

A framework for the production of
Drainage and Wastewater Management Plans

Appendix A

Collaborative drainage and wastewater planning

Commissioned by Water UK in collaboration with Defra,
Welsh Government, Ofwat, Environment Agency, Natural
Resources Wales, Consumer Council for Water, ADEPT
and Blueprint for Water

September 2019

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A.1. Introduction

This appendix supplements the information provided within the main framework document for drainage and wastewater management plans (DWMPs). The main document (and appendices) aim to provide water and sewerage companies (hereinafter referred to as 'companies' or variations thereof), operating within England and Wales, with a framework within which DWMPs can be developed. The DWMP framework is also expected to be of relevance to other parts of the UK.

This appendix provides:

- > Further information on the management structure for the level 2 strategic planning groups (section A.2);
- > Additional information on approaches to facilitate effective, collaborative planning between all relevant stakeholders (section A.3).

A.2. Drainage and wastewater management planning - management structure

Information on developing the management structure has been provided in section 4.2.4 of the main methodology document. In brief, as a minimum, a three-level management structure should be developed (shown schematically in Figure A-1):

- > **Level 3** – the basic tactical planning unit (TPU) will be the wastewater treatment works (WwTW) and its catchment (or aggregations thereof for small catchments, or discrete sub-catchments for larger wastewater treatment works (WwTW) catchments).
- > **Level 2** – an aggregation of level 3 units into larger level 2 strategic planning areas (SPAs). The Level 2 SPAs are to describe the local drivers for change as well as facilitating a more strategic and collaborative level of planning above the detailed catchment assessments.
- > **Level 1 water company drainage and wastewater management plan** – planning at level 2 and 3 to be brought together within an overarching company level DWMP to provide a strategic, long-term plan for drainage and wastewater resilience and associated investment over the plan period.

For consistency the same terminology as used in the main report will be applied here.

In respect of the level 2 SPAs, the principle is that companies endeavour to align level 2 areas with the river basin district (RBD) management catchments. These management catchments, as shown in Figure A-2, represent the level within river basin management plans (RBMPs) and flood risk management plans (FRMPs) at which actions in respect of receiving water quality and flood risk management are taken.

Aligning the level 2s in this way reflects the need for level 2s and the DWMP to take on board potential impacts on the environment and the potential impacts that flood management activities by other responsible bodies may have on company and related systems. The number of RBD management catchments that intersect with water company operating boundaries will initially define the number of level 2s for each company (however, see subsequent text on flexibility in this approach).

