

Incorporating Colour into Henderson Town Centre

Business Case for a Proposed Concept

Prepared by

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Service Manager Parks Planning

23rd August 2005

Introduction

The development of the new Civic Centre in Henderson, Waitakere City has initiated a number of upgrade and improvement projects which aim to revitalise the Henderson Town Centre. Alongside these development projects, and with the imminent shift of the Council into the core of Henderson, the Chief Executive, Harry O'Rourke has indicated a desire to ensure that the Town Centre is vibrant and colourful and suggested the use of hanging baskets to achieve this. The Chief Executive has allowed for the preparation of this business case to investigate the most effective way to create a colourful impact within Henderson Town Centre in a consistent manner with the other design initiatives being undertaken over the coming year.

Design Considerations

In developing a proposal for consideration it was important to ensure consistency with other design initiatives that have been approved for Henderson Town Centre, this will ensure that whatever response is taken will contribute to the overall improvements of the Town Centre and compliment an overall design aesthetic that will be achieved through integration of all the projects.

Integrated Projects

Other projects that are being undertaken which influence the proposal include;

- **Henderson Street Furniture Palette** – a range of standard furniture and material specifications specific to Henderson Town Centre that will be used throughout the public spaces and streetscape to provide linkages. The materials include stainless steel, timber and various types of concrete finish such as exposed aggregate, honed concrete and sand-blasted concrete.
- **Henderson Transport Interchange** – a new bus and train station linked to the Civic Square that is incorporating the materials palette for Henderson in the paving.
- **Civic Square and Japanese Garden** – nodal public spaces which have their own character but which link with the overall Henderson design palette through use of consistent materials and some of the seating elements.
- **Henderson Library Plaza** – a nodal public space that again has its own character but which utilises the materials palette and seating for Henderson and incorporates these into the specific design for the plaza.
- **Railside Avenue and Ratanui Street Upgrade** – a project which utilised the materials palette and furniture to provide a clear linkage between all the nodal public spaces and provides a strong and clear design character for Henderson Town Centre.

AI

Overall Concepts and Design Cues

The overall design cues that are characterising the Henderson Town Centre developments include the paring back of clutter to provide clean lines and consistent use of materials throughout all the streetscape and public spaces within the Town Centre.

Overall Henderson is a very active and busy retail area that requires a strong and simple design to link different areas together. This has been achieved through the use of textured concrete and clean lines and by ensuring there is a clear flow between different parts of the Town Centre through the use of a consistent materials and furniture palette.

Other design cues that have influenced the various spaces include the bounding of the Town Centre by both the Opanuku and Oratia streams (Twin Streams) and their associated alluvial terracing, views to the Waitakere Ranges and the multi-cultural and diverse nature of the West. These are reflected in the patterning that is being utilised in the streetscape and other open space areas.

Planting within the spaces varies depending on the particular character of the designs but is predominantly a mix of native and exotic species, which nicely reflects the multicultural concepts. The library plaza has a mix of native and exotic specimen trees and a wetland feature. The Civic square and Japanese gardens are a mix of native and exotic plantings and specimen trees (with a predominance of exotic). The Ratanui Street and Rainside Street upgrade has the use of exotic specimen trees and a mix of native and exotic plantings.

Brief

The request for hanging baskets in Henderson Town Centre is specifically aimed at providing vibrancy and colour within the Town Centre. At the same time it is important to ensure any proposal is complimentary to the other design elements that will be incorporated into the streetscape and associated public open space areas (as outlined above). From the Chief Executive's desire to see colour and vibrancy within the Town Centre and picking up on the issues outlined in the Design Considerations section of this report, the following brief has been developed:

- Provision of a bold colour impact within Henderson
- Extensive use of a colour theme to create the most impact
- Use of non-native plant species
- Focus on flowering plants (annuals or perennials)
- Opportunity for seasonal or special event colour variations
- Minimisation of maintenance
- Integration with other proposed street gardens within the Town Centre
- Complimentary to the streetscape design
- Reflective of the multicultural Waitakere character

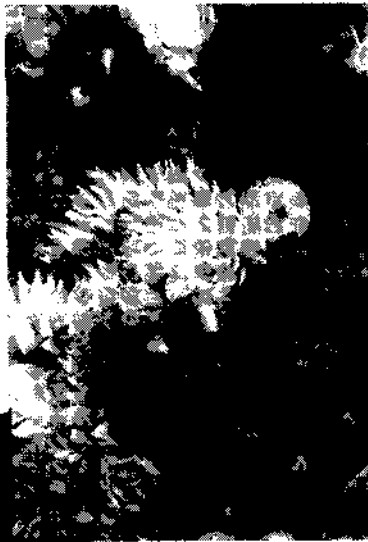
A2

Proposal - 'A Ribbon of Red'

Taking into account the above brief the following proposal is being put forward as the most dramatic and effective way to incorporate colour into the Town Centre.

