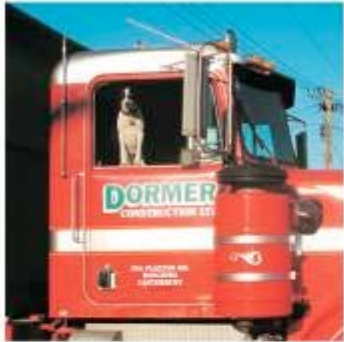


DRAINAGE • DEMOLITION • DE-WATERING • EARTHWORKS • CIVIL



Before



After



TRAVIS WETLAND

Chartwell Street Boxdrain, Christchurch

CANTERBURY CONTRACTOR OF THE YEAR AWARDS 09
CATEGORY B



TRAVIS WETLAND

Christchurch District Council CHRISTCHURCH



INTRODUCTION

In March 2009 Dormer Construction Ltd submitted a tender for and was awarded "Contract 07/08-147, Travis Wetland Chartwell Street Boxdrain" with the Christchurch City Council. The value of the contract was \$73,800.

The contract involved the removal and disposal of an existing timber drain and the formation of a new swale alongside the old drain. It also involved the construction of a predator moat in the Clarevale Reserve.

PROJECT BACKGROUND

The box drain had been identified as being unneeded by CCC drainage engineers some time ago and was falling into disrepair.

The filling of the box drain and the creation of the swale improves the boundary between the Travis Wetland and the neighbours by providing a more natural outlook.

Replacing of the box drain with a swale gives the Council the opportunity to establish a buffer of native wetland plants. Many of the neighbouring properties had steep and unstable banks along the boundary. As part of this project the angle of the bank was reduced using spoil from the swale.

The opportunity was taken to fell several large poplar trees and willows that were likely to be a hazard to neighbouring properties in the future. There were many

favourable comments from the neighbours as the work progressed.

Replanting by CCC is still required to finish this job. This is programmed to take place for spring, the ground would have settled down over winter by this stage. A community-planting day in conjunction with the Travis Wetland Trust workday is planned for Saturday 17th October, 2009.

CONTRACT ADMINISTRATION

With this contract the adjacent neighbours showed great interest in the project and CCC had carried out consultation with them, gaining their views on the work proposed and any concerns they may have. Most were more than happy with the work but were apprehensive about how the physical works may affect them.

At the start of the project we had a meeting with all Council staff who had been involved with the planning stage and went through how we proposed to do the works. At that stage the Area Ranger marked out trees and other plants that he hoped we could save during the work. It became apparent at that stage that the alignment of the new swale had to be a 'design as you go', to fit around these plants. This meant that our approach was that we would start at the downstream end of the work and clear a track along the line of the proposed swale and align it to miss most of the native plants to be saved.



Shows access around existing trees



Digger working on the formation of the Moat



Mulcher on digger with results of its work



CONTRACT ADMIN.. cont

We then worked our way out forming the swale and filling the drain as we went. This meant we had to get it right first time, as access was not possible after we moved through.

With careful planning and a good operator doing the work we managed to do this and ended up with a finished job that all stakeholders were proud of.

There were also a number of large trees, poplars and willows that had to be felled as part of the contract. We used a specialised tree felling contractor, Treetech, to do this work for us because of the size of the trees and the proximity to houses. It was not possible because of the very soft underlying ground conditions to remove these from the site. Therefore we had to lose these as much as possible along the line of the works. Council were happy for some of these to be pushed out along the swamp edge as they would degenerate over time, but did not want these left in heaps. The option we came up with for this was to bury the surplus logs at the bottom of the existing timbered drain when it was backfilled. As there was not sufficient fill on site to fully form the edge of the swale from the new alignment to the property boundaries this served a dual purpose in that we were able to better form this slope over the logs with the material available.