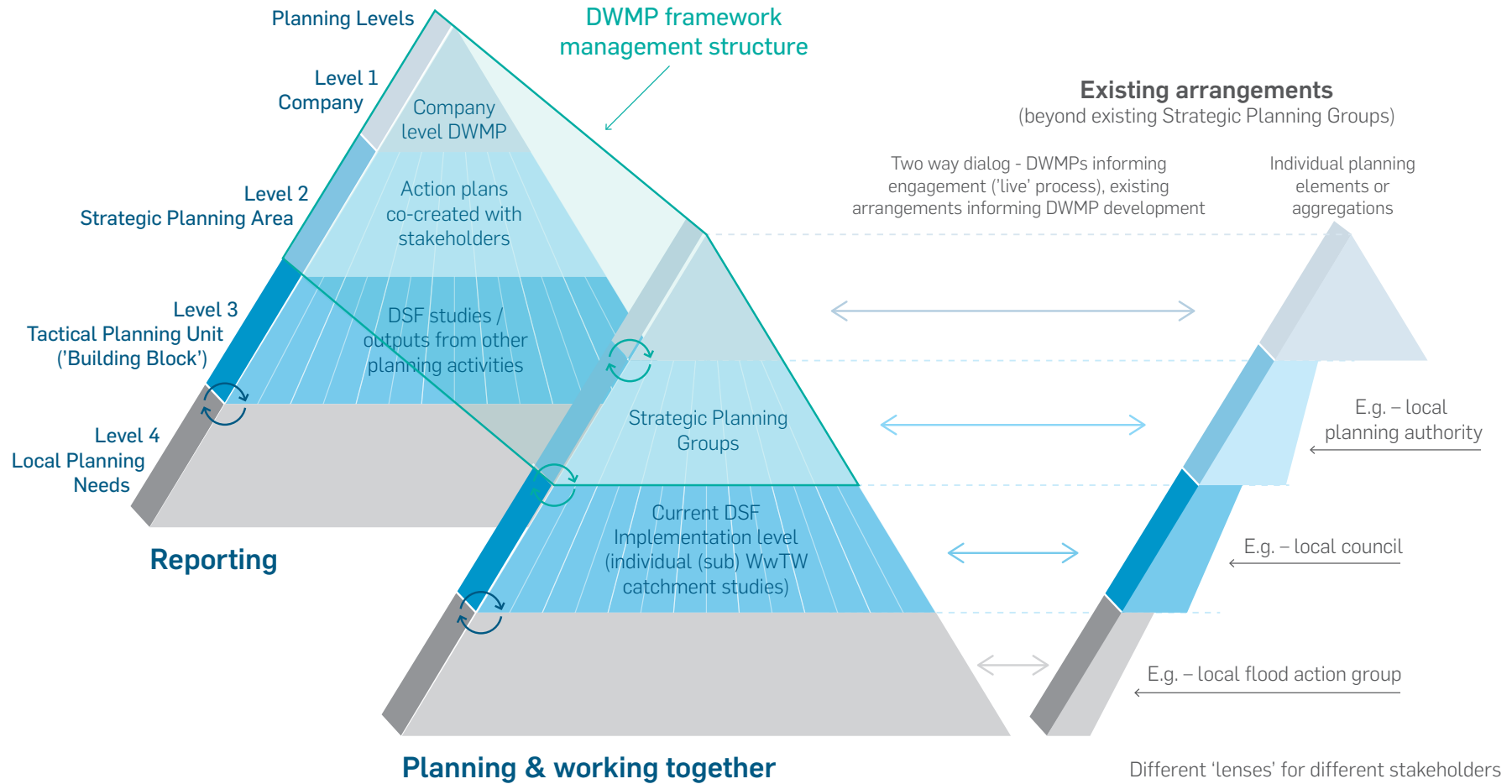


Figure A-1 – Drainage and wastewater management plan - framework management structure

Table A-1 presents a GIS analysis of RBD catchment management boundaries and company operating areas and provides an indication of the potential number of level 2s per company. Further comment is provided to put these figures into context.

Table A-1 - Potential number of RBD catchment management areas by company

Company	RBD catchment management areas / potential level 2 SPAs
Anglian Water	13
Dŵr Cymru Welsh Water	13
Northern Ireland Water	11 (based on Cycle 1 data)
Northumbrian Water	6
Scottish Water	9 (based on Area Advisory Groups)
Severn Trent Water	14
South West Water	7 (including Isles of Scilly)
Southern Water	12
Thames Water	14
United Utilities	14
Yorkshire Water	7
Wessex Water	4