One of the challenges of providing planting opportunities within a Town Centre is the lack of space for planters and gardens. Hence the use of hanging baskets has been one response to these constraints. However, hanging baskets also have constraints in terms of weight restrictions and inconsistency in verandas (which is the case currently in Henderson). For a street of the scale of Great North Road the baskets would need to be quite large to provide the required impact that is desired and this would be difficult to achieve within the current situation.

However, within Henderson we have a unique opportunity in the road median islands to provide a strong annual planting display – a **'Ribbon of Red'** which runs through the main street and is visible from all aspects.



A3



Photo of current median strip on Great North Road



Photo of proposed '*Ribbon of Red*' annual planting and plane trees within the median strip

A4

The road medians are currently paved with cobblestones and have specimen tree plantings of Rewarewa. These are woefully inadequate in providing any decent tree scale to the Town Centre and a review of the species within these medians is being undertaken as part of the streetscape project. The proposed tree species is an exotic plane tree which will provide seasonal colour and an appropriate scale within the wide street environment of Great North Road.

The medians are very wide (2.5 metres) and provide a perfect opportunity to create a dramatic colourful feature through the Town Centre that is both highly visible, isolated from the clutter of signage and veranda hoardings etc and is protected from general trampling by pedestrians.

The images attached at A 1, 2 and 3 provide an indication of the concept as it would be seen in the street and highlights the extent of the proposal.

Within the Ratanui Street and Railside Avenue street upgrade project there are also a number of corner street gardens which could be used to create even more drama by repeating the species and colour used in the central median. Again reinforcing the connectivity within the streetscape environment and

The aim is to provide a bold colour impact, with the use of a single, showy species, or a mix of different heights within the same colour theme.

Design Considerations for Use of Annuals

The key to designing a beautiful annual bed is to limit the colour theme and mix an even balance of flower shapes, textures and heights or to limit the palette to one species of annual.

It is proposed for the '*Ribbon of Red*' planting to select a colour theme of red, orange and yellow. Then pick an even balance of rounded and spiked flowers. Duane says the rounded flowers give a restful feeling and the spiked flowers give an excited uplifting feeling.

Plants would be placed in the median according to height. Tall plants in the centre, then medium-size plants next to the tall ones, and then shorter plants in the front or edge of the median.



A5

Maintenance Requirements

The recommendation is that if we use brightly coloured annuals as outlined in the proposal that we undertake all necessary requirements to ensure the absolute best and most robust display of colour possible. This will require the following provisions to ensure the complete success of the project:

- Irrigation of the medians and garden corners
- Regular growing on and quarterly renewal of the annuals to ensure all-year round colour
- Specific species specifications to the Contractor to ensure consistency in the use of the annuals.
- Regular fertilising and mulching of the garden areas
- Regular weeding for unwanted seedlings and weeds
- Adhoc renewal for damaged plants

Conclusion

There is a unique opportunity in Henderson to create a very dramatic, bold and colourful design statement through annual planting within the Great North Road medians that run through the entire Town Centre. It is proposed to create a 'Ribbon of Red' which compliments the new Henderson Town Centre open space designs and streetscape designs. This red/orange colour theme can also be reflected in other street gardens and within round-about.

