBCS REVIEW AND STAKEHOLDER ENGAGEMENT

Timescales

A timescale for all responses to be received should be set that is appropriate to the programming of the BRAVA and Problem Characterisation stages for a L3 area. Enough time should be allowed for stakeholders to provide input to the process; however, the stakeholder engagement process should not result in delays to the delivery of the overall programme.

Issue / Opportunity Recording

All identified issues and opportunities are to be collated using the Arc Collector (or similar) software. This will enable the **RBCS_All** dataset to be updated efficiently and will provide an auditable record of all feedback received.

It is important that each of the responses from the stakeholders is referenced, linked to one of the eight Planning Objectives.

Feedback will be coded as per the following structure;



Level 2 Coding

Level 2	Code
Northumberland	01-NOR
Rural Tyne	02-RTY
Tyneside	03-TYS
Wearside	04-WRS
Wear	05-WEA
Teesdale	06-TDL
Teesside	07-TEE

Level 3 Coding

Based on the NWL drainage area boundary codes.

Level 4 Coding

Based on the Level 4 'drainage community' identifier generated during the Problem Characterisation process.

Planning Objective Code

Based on the Primary Planning Objective exceedance.

Asset/Grid

Asset reference or grid square where the issue/opportunity has been identified.

BRAVA Score

Planning Horizon when the issue/opportunity has been identified and/or is likely to be realised.

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RBCS REVIEW AND STAKEHOLDER ENGAGEMENT

Example

For an internal flooding issue identified in the Berwick drainage area, within grid square ID 4253, the code would be **01-NOR_01-D35_C01_P01_4253_2020**.