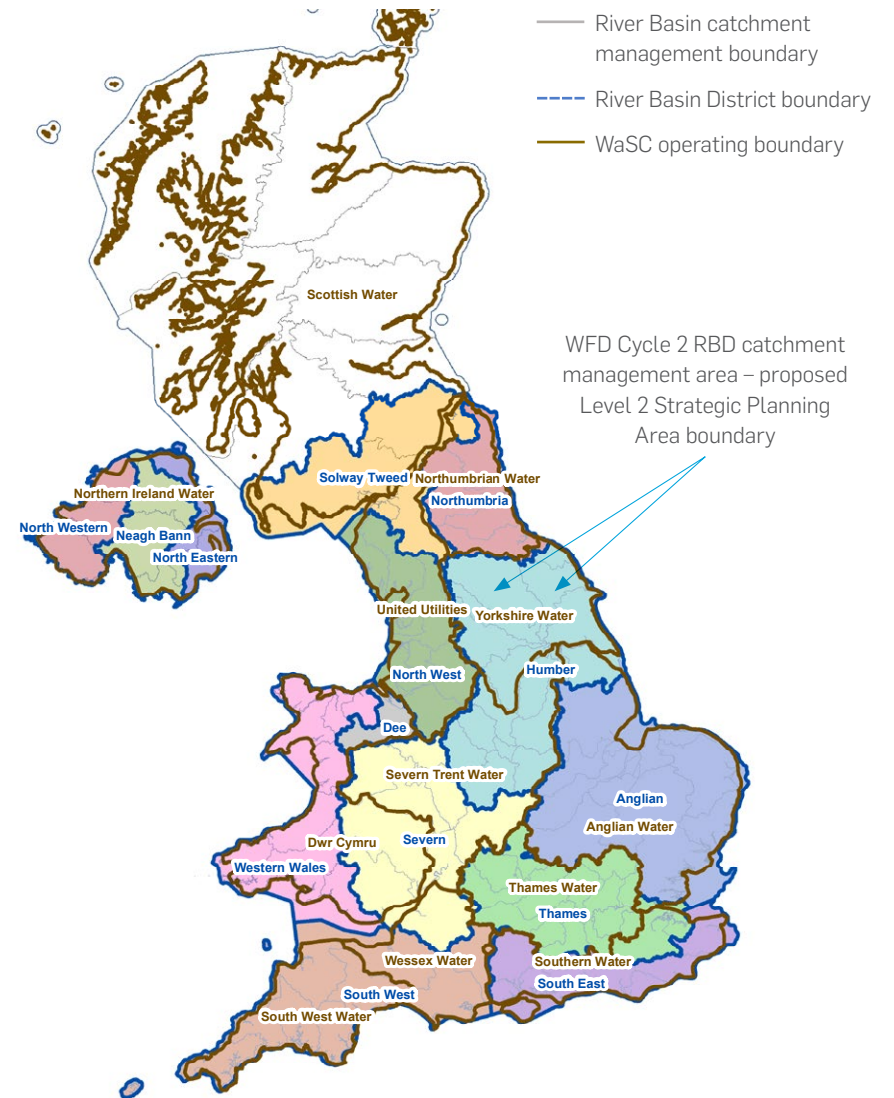


Figure A-2 - Potential level 2 strategic planning area boundaries; equivalent to RBD catchment management boundaries (note for Northern Ireland boundaries are based on Cycle 1)

The DWMP framework provides a management structure that operates at levels 1 and 2, drawing upon, and influencing, activities (the detailed planning and assessment) undertaken at level 3.

A more collaborative, shared planning approach coupled to an understanding of other risk management authority (RMA) plans and funding cycles is essential to the successful production of a DWMP (and resultant delivery plans that arise from it). Therefore, companies are advised to establish an early collaborative planning framework to identify where high priority risks (to achievement of planning objectives) are likely, and the issues that presents in terms of delivery of the DWMP.

As outlined in the main methodology document, it is acknowledged that in developing their existing long-term planning approaches, companies will have developed planning structures that best reflect their needs. As such, it is considered appropriate that in practice there be some flexibility around how the level 2 and 3 structures are established. The schematic diagram in Figure A-3, coupled to the following text, outlines examples where such flexibility might be appropriate:

- > Companies can aggregate WwTW catchments to form larger level 3 planning areas. Individual WwTW catchments might be considered in isolation as level 4 components.

- > Companies may decide that a significantly large, predominantly urban, catchment should be a level 2 SPA in its own right. In this case sub-catchment elements (e.g. terminal pumping stations and upstream network), would represent a level 3 TPU. In such cases, companies would need to be able to demonstrate how the stand-alone level 2 management area tied in with others linked to the same RBD catchment management area or areas (where the stand-alone level 2 management area crosses more than one RBD).

- > It is noted that, for some companies, the approach outlined could result in a considerable number of level 2 SPAs. Companies may consider aggregating the level 2s to form larger level 2 SPAs; however, it is considered important that the alignment to RBD catchment management areas is maintained.

The structure outlines a key principle of aligning company planning areas to RBMP and FRMP areas to ensure water quality impacts and flood risk are appropriately captured within the process. It is important that, while there needs to be flexibility in the development of the planning structure, ultimately the planning areas need to be additive to define the overall DWMP. It is envisaged that as the DWMP process becomes embedded in companies' planning processes this element of the methodology will likely become redundant and be superseded by companies' developed management structures.