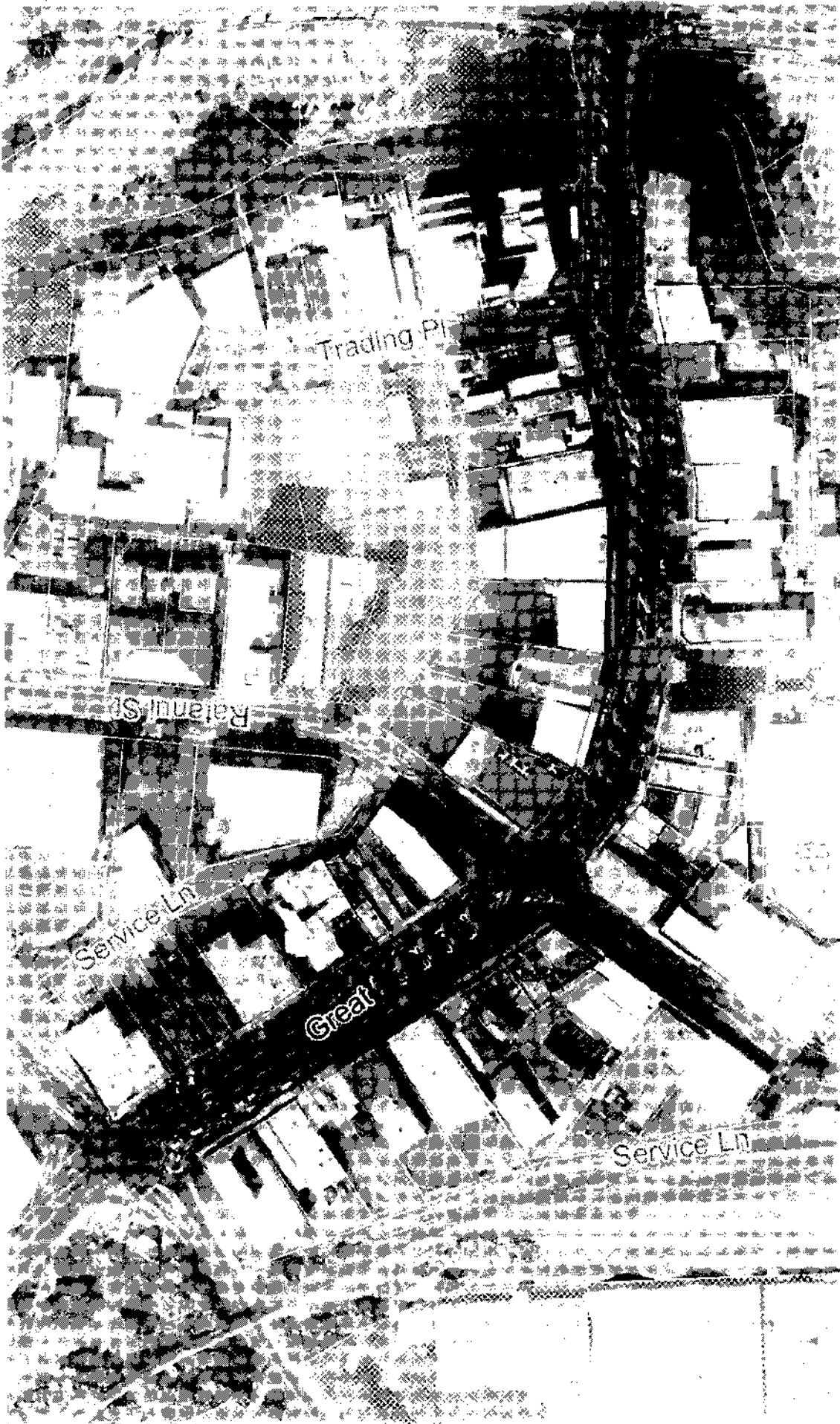
The opportunity to create such an expanse of colour in a protected and visible location is exciting and it is my professional opinion that it offers more scope, in this particular situation, for dramatic impact than hanging baskets (which are more appropriate for the village characters of Glen Eden and Titirangi).

It is recommended that this approach be progressed through the upgrade of the medians to be completed at the same time as the Ratanui Street and Railside Avenue street upgrade project. This will ensure the planting is in place prior to the opening of the library and Civic Centre in 2006.

Recommendation

1. *That the Chief Executive confirm the use of the Great North Road median islands as the colour feature within Henderson Town Centre with linkages through use of the same annuals to the corner street gardens and round-a-bouts as appropriate.*
2. *That the required budget to undertake the full renewal of the median strips including ongoing maintenance and quarterly plant renewals be provided to implement the project to align with the completion of the Railside Avenue and Ratanui Street projects.*

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SCALE: NTS
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REVISION NO: A
JOB NO: 1984

