

## Appendix J: Briefing paper

## Briefing Paper - Camborne Pool Redruth Surface Water Drainage Implementation

### *Introduction*

The Camborne Pool Redruth (CPR) area is served by a combined sewer network that in many places is operating at or near to capacity. In addition, the sewage treatment works is already at capacity and as a result, all future development cannot contribute additional flows to the system without first either reinforcing the existing network and replacing the sewage treatment works or, removing surface water flows to increase capacity.

To ensure that redevelopment of the CPR area is not constrained, work has been undertaken to determine how surface water can be removed from the combined sewer system. This work is now contained within a document called the Surface Water Management Plan (SWMP).

The SWMP proposes the use of sustainable drainage systems (SUDS) in as many locations throughout the CPR area as possible to reduce the surface water entering the combined sewer system. SUDS can be described as techniques for disposing of surface water runoff that can improve water quality, reduce quantity, provide amenity, and improve biodiversity dependent on the method applied. In areas of widespread regeneration within the CPR area strategic SUDS are proposed. Strategic SUDS are systems that serve multiple development plots and will primarily take the form of 'swales' (grassed wet or dry ditches, see photo 1) and ponds (see photo 2) mimicking the natural environment as closely as possible where constraints allow, effectively creating an artificial watercourse.



Photo 1: Example of best practice - Dry swale with crossing point at Upton Northamptonshire.



Photo 2: Example of best practice - Wet pond with storage provided above permanent water level at Exeter Business Park, Exeter.

The Surface Water Management Plan (SWMP) for the CPR area is seen as national best practice and is referred to in the recently published Planning Policy Statement 25: Development and Flood Risk Practice Guide. The SWMP was 1 of 15 DEFRA Integrated Urban Drainage (IUD) pilot studies whose purpose was to identify problems with urban drainage throughout England, and propose ways to investigate or remedy the issues identified.

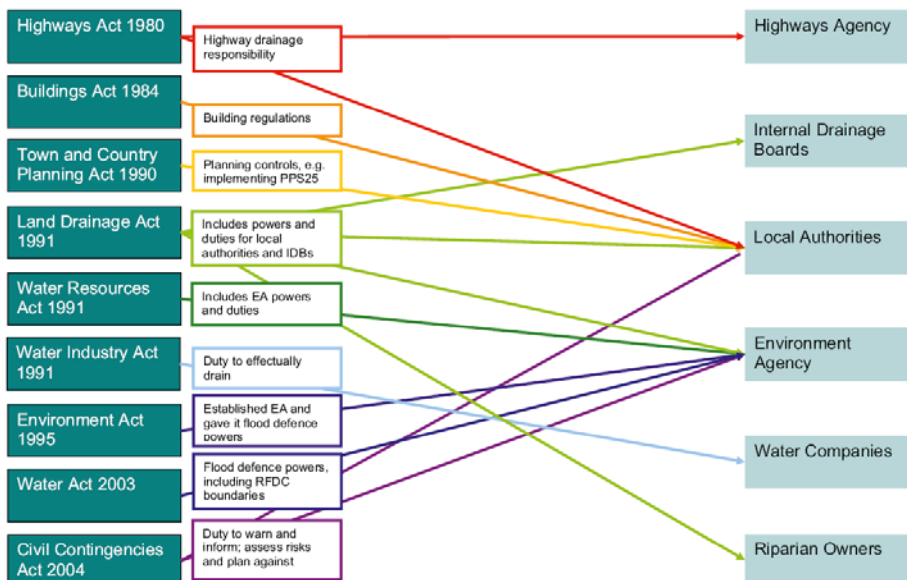
The SWMP for the CPR area is the first project in England to look at how the proposals in the plan could be realised, and as a result those currently writing national policy are viewing this project as a national template for implementing SWMPs in future.

### ***Local authority as lead organisation***

The South West Regional Development Agency and CPR Regeneration commissioned Halcrow in April 2008 to review the SWMP prepared by Entec UK to produce a Drainage Implementation Strategy (DIS). One of the key findings is that a Strategic Drainage Group (SDG) should be formed to oversee the management and operation of the proposed strategic SUDS systems.

It is clear from figure 7 below (extracted from the Pitt Review) that local authorities are best placed from an existing legislative point of view to lead on the management of surface water at a community level.