HUMAN RELATIONSHIPS

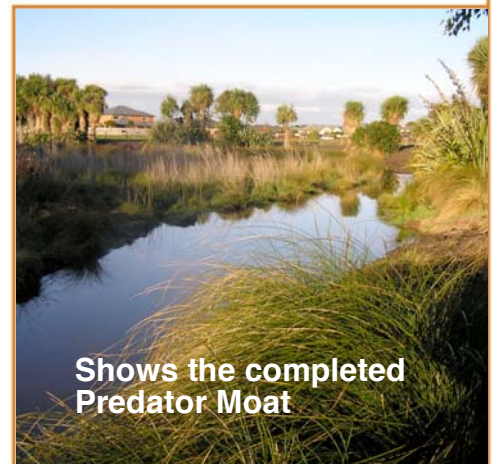
A health & safety plan and a contract quality plan were both developed for the contract. These worked well as the staff on the site took ownership of these and followed through with their completion. This cooperation between site staff, office staff, and Council staff led to the fact that the job went well with very few problems and any variations required or requested were carried out in a positive and friendly manner.

The property owners were kept informed as the work was done so that any concerns they had were addressed at the time of the works.

INNOVATION

We showed innovation in the following areas of the contract:

- As the under lying ground was very soft peat, the trees that had to be felled were cut to manageable lengths and these were used to assist with stable ground for the digger to work on in the softer areas. We used this timber as swap pads
- These logs were then lost on site by burying them in the old timber drain and under the slope from the new swale to the property boundaries.



Shows the completed Predator Moat



Shows Predator Moat and new path



New swale and firewood for residents



INNOVATION.. CONT

-Some of the cut trees and prunings were mulched with a digger operated mulcher, this provided a mulch for future plantings. This was operated from a larger digger and the ground was too soft to complete the entire contract this way.

-We set up a pump each day and any flow in the existing drain was pumped out into the swamp so that this water was not interfering with the work and flowing as dirty water to downstream sensitive areas.

-For the predator moat the access between the existing tree plantings meant that it was difficult to fully excavate the moat. By leaving the existing plants in place in the swampy area we were able to walk our digger over these using them for stability to work off in this swampy area. We then removed these plants as we moved along through the area.

CLIENT SATISFACTION

The client has advised us that they are very satisfied with the way that we carried out the works, and with the standard of the completed works, and would not hesitate to use us again on similar works. The completed job was of a high standard.

Please refer to the appendix 1 which is a performance assessment and letter from Council.

DESIGN CHANGES

It became obvious from the outset that the plans were only indicative. The alignment and finished shape of the works were a 'design as you go' job and this worked very well. The foreman that was on the job took pride in the work and after being shown the general shape of the work required did a very good job and saved most of the plantings that the council hoped to save by working around them and shaping the swale as he worked through the job.

PROJECT DIFFICULTIES

The main difficulties with the contract were as follows:

- Access to the job was difficult for normal plant and equipment to carry out a job of this nature.
- The underlying ground conditions were soft wet peat which meant that a special digger, a 10 tonner with swamp tracks, had to be used to carry out the work.
- In some areas the ground was so soft we used cut tree logs as pads for the digger to work on.
- The work was carried out in a live drain and we had to stop any dirty water flowing downstream into sensitive areas.



Prior to start of work



During work



After work



PROJECT DIFFICULTIES..

-The whole job was carried out in a very environmentally sensitive area so this had to be taken into consideration with everything that was done on the job.

By using innovative thinking and having a very good foreman on the job who took great pride in the finished product, the job went very well and no problems were caused.

By installing a double silt trapping system before we started, and with the addition of bypass pumping of the flow in the drain, there were no instances of dirty water going downstream.

QUALITY INSURANCE

With this contract CCC had quality assurance requirements for everything to do with the contract works.

A comprehensive contract specific quality assurance plan was developed for this contract including check sheets for those involved with the contract. All of these check sheets were kept up to date and all of those involved took ownership of their own areas and at the end of the contract a set of quality assurance records were produced for this contract which more than covers all that the CCC required.

MAJOR VARIATIONS

There were no major variations for the works

ENVIRONMENTAL FACTORS

Before we started the work we had to produce a comprehensive erosion and sediment control plan to cover all of our work in the drain. It was impressed on us that the downstream drain was very sensitive and that under no circumstances was any dirty water allowed to be discharged downstream. We put in place a double silt fence in the drain downstream from our work before any work was started, and although we initially planned to bypass pump the drain flow around our work area, we decided that to use the pump to pump the water into the adjacent swamp area and use this as a silt trap was a good option. This Council agreed and it worked very well. The flow in the drain was allowed to flow through the new swale formed each day while we were not on site. We formed small pond areas to stop erosion.

Christchurch City Council and ECAN monitored our works and were more than happy with our approach to the protection of the environment.