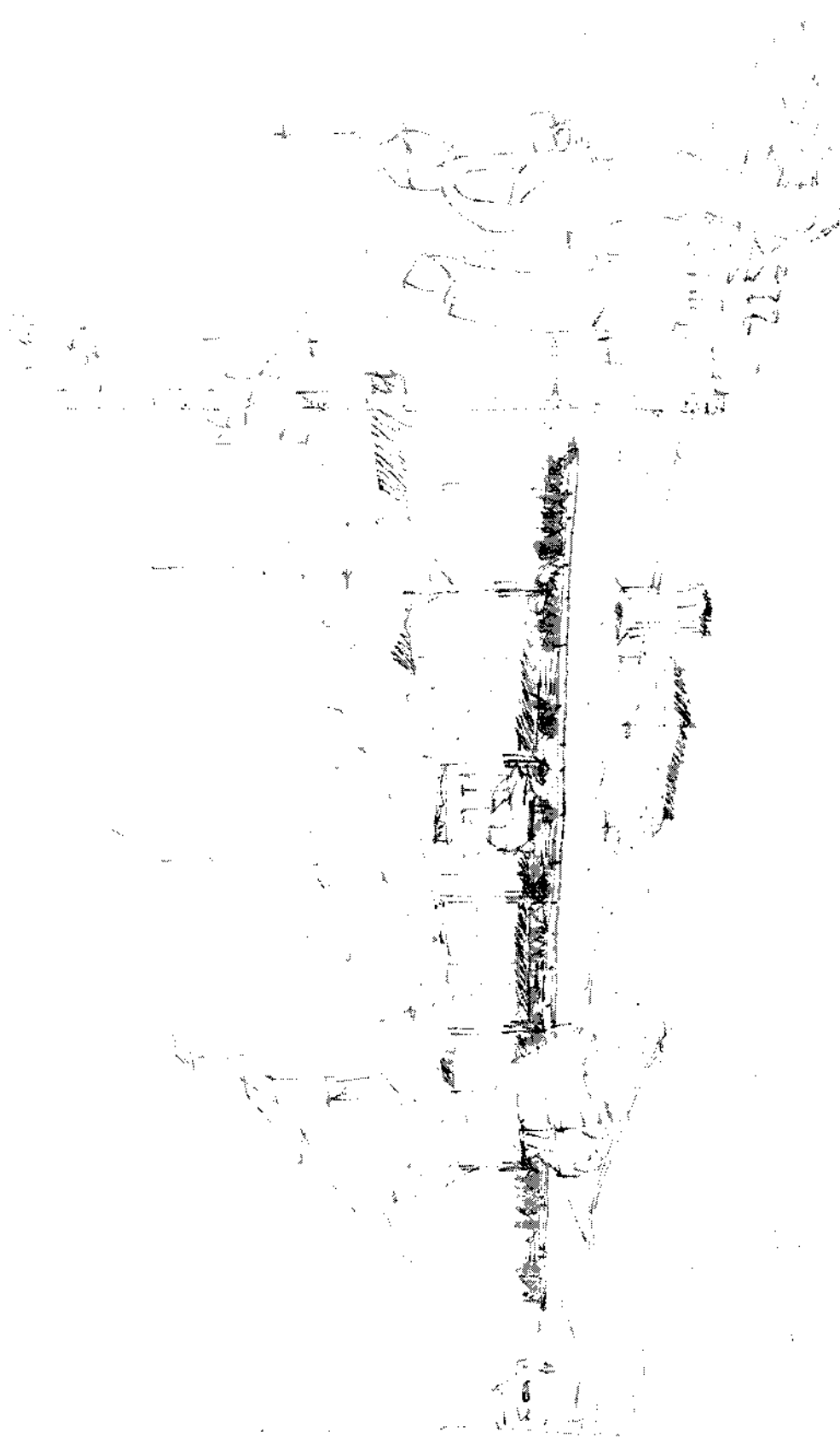
HENDERSON CBD MAINSTREET

CENTRAL MEDIUM STREET TREE REDESIGN

SITE WIDE CONCEPT PLAN

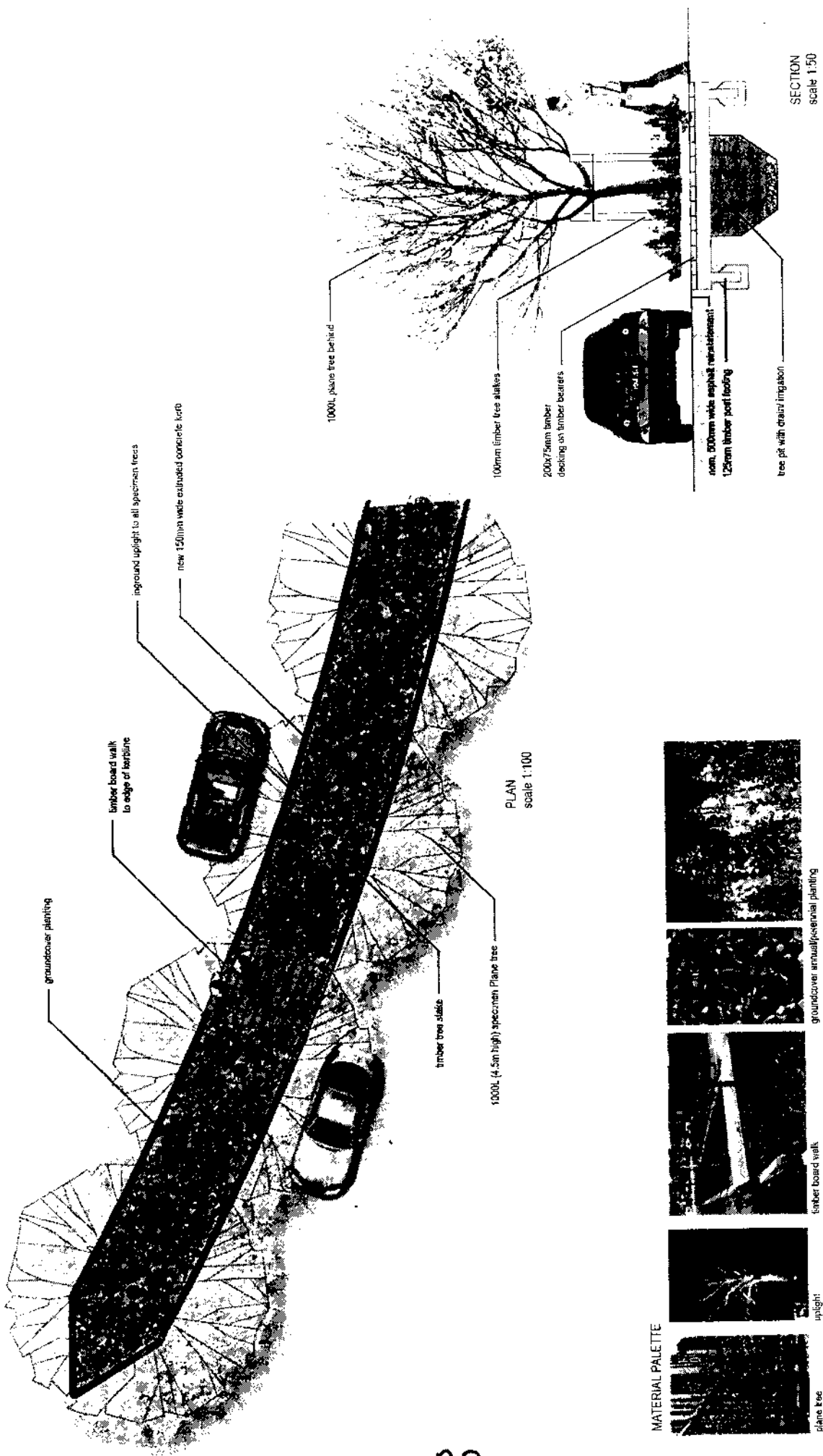
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A7



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REVISION NO.: A
JOB NO.: 1984

HENDERSON CBD MAIN STREET
CENTRAL MEDIUM STREET TREE REDESIGN
OPTION 2 CONCEPT SKETCH



isthmus GROUP

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 SCALE: NTS
 DATE: 24 AUG 2005
 REVISION NO: C
 JOB NO: 1984

HENDERSON CBD
 GREAT NORTH ROAD CENTRAL MEDIAN UPGRADE
 OPTION 2



TERRAM

Root Guard

Protect pavements, underground services, walls and foundations from the damage that is caused by tree roots

A10

Tree Root Control Barriers

The Problem

Tree roots growing underneath lawns, paths, drives, patios and roads can be a nuisance. Frequently they lift or crack the surface resulting in the need for expensive repairs. Boundary walls with shallow foundations can also be cracked if large roots grow under them.

Damaged underground pipes, or pipes with faulty joints, can become blocked if roots enter them and proliferate. Even after repairs damage may recur unless roots are prevented from growing back into the vulnerable area.

