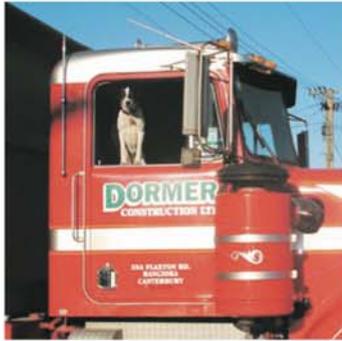


DRAINAGE • DEMOLITION • DE-WATERING • EARTHWORKS • CIVIL



# Estuary Road Sewer Renewal – Stage 1



## NEW ZEALAND CONTRACTORS FEDERATION CANTERBURY CONTRACTOR OF THE YEAR AWARDS 2008 CATEGORY B & UNDERGROUND SERVICES ESTUARY ROAD SEWER RENEWAL Stage 1

### INTRODUCTION

In October 2007 Dormer Construction Ltd submitted a tender for and were subsequently awarded 'Contract 07/08-56, Estuary Road Sewer Renewal – Stage 1' with the Christchurch City Council. The value of the contract was \$704,028.

The contract involved the replacement of 657 metres of 300mm diameter gravity sewer pipes from Ebbitide Street to No 301 Estuary Road. This sewer was completely below ground water level and varied in depth from 1.6 to 4 metres. At the top end of this line a pumping main from a South Brighton sewage pump station discharged into the line and this had to remain operational throughout the contract works.

### PROJECT BACKGROUND

This line, like many others at the ends of pumping mains in Christchurch, was subject to Hydrogen Sulphide attack and the concrete pipes were nearing the state of collapse. Hence the reason for the renewal even though the line was only approximately 50 years old.

### CONTRACT ADMINISTRATION

Because Dormer Construction Ltd has very good systems in place for contract administration, this was not a difficult contract to administer. For this contract there were however 2 large variations/additions to the extent of the work which had to be separated as far as administration was concerned. One

of these variations was carried out for us by another contractor to ensure it was completed on time and to minimise public disruption.

Added to this was the fact that we were granted appropriate extensions of time for both this contract and our next contract which was also with the Christchurch City Council was very important.

### HUMAN RELATIONSHIPS

A health & safety plan was developed for the contract and during the work there were no accidents or incidents. Our staff worked well with the public and with a school close by gained a good relationship with them after some initial discussion about the works.

With a contract running for this length of time, 6 months, the public is always going to get a little frustrated with the disruption for this length of time. However by carrying out the work the way we did there were very few negative comments about the job. For the most part we managed to only have disruption over one manhole length at a time, and apart from a couple of days while waiting for the previous length to be asphalted, disruption was only over a length of no more than 90 metres at a time. This we believe was appreciated by the public and helped. There was a lot of traffic on this road being the main route between South Brighton and the City arterial, especially morning and night, and we caused only minor delays to this traffic.





## NEW ZEALAND CONTRACTORS FEDERATION

# CANTERBURY CONTRACTOR OF THE YEAR AWARDS 2008

## CATEGORY B& UNDERGROUND SERVICES

### ESTUARY ROAD SEWER RENEWAL Stage 1

#### PROJECT DIFFICULTIES...

Also the difficulties of re-benching the manholes with the large constant flow in the main as previously discussed.

The top end of the line was on the bend in the road at the start of Ebbtide Street and this was a significant challenge with traffic management that would work and allow traffic to safely go around the work site when we were on working and after hours. The plan we put in place worked without incident. This was made worse because we did not have room in the road for well point installation and the fact that we had to install a new manhole which involved extra work. Careful planning of this part of the work kept our time of disruption to a minimum.

The estuary was beside this corner in the road which meant that the ground water level was tidal with large ground water yields and this did not help with the work

#### QUALITY ASSURANCE

With this contract the CCC had new and comprehensive quality assurance requirements for all parts of the contract works. Both CCC and Dormer Construction were on a learning curve as to what they required for this.