During work



One of the silt fences



Environmentally sensitive area

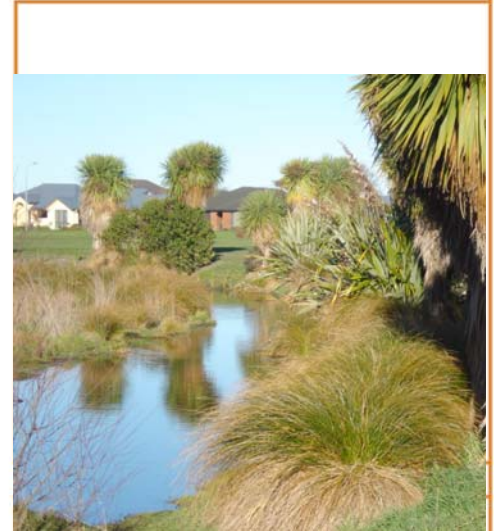


CONTRACT COMPLETION

The completion date for the contract was set at no later than 15 May 2009. The contract period was set at 6 weeks. Despite the fact there was some wet weather, which meant it was not possible to work in the drain, works were completed on time.

We did not need nor did we request an extension of time for the project.

Company name: Dormer Construction Ltd
Contact person: Pete Dormer
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Website: www.dormer.co.nz
Client: CCC
Principal contractor: DCL
Consultant/Engineer:
Kevin Burgess 03 9416482
Project commencement date: March 09
Completion certificate date: May 09



13 July 2009

The Manager
Dormer Construction Limited
P O Box 22674
CHRISTCHURCH 8142

Dear Sir

**CONTRACTOR'S PERFORMANCE ASSESSMENT
CONTRACT NUMBER 07/08-147
TRAVIS WETLAND CHARTWELL STREET BOXDRAIN**

Please find attached our "Contractor's Performance Assessment" for the above contract for your information. You are invited to provide comment on any part of the assessment if you consider it to be appropriate.

Thank you for a job well done.

Yours faithfully



Kevin Burgess
ENGINEER'S REPRESENTATIVE

cc Capital Programme Group CPP Attribute File
Dennis Preston (Project Manager)
Adrian Crosby

Encl

CONTRACTOR'S PERFORMANCE ASSESSMENT – CPE 48

CHRISTCHURCH CITY COUNCIL – CITY SOLUTIONS

Contractor: Dormer Construction Ltd
Contract: Chartwell Boxdrain
Contract Number: 07/08-147

Date: 08/07/2009
TRIM file: 500076

Brief Synopsis of Contract:

Size: Drainage Small: < 100K

Complexity: Moderate
 Wet ground;

Type of Work: Stormwater construction

Attribute	Factor	Performance				Scr.	Comments
		Un	Av	Gd	Ex		
H+S and Traffic Management Plan	Attitude to plans			x		75	Good supply of accurate details
	Application of plans			x		75	Generally good effort to meet requirements
Working to Programme	Preparation and monitoring			x		75	Regular consultation with Council
	Completion on time				x	100	Excellent effort made by contractor to finish on time.
Social Impact	Disruption to public and site tidiness				x	100	Disruption to public very minimal, worksite always very tidy
	Public relations			x		75	Positive feedback received
	Disruption to commercial premises					0	
Supervision	Supervision required				x	100	Brendan the foreman on site required only minimal supervision.
	Partnering			x		75	Practical suggestions made throughout the works
Resources	Plant and Equipment				x	100	Excavator used on site with the wide tracks was crucial to the excellent result.
	Materials			x		75	
Management skills	Personnel				x	100	High standard of personnel on site.
	Site control				x	100	Well planned approach used during the works.
	Communications with sub-contractors			x		75	Subcontractors were efficient and did not hold up the main contractor,
	Quality assurance			x		75	No testing required with minimal product brought in.
Methodology	Procedures and planning				x	100	Well planned approach to tackle this unusual site
	Application			x		75	
Services	Care around			x		75	Good care shown around trees, shrubs, etc
Technical Skills	Pipelaying					0	
	Structures					0	
	Sealing					0	
	Trench restoration					0	
	Waterways				x	100	Sediment Control worked well
	Landscape					0	
	Berms					0	
	Maintenance					0	

Assessed By: Adrian Crosby