Tree roots can also contribute to building damage by undermining foundations and is related to the influence of roots on the soil. Damage of this sort only occurs on clay soils (so houses on non-clayey soils should be completely safe unless a tree is very close, i.e. within about 1-2 metres) and is usually confined to older buildings on shallow foundations. The problem is that clay's shrink and dry out. Tree roots may dry

soils beneath foundations to such a degree that the consequent soil shrinkage results in parts of the foundation no longer being supported. When this occurs the building may subside and crack and in these circumstances expensive underpinning may be needed. Where damage is caused the most obvious remedy is to remove the offending tree. However, this is not always a practical or desirable solution. A more environmentally responsible alternative may be to place a tree root control barrier in the soil between the tree and the structure at risk. However, creating an *effective* root barrier is not as simple as it appears since roots may be able to grow over, under, around or through it. Nevertheless, if a barrier is properly designed and installed and uses the right materials it can be a useful tool in controlling nuisance roots.

The first step to designing an effective barrier is to have a basic understanding of how tree roots grow.

So, How Do Tree Roots Grow?

People often wrongly assume that tree roots are thick and grow down into the soil for many metres (*Figure 1*). In reality tree roots:

- Are usually only large near to the trunk and get thinner the deeper and further from the tree they go. At a distance of just 3-4 metres from the trunk most roots are no bigger than a few centimetres in diameter.
- Spread outwards from the trunk, more or less parallel with the soil surface, rather than growing downwards (*Figure 2*).
- Can spread horizontally in any direction for a distance equivalent to at least the tree's height.
- Are usually relatively shallow; 80-90% of a tree's roots are in the upper metre of soil. Few roots reach depths of more than about 2-3 metres and at this depth they are only a few millimetres in diameter.



Figure 1. Incorrect.

Figure 2. Correct.

A Solution

Use the right materials

Materials to be used as root control barriers should have the following qualities:

- Resistant to root penetration
- Resistant to puncturing
- Biologically inert
- Resistant to biodegradation
- Easily installed
- UV resistant

Terram root control products have all these qualities and more.

Impermeable barriers

The choice of materials for a root control barrier will depend upon the specific application. Experiments with high-density polyethylene have demonstrated that this material can withstand penetration by even the most vigorous of tree roots. Therefore in applications that do not need a permeable barrier use **Terram Root-Guard Plus**. This is a composite

of Terram non-woven geotextile and HDPE and will give the greatest degree of protection afforded by a flexible barrier material.

Permeable barriers

In some instances it may be necessary to have a water permeable barrier, e.g. surrounding land drains (*Figure 3*). Although some permeable barriers may not provide the high degree of protection as HDPE, they still provide excellent resistance. In this case Terram Non-Wovens, made of bonded Polypropylene and Polyethylene, will provide excellent resistance to tree roots. **Terram Root-Guard** has been shown to be effective in resisting root growth in all experiments using this material. Terram Root-Guard has a high tensile strength, is resistant to puncturing and is capable of withstanding the differential forces that can develop in drying clay soils. Therefore where resistance to root penetration and permeability are required use **Terram Root-Guard**.

Designing a Root Control Barrier

Whilst the material used for a barrier may resist root penetration, the barrier will only be effective if it is designed and installed properly. So make sure that it:

- **Extends below the likely depth to which roots will grow.**
If a barrier is too shallow roots may grow under it and up towards the surface again.
- **Protrudes above ground level.**
If the top is buried, roots may grow over it. It may be necessary to embed the above ground part in a durable material (e.g. concrete) to avoid it being damaged.
- **Is situated between the structure at risk and the tree.**
- **Is long enough so that roots don't grow round it.**
It may be necessary for the barrier to extend either side of the tree a distance equivalent to its anticipated mature height. Building a barrier in an arc around a tree may be a possible solution.
- **Is free of any openings or joints through which roots might grow.**
The barrier should, therefore, be sealed around every service or structure that crosses it. Or if a barrier is used to surround something (e.g. perforated drainage pipes) the barrier material should be overlapped and joined. Please refer to Terram Ltd for more information.
- **Is not torn or split during installation.**

What About the Tree?

Digging trenches near to trees to install a barrier is likely to result in significant root severance – the closer to the tree, the worse the damage.

Generally, leave a distance of at least 3 metres between the tree and the trench, and a greater distance if the tree appears to be in poor health.

General advice is contained in BS5837 *Trees in Relation to Construction* and specialist advice may be obtained from an arboriculturist (a list of consultants is provided by the Arboricultural Association).

Also, if the tree has statutory protection, because it stands in a Conservation Area or is covered by a Tree Preservation Order (TPO), consult the council before carrying out the work. Failure to do so may result in a hefty fine.