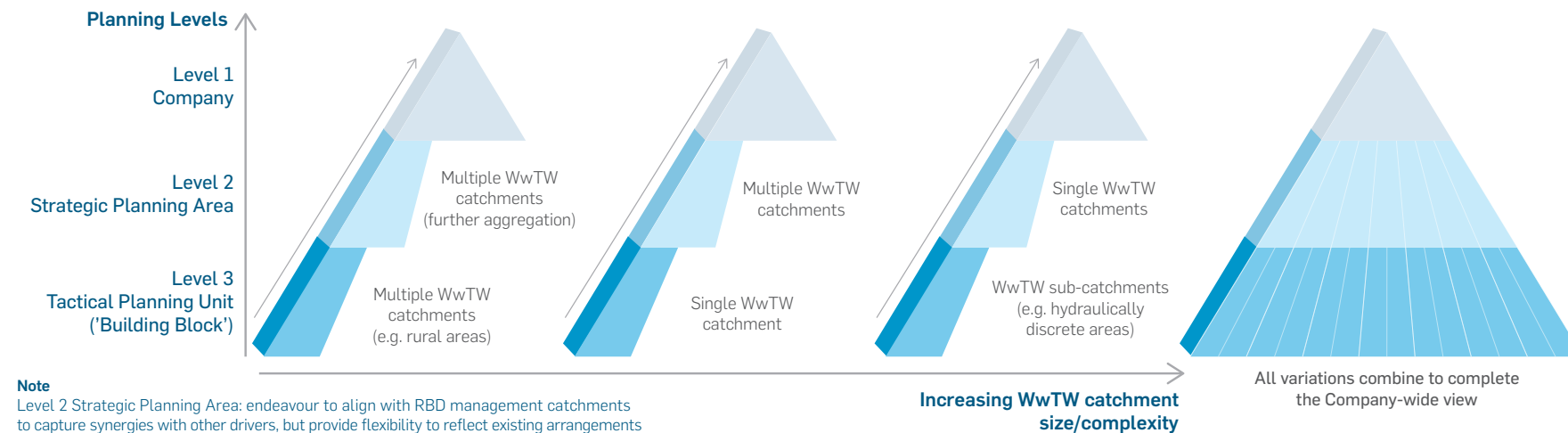


Figure A-3 - Options for developing level 2 and 3 boundaries

A.3. Approaches to facilitate effective, collaborative planning

Collaborative drainage and wastewater planning, and partnership working, will be key to delivering resilient wastewater and drainage systems in the future and a driving principle of the DWMP framework is that better and more successful outcomes are generally more likely to be achieved by stakeholder organisations working together. The DWMP should provide the facilitation framework to ensure the essential integration of partners and co-creation of interventions and in so doing foster much greater understanding of the related needs and works of others in this space. The intention is, through collaborative planning, to identify more robust and integrated interventions that are also able to provide multiple benefits to achieve best value to the economy, society and the environment over the long term.

This section expands upon the information provided in the main document relating to the management structure proposals a DWMP, and the stakeholder engagement required to make the process work. Good drainage and wastewater planning is underpinned by collaboration with partners, and engagement with others needs to be carefully planned.

The UKWIR project, 'How best to align the funding processes with the various bodies involved in resolving flooding' (UKWIR, 2016)¹ provides guidance that supports a common and systematic approach to unlocking collaborative opportunities. The project identified numerous examples which demonstrate that collaboration can reduce the costs of infrastructure to individual partners, unlock investment that would otherwise not be feasible, and deliver multiple benefits to the public and the environment. The report provided practical examples of assessment of costs and benefits accruing to different organisations, enabling suitable funding contributions for collaborative projects to be determined. It can be expected that organisation involved in DWMP production will closely follow the good practice detailed with the document. The DWMP will ensure good practice within the UKWIR report is brought to the forefront and, in identifying opportunities for collaboration and co-creation of measures, will add value to those mechanisms already in place.

The following are two further examples of industry good practice; organisations involved in DWMP production are encouraged to utilise such resources when planning their approach to collaboration:

- > **'Working with others' guide produced by the Environment Agency²** - the Environment Agency have produced a guidance document detailing how they approach working with others, including the required skills and techniques. The guidance has been provided to flood risk management authorities for them to use/adapt for their own engagement purposes.
- > **Defra's catchment based approach (CaBA) policy framework (May 2013)³** - the framework details the behaviours, skills and organisational culture required for successful catchment-based partnership working. The framework was based on the learning gained from over 25 catchment pilots. An accompanying 'Guide to Collaborative Catchment Management' was produced, with supporting appendices on methods/ tools and case studies. This can be found on the website detailed in the footnote.