Figure 7: Summary of legislative links



(The Cabinet Office, 2008, p136)

In addition, as can be seen from the extracts below, the DEFRA surface water consultation papers and the resulting future legislation is likely to recommend Local Authorities taking responsibility for writing SWMPs as well as adopting SUDS.

“Local authorities represent their communities and can therefore provide a useful link into broader issues of community sustainability. There could, for instance, be opportunities for local management and maintenance of neighbourhood SUDS schemes through community stewardship, parish councils or community groups....

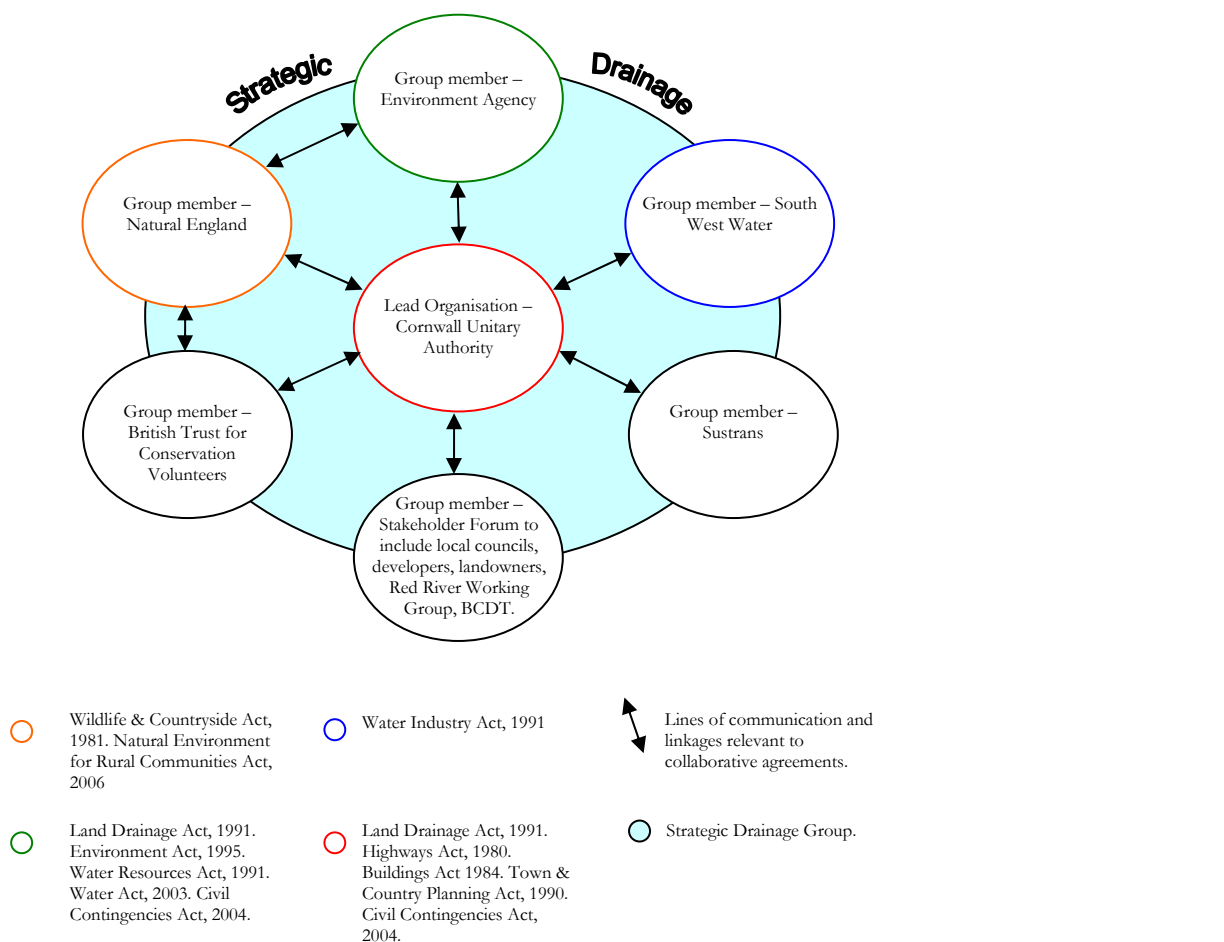
...local authorities currently engage in complex planning processes, and many in the highway adoption process and green space management, SUDS adoption ought to be a challenge of adaptation rather than one of creating new systems...