A new and comprehensive quality assurance plan was developed for this contract including new check sheets for those involved with the contract before work on the contract was started. All of these check sheets were kept up to date and all staff involved took ownership of their own areas and at the end of

the contract a set of quality assurance records were produced for which more than covered CCC requirements.

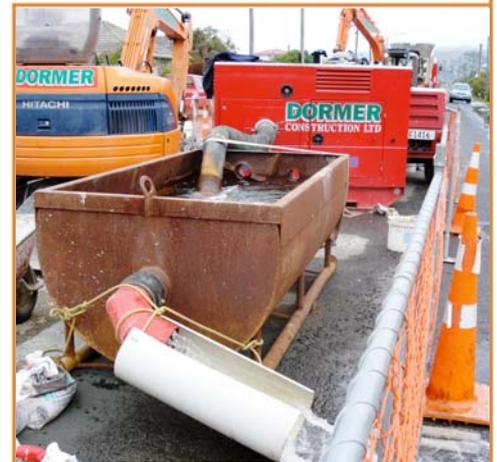
This required rigorous book keeping and good communication to ensure that all areas required were covered by the documents submitted to the CCC at the end of the contract. This also involved co-operation of all materials suppliers, sub contractors, and our staff working on the site and at the end of the day proved to be very successful.

The CCC said that our quality information was a little slow, but this was more to do with a delay caused by presenting the quality assurance documents in a format, that a major document like this deserved and in turn giving us a very high rating

This proved to the council the effort and value we put on the document we supplied to them. The QA document was on hand over a very large and impressive compilation of proven workmanship which we were proud of – we received 100% in our review.

#### MAJOR ADDITIONS

Whilst carrying out this contract the CCC also asked us to price two reasonably major additions to the work. They required these to be carried out while we working on the contract so that disruption in this area which also involved the ocean outfall contractor's heavy traffic would be finished for the adjacent residents.





## NEW ZEALAND CONTRACTORS FEDERATION

## CANTERBURY CONTRACTOR OF THE YEAR AWARDS 2008

### CATEGORY B & UNDERGROUND SERVICES ESTUARY ROAD SEWER RENEWAL Stage 1

#### MAJOR ADDITIONS... continued

The first of these involved the laying of a new connecting water main, and power cables, from an existing pump station to a new pump station in Jellicoe Street. To carry this out quickly and avoid undue disruption we arranged for another contractor, C & A Cox (a member of the contractors federation) to do this work on our behalf. The other extra was an extension of the sewer relay work for another two manhole lengths to take the work past Jellicoe Street. This was deeper and more difficult but was carried out within the time allowed by Council. These 2 extras added another 35% to the contract value.

#### ENVIROMENTAL FACTORS

During this contract major dewatering of the ground with the use of well points was necessary and the amount of water discharged from these was considerable. This work was close to an environmentally sensitive area, the estuary, and with the use of silt traps for the discharges no complaints were received. All pump discharges were checked on a regular basis to ensure no problems were caused. After passing through our silt trap the water discharged via the storm water system, or direct, to the estuary. ECAN were impressed with no discolouration or sedimentation of the water.

#### CONTRACT COMPLETION

The original completion date for the contract was 30 May 2008 which was subsequently extended to the 15 August after the additional work variations, and without the addition of any wet weather extensions that were due to us over the contract period. The works were completed on 15 August 2008.

#### MORE INFORMATION

For more information on this entry please contact:

Company name: Dormer Construction Ltd  
Contact person: Pete Dormer  
Contact number: +64 274 381 221  
Email: [petedormer@xtra.co.nz](mailto:petedormer@xtra.co.nz)  
Client/Principal contractor: CCC  
Consultant/Engineer: Tony Borkus, CCC  
Project commencement date: Mid Feb 08  
Completion certificate date: 15 August 08





# DORMER CONSTRUCTION LTD

