

**ENVIRONMENTAL DEPARTMENT
CORNWALL AREA**



NRA

FINAL DRAFT REPORT

**CARNON RIVER EC DANGEROUS
SUBSTANCE DIRECTIVE FAILURE**

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CARNON RIVER EC DANGEROUS SUBSTANCE DIRECTIVE FAILURE

1. INTRODUCTION

1.1. Background

The Camon River at R19E008 and R19E016 failed for total zinc and dissolved copper in 1993. These sites are in use to monitor the Wheal Concord mine. The consent for Wheal Concord was revoked in 1990 but monitoring has continued due to List II failure. The locations of monitoring sites and summary of water quality data are shown in Figure 1.

1.2. Objective

To determine the cause of EC dangerous substance directive failure in the Camon River at R19E008 and R19E016.

2. METHODS

Review of water quality data.

Site visit to area to identify pollution sources.

3. RESULTS

3.1. Water quality data

All monitored sites on the Camon River upstream of R19E008 exceeded total zinc and dissolved copper standards in 1993 (see Figure 1). The data indicated chronic pollution. The most upstream site at WSTW0012A was within 500 metres of the Wheal Concord discharge and the source of the Camon River.

3.2. Site visit

A site visit of the Camon River upstream of WSTW0012A was undertaken on 12 August 1994. The locations of Wheal Concord mine, discharge point and other disused mineworkings are shown in Figure 2.

4. DISCUSSION

The drainage ditch downstream of Wheal Concord discharge was dry and there was no evidence of recent use. Because of the chronic nature of copper and zinc failure Wheal Concord can be ruled out as a source. It is most likely copper and zinc failures are due to the numerous disused mineworkings associated with North Wheal Busy Mine at the source of the Camon River. As a result continued failure is likely for many years to come.



5. CONCLUSIONS

1. All monitored sites in the upper reaches of the Carnon River exceed the copper and zinc standards.
2. The water quality data indicates a chronic pollution problem.
3. There is no evidence that Wheal Concord discharge has operated in the recent past.
4. Numerous abandoned mineworkings at the source of the Carnon River were the most likely source of copper and zinc failure.

6. ACTIONS

1. EC Dangerous substance monitoring at R19E008 and R19E016 to be discontinued.

Action - Water Quality Planner

Figure 1. Upper reach of the Carnon River showing monitoring sites and summary of water quality data for 1993

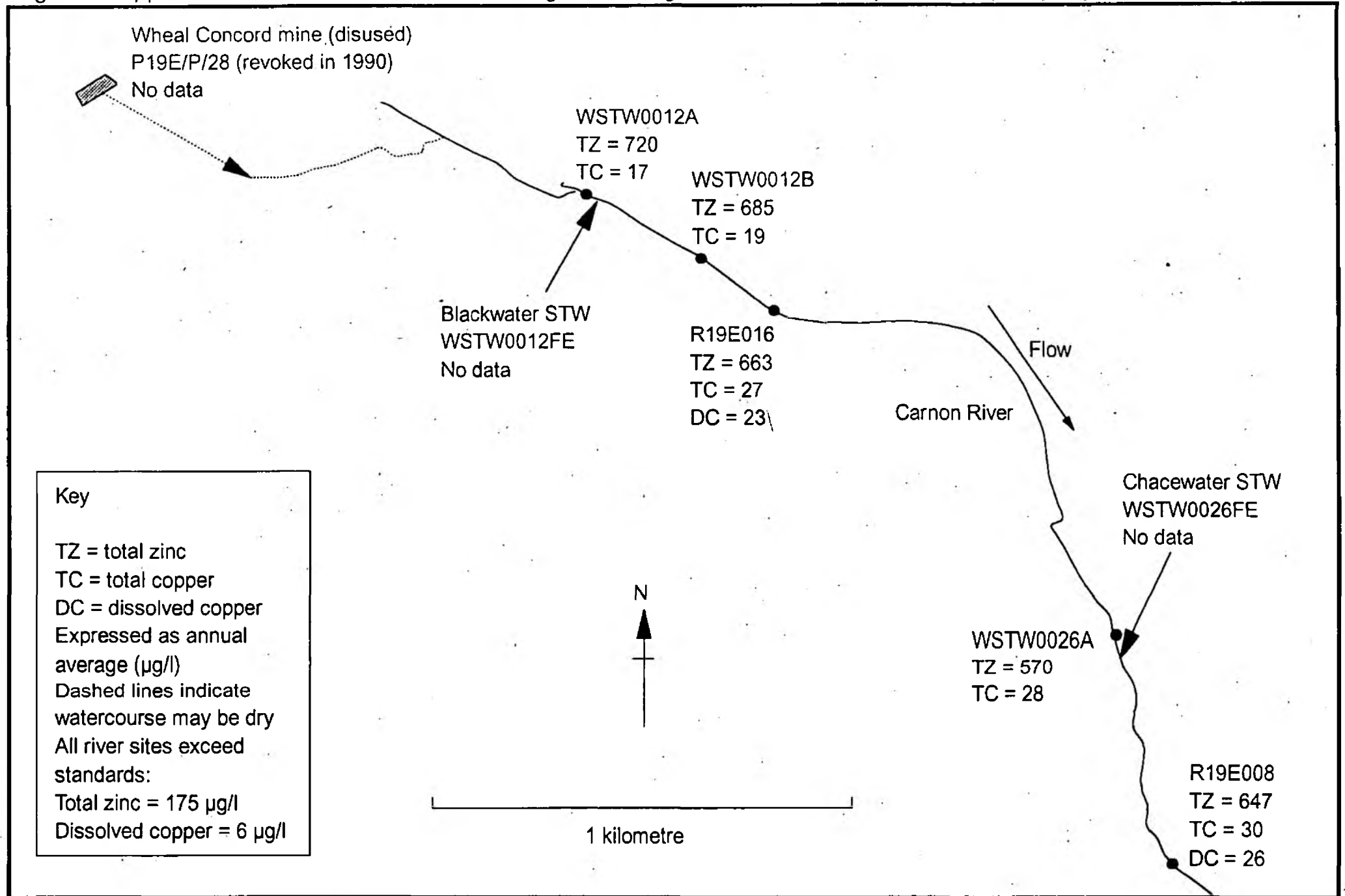


Figure 2. Location of disused mine workings and monitoring points upstream of Blackwater STW