...Local authorities would be well placed to deliver maintenance inputs for SUDS (for example litter removal, vegetation control) in terms of their proximity to the infrastructure, current range of work, and ability to integrate tasks with the maintenance of public spaces. For example, if the management of SUDS infrastructure was integrated with the management of green spaces within a local authority, this should ensure that surface water drainage would continue to be provided even if the area is subsequently re-landscaped...

...Highway authorities have a right to discharge water to streams outside the highway and to cross third party land with their drainage subject to paying reasonable compensation. This could provide a very useful and practical arrangement for securing well-designed SUDS.”

(Source: [Improving Surface Water Drainage – Consultation to accompany proposals set out in the Government’s Water Strategy, Future Water, DEFRA 2008, p42-43](#))

The benefit of involving stakeholders, including the local community, in the operation and maintenance of the strategic SUDS cannot be overstated. This will lead to a co-ordinated and integrated approach being adopted with all stakeholders involved in the process. It will have legal and financial benefits due to access to additional funding sources. The organisations currently being considered as Strategic Drainage Group (SDG) members for ongoing operation and maintenance activities are shown in the diagram below which also highlights the powers each party can exercise under existing legislation.



All of the above organisations except South West Water have signed up in principle to progressing this project with conditions attached in some instances (including Cornwall County Council which has requested more details on funding).

One of the more important pieces of existing legislation relating to the lead organisation is the Land Drainage Act (LDA), which gives certain powers to the local or unitary authority. The powers include, but are not limited to, the right to carry out maintenance works, improve existing watercourses (not main river), and constructing new works. These extensive powers are summarised in the table below;

Powers conferred in the Land Drainage Act, 1991
<p><u>Section 14 – General powers of boards and local authorities</u></p> <p>The provisions for maintaining existing, improving or constructing new works.</p>
<p><u>Section 15 - Disposal of spoil by boards and local authorities</u></p> <p>Power to deposit spoil / arisings from drainage works on the banks where appropriate.</p>
<p><u>Section 16 - Exercise of local authority powers under sections 14 and 15</u></p> <p>Allowance for transfer of powers from local Council to County Council if necessary.</p>
<p><u>Section 21 - Enforcement of obligations to repair watercourses</u></p> <p>Enables local authority to enforce works are undertaken where and when necessary.</p>
<p><u>Section 25 - Powers to require works for maintaining flow of watercourse</u></p> <p>Enables local authority to enforce works are undertaken where and when necessary.</p>
<p><u>Section 59 - Grants to drainage bodies</u></p> <p>Makes provision for contributions towards the expenses incurred by local authorities in the course of executing their functions for drainage schemes at the discretion of the relevant Minister and the Treasury.</p>
<p><u>Section 62 - Powers of internal drainage boards and local authorities to acquire land</u></p> <p>Allows local authorities to compulsory purchase land under certain circumstances.</p>
<p><u>Section 64 - Powers of entry for internal drainage boards and local authorities</u></p> <p>Enables local authorities or their appointed representatives to access land for the purposes of carrying out their drainage functions.</p>

The LDA gives the local authority significant powers to deliver the proposed strategic SUDS construction and ongoing operation and maintenance of this infrastructure. When considered in conjunction with the other SDG members there is significant scope for reducing the likelihood of future flooding, cutting the number of Combined Sewer Overflows (CSOs), cost savings on O&M activities, sharing of knowledge, and community involvement.

## *Funding*

There are existing funding mechanisms in place that could be used to source capital and revenue for both construction of the strategic SUDS and its ongoing maintenance.

## *Capital*

The capital for construction of the strategic SUDS could be sourced from a combination of the following:

- ◆ Convergence funding programme
- ◆ Regional Infrastructure Fund (SWRDA)
- ◆ Water company part funding as proposed by OFWAT

## *Revenue*

If capital costs can be covered by the options outlined above, then the least controversial approach is for the ongoing maintenance (revenue) costs to be sourced from s106 (of the Town and Country Planning Act, 1990) developer contributions. This may not be the most equitable way to fund the SSWS, but is potentially the most attractive to the adopting authority due to the low risk.