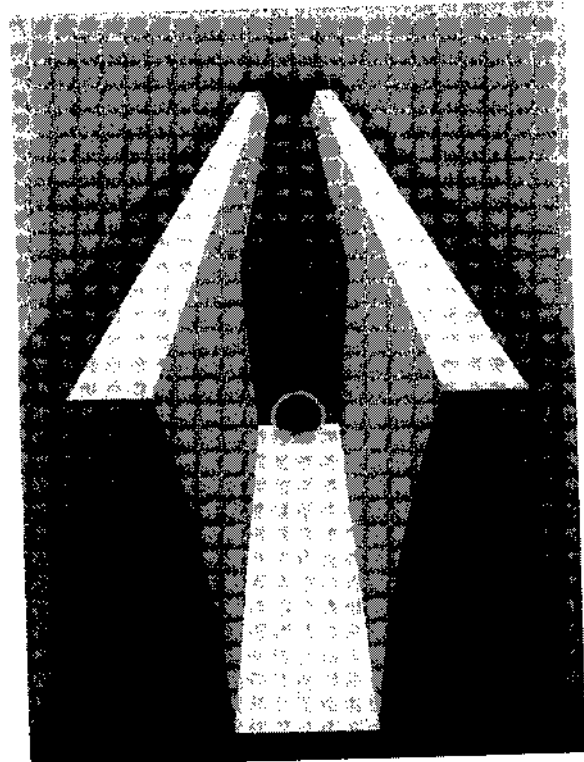


Figure 3. Terram Root Guard surrounding drainage materials.

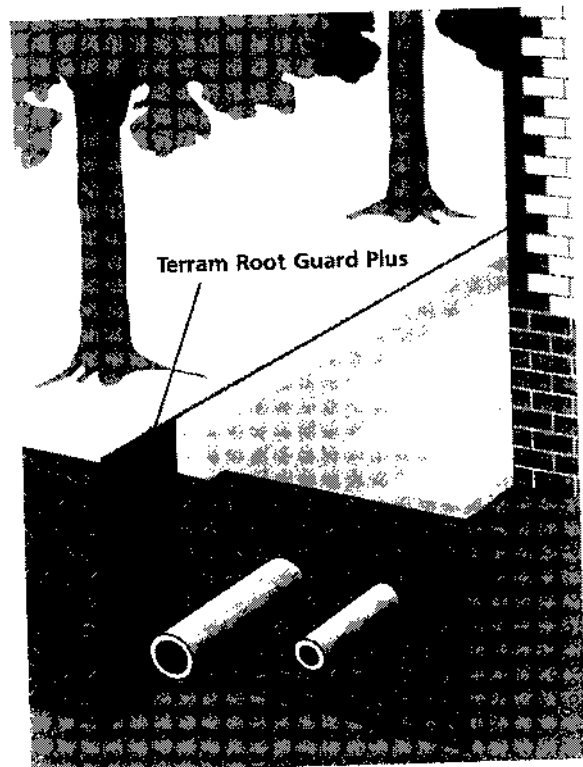


Figure 4. Terram Root Guard Plus installed as a vertical barrier can protect pavements, underground services, walls and foundations.

Example applications

Protection of surfaces

Most damage to paved or tarmacked surfaces occurs within only a few metres of a tree and is caused by roots less than half a metre deep. Such surfaces may therefore be protected by relatively shallow barriers (approximately 1 metre deep). This will serve to prevent roots growing directly under the surface and will deflect roots to deeper soil levels where they will remain small and will therefore be less likely to cause damage. Even if roots grow under the barrier and towards the surface again they should have tapered sufficiently so that they no longer cause damage. In this case use Terram Root-Guard, where permeability is vital (perhaps if there are underground springs) or Terram Root-Guard Plus where permeability is not an issue.

Protection of walls

Where walls show early signs of cracking due to the influence of roots, severance of the offending roots and the installation of a root barrier to a depth of about half a metre between the tree and the wall should arrest the damage. Install the barrier immediately adjacent to the wall, inserting a layer of compressible material (such as polystyrene or clayboard) between the barrier and the foundation (in order to ensure that roots growing up to the barrier do not cause excessive referred pressure against the wall).

Disclaimer

This brochure is intended as general guidance and does not constitute detailed installation instructions. Terram does not accept any liability for loss or damage resulting directly or indirectly from installation of our barrier materials in sole reliance on the guidance in this brochure. Terram recommends that our barrier materials are installed by appropriately qualified installers. Please see Terram's standard terms of sale for details of the guarantees Terram offers in relation to our materials.