Appendix E (case studies) provides some further examples of good practice that will assist organisations to effectively work together to achieve DWMP objectives.

¹ <https://www.ukwir.org/How-best-to-align-the-funding-processes-with-the-various-bodies-involved-in-resolving-flooding>

² Available upon request from the Environment Agency

³ <https://www.catchmentbasedapproach.org>

A.3.1. Alignment with the plans of other risk management authorities and environmental organisations

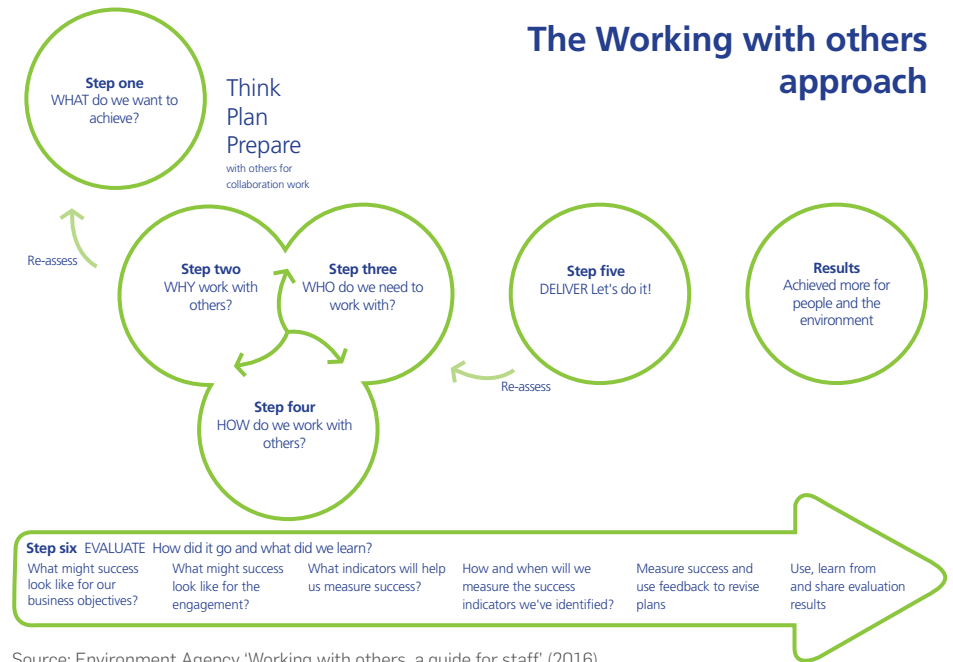
Water companies have a duty (under the Flood and Water Management Act, 2010) to cooperate with other RMAs when undertaking drainage and wastewater planning (having been defined a RMA due to their duties arising from the Water Industry Act, 1991). In return, other RMAs "must co-operate with other relevant authorities in the exercise of their flood and coastal erosion risk management functions". Companies "must act in a manner consistent with the national strategy" and "have regard to local strategies". A DWMP developed in collaboration with other RMAs will help demonstrate discharging these duties. Therefore, a DWMP must demonstrate strong links with the plans of other RMAs:

- > RBMPs
- > FRMPs
- > Local plans produced by local authorities (e.g. local flood risk management strategies, local development plans)

The DWMP should also demonstrate strong links where activities being promoted may significantly impact other plans (e.g. nutrient management plans, diffuse water pollution plans).

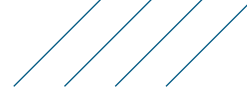
The DWMP provides a long term planning framework, setting out near, medium and long-term investment risks, uncertainties and planned investment requirements. In so doing, it will be essential to understand where wider drainage risks and management plans may integrate with those identified by companies to create a more integrated and resilient drainage and wastewater plan. The integration of needs and potential solutions may also identify more efficient, cost-effective delivery of outcomes. As a result, this should encourage and facilitate more collaborative planning across RMAs.

In addition, companies have an obligation to ensure that their activities, and the potential impacts on the environment, are consistent with the requirements of the Water Framework Directive and other relevant environmental legislation. It is important that companies engage and work with environmental regulators and other stakeholders as appropriate, to ensure that planning processes encompass wider environmental objectives.



Source: Environment Agency 'Working with others, a guide for staff' (2016)

Figure A-4 - The 'working with others' approach





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