If this approach is taken then developers may be seriously deterred by the high s106 costs. A potentially more equitable approach may be to split the contributions between developer and end user by ensuring the developers cover the ongoing maintenance costs (excluding capital costs) for the first 25yrs and then subsequently funded by council tax and business rates, potentially subsidised by savings delivered by the co-ordinated use of a volunteer workforce (British Trust for Conservation Volunteers who are keen to be a member of the SDG).

The Halcrow DIS (see section 5.3) covers the various options in more detail. It is recommended that the lead organisation in conjunction with the SDG members satisfies themselves regarding the funding of the strategic SUDS by conducting their own economic appraisal.

To summarise, the source of revenue for ongoing operation and maintenance of the strategic SUDS can be currently obtained from either;

- ◆ Option 1: s106 contributions from developers
- ◆ Option 2: s106 contributions from developers for the 1<sup>st</sup> 25 years, and the remainder sourced via residents from the CPR area through Council tax and Business rates.

## *Land ownership*

The steering group has expressed a desire for the SDG not to be the landowner, in the same way as Internal Drainage Boards do not own the land they manage. However, if it does not own the land that the strategic SUDS run through, certain responsibilities will fall to the riparian owner unless they in turn lease the land to the SDG and transfer these responsibilities under the lease agreement.

It is unlikely that a maintenance regime delivered under riparian ownership will be as rigorous as that necessary for successfully operating and maintaining the strategic SUDS proposed. The strategic SUDS land ownership options are shown in the table below.

**Land ownership options for SSWS**

Ownership options for SSWS
Option 1: SDG Lead organisation (Local Authority) owning the land– <i>Recommended 1st choice (and by Bedford IDB)</i>
Option 2: Leasing the land in perpetuity from the developer / land owner for a nominal rent, e.g. £1/annum, with the riparian responsibilities transferred to the lessee. - <i>Recommended 2nd choice</i>
Option 3: Land not owned or leased. Reliant on riparian responsibilities and powers under the LDA. – <i>Not recommended</i>

The Marston Vale (Bedfordshire) Surface Waters Plan (Milton Keynes Council, 2004) is an IUD Pilot Study, which has addressed some of the same issues regarding land ownership. The primary differences between the two pilot studies are that the Marston Vale study is based around an existing Group (the Marston Vale Surface Waters Group) that has been in operation since 1997 and that it is within the boundaries of an existing IDB. The rest of the Group consists of similar members to those being considered for the CPR Strategic Drainage Group including:

- ◆ Bedford IDB
- ◆ Environment Agency
- ◆ Anglian Water
- ◆ Mid Beds District Council
- ◆ Bedford Borough Council
- ◆ Bedfordshire County Council
- ◆ The Forest of Marston Vale (Community Forest charitable trust)
- ◆ Renaissance Bedford (urban regeneration company)

The Marston Vale project has been running for over 10 years and therefore provides the CPR project with a source of information for what does and does not work in practice. Problems that have been identified include the legal intricacies of the allocation of funding, responsibilities and the riparian rights of land ownership (Oldfield J, 2008),

Oldfield recommends direct landownership (Option 1 above) as this simplifies negotiation, phasing of construction works, design and long-term maintenance issues. He also recommends that Compulsory Purchase Order and delivery powers for IDBs are extended to facilitate development where a strategic solution is identified that will benefit the catchment as a whole. Legal advice as to whether this course can be followed would need to be taken, as the LDA allows for the CPO powers to be used to acquire land for any purpose to do with the local authority's functions relating to drainage.

### *Timetable to implementation*

The following action items need to be undertaken immediately over the next 4 – 8 weeks with those items highlighted in blue requiring to be done prior to handing over to Cornwall County Council;

- ◆ A more detailed economic appraisal to be undertaken to clarify funding sources and financing options for both construction and maintenance (capital and revenue) prior to proceeding with this project to ensure its future viability. **Action – Consultant TBA (SWRDA & CPRR).**
  - ◆ The SWMP will need updating to reflect any additional survey work that is undertaken, and to incorporate the findings of the Halcrow report. **Action – Consultant TBA (SWRDA & CPRR).**
  - ◆ Cornwall County Council to agree to become lead organisation within a Strategic Drainage Group (SDG). **Action – SWRDA, CPRR & CCC.**
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- ◆ SWMP to be incorporated within the Area Action Plan (AAP) as Supplementary Planning Guidance (SPG) to give the document legal standing. **Action – Kerrier District Council & CCC.**
  - ◆ The SDG to be formed and collaborative agreements negotiated between all potential SDG members' specific responsibilities. **Action – CCC and all other parties involved in SDG.**
  - ◆ Appoint legal Counsel to act on behalf of SDG. **Action – CCC.**
  - ◆ Funding sources to be confirmed and approved by the SDG and their appointed legal representative(s). **Action – CCC and all other parties involved in SDG.**
  - ◆ Collaborative agreements to be drafted by legal Counsel to formalise the understanding between each of the SDG members in terms of what is required of each organisation. **Action – CCC with advice from the EA.**

- ◆ CPRR should provide guidance on the sequence of development plots coming forward to inform the prioritisation of the sub-catchments. **Action – CPRR & Kerrier District Council.**
- ◆ Review the prioritisation of sub-catchments in light of the above actions. **Action – Consultant TBA (SWRDA & CPRR).**

The action items below can be undertaken concurrently with those above but the time scale for their execution is more flexible. Results gained from additional investigations will need to be incorporated within the Surface Water Management Plan to keep it a 'live' and relevant document. Sub-catchment 5 (Trevenson Road Implementation Plan area) is progressing at present and parts of the actions listed below will need to be acted upon accordingly so as not to cause delay to the sites in this location.

- ◆ Review of mapping data used in production of SWMP to determine variations significance on existing flow rates calculated. **Action – Consultant TBA (SWRDA & CPRR).**
- ◆ Purchase or lease (in perpetuity) of the land the strategic SUDS will be located on to be negotiated. **Action – SWRDA, CPRR, Kerrier District Council & CCC.**
- ◆ Legal Counsel to amend the model agreements developed by the National SUDS Working Group to suit the adoption criteria and s106 contributions between developers and the SDG. **Action – CCC and all other parties involved in SDG.**
- ◆ Risks and liabilities identified will need to be assessed in detail and supplemented during the next and subsequent phases of design. A CDM co-ordinator should be involved in this process. Risks and liabilities identified will need to be discussed in detail with the adopting authority to ensure they are prepared to accept the residual risks. **Action – CCC & SWRDA / CPRR.**
- ◆ Targeted investigations into the top three prioritised sub-catchments to verify combined sewer, highway, and private drainage contributions, connections, base flow, and exceedance routes from the existing drainage network are to be commissioned. **Action – SWW & CCC.**
- ◆ The results of the targeted investigations should be mapped and SUDS solutions for exceedance flows considered in conjunction with proposals for the strategic SUDS to deal with overland flows as proposed in the SWMP. **Action – SWW & CCC.**
- ◆ Updating SWW sewer model to reflect findings of additional surveys and include private and public, foul and surface water sewers. **Action – SWW & CCC.**

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- ◆ Variations in impermeable contributing area percentages, flow control devices, and flow rates will need to be modelled to determine the effect on strategic SUDS. **Action – Consultant TBA (SWRDA & CPRR).**
  - ◆ A site walkover (perhaps in conjunction with the surface water drainage survey) to confirm surface types and permeability. **Action – Consultant TBA (SWRDA, CPRR & CCC).**
  - ◆ Detailed design of the strategic SUDS. **Action – Consultant TBA / CCC.**
  - ◆ Exceedance flows should be verified as the detailed design develops. **Action – CCC, SWW, & SWRDA / CPRR.**
  - ◆ Preparation of an operation and maintenance manual for the strategic SUDS. This is to follow best practice outlined in the CIRIA SUDS manual plus programming, emergency procedures, and a waste management plan. **Action – CCC and all other parties involved in SDG.**
  - ◆ Core staff of the SDG should be sourced from the lead organisation, and supplemented where possible with SDG members for technical support and volunteer staff for simple maintenance tasks. Complex and dangerous maintenance activities should be carried out by experienced and qualified personnel either from the lead organisation, South West Water or a private contractor. **Action – CCC and all other parties involved in SDG.**