Further reading

BS 5837 (1991). A Guide for Trees in Relation to Construction. British Standards Institution.

Biddle, PG (1998). Tree Root and Foundations. Arboriculture Research and Information Note 142/98/EXT. Arboricultural Advisory and Information Service, Farnham.

Dobson, M (1995). Tree Root Systems. Arboriculture Research and Information Note 130/95/ARB. Arboricultural Advisory and Information Service, Farnham.

Marshall, D, Patch, D and Dobson, M (1997). Root Barriers and Building Subsidence. Arboricultural Practice Note 4. Arboricultural Advisory and Information Service, Farnham.

Nicoll, BC and Armstrong, A (1997). Street Tree Architecture and Pavement Damage. Arboriculture Research and Information Note 138/97/SILN. Arboricultural Advisory and Information Service, Farnham.

For further information please consult: www.terram.com



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ISTHMUS GROUP

GREAT NORTH ROAD CENTRAL MEDIAN UPGRADE - COST ESTIMATE CONCEPT ISSUE - 26 OCTOBER 2005

Item No.	Description	Unit	Rate	Quantity	Cost
1 Preliminary and General					
1.1	General	LS	\$ 2,000.00	1	\$ 2,000.00
1.2	Construction and management plans	LS	\$ 1,000.00	1	\$ 1,000.00
1.3	Survey and setting out	LS	\$ 2,000.00	1	\$ 2,000.00
1.4	Traffic Management	LS	\$ 2,000.00	1	\$ 2,000.00
1.5	As built drawings	LS	\$ 1,000.00	1	\$ 1,000.00
				subtotal	\$ 8,000.00
2 Excavations and Downtakings					
2.1	General excavations and removal of hotmix, kerbs, concrete, paving, gardens and the like.	m ²	\$ 10.00	560	\$ 5,500.00
2.2	General downtakings	LS	\$ 2,000.00	1	\$ 2,000.00
2.3	Tree removal works	LS	\$ 5,000.00	1	\$ 5,000.00
				subtotal	\$ 12,500.00
3 Earthworks					
3.1	Excavate 1.2m x 1.0m tree pit trench, cut to waste.	m ³	\$ 35.00	215	\$ 7,525.00
3.2	Excavate 450mm planter bed, cut to waste.	m ³	\$ 35.00	250	\$ 8,750.00
				subtotal	\$ 16,275.00
4 Water Supply					
4.1	Supply and install water points	No	\$ 1,250.00	4	\$ 5,000.00
4.2	Supply and install water supply to irrigation headworks.	No	\$ 1,900.00	3	\$ 5,700.00
				subtotal	\$ 13,200.00
5 Kerb and Channel Construction					
5.1	Supply and install 150mm thick compacted AP40 base for kerblines.	m ³	\$ 120.00	10	\$ 1,200.00
5.2	Supply and install 150mm wide concrete kerb.	m	\$ 70.00	420	\$ 29,400.00
				subtotal	\$ 30,600.00
6 Roadmarkings and Signs					
6.1	TRAFFIC SIGNS- Supply and erect				
	PW55	each	\$ 410.00	4	\$ 1,640.00
	RG6	each	\$ 325.00	4	\$ 1,300.00
6.2	ROADMARKING - Supply and install				
	White continuous reflectorised line - WC100R	m	\$ 1.50	100	\$ 150.00
	Yellow broken reflectorised line -	m	\$ 3.25	420	\$ 1,365.00
				subtotal	\$ 4,455.00
7 Roading and Carriageway Reinstatement					
7.1	Mill out nom. 500mm wide strip along kerblines, asphalt to be replaced	m	\$ 8.00	420	\$ 3,360.00
7.2	Construct asphaltic concrete reinstatement nom. 500mm wide. Includes sawcut.	m	\$ 25.00	420	\$ 10,500.00
				subtotal	\$ 13,860.00

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Item No.	Description	Unit	Rate	Quantity	Cost
8 Flush Timber Boardwalks					
8.1	Construct Hardwood Timber Boardwalk, flush with top of kerb level.	m ²	\$ 525.00	60	\$ 31,500.00
				subtotal	\$ 31,500.00
9 Lighting and Electrical					
9.1	Supply and install 16-watt in-ground uplighter and blackout including concrete footing to shrub beds.	No.	\$ 1,100.00	21	\$ 23,100.00
9.2	Supply and install electrical ducting, cabling and commissioning for all lighting.	LS	15,000.00	1	\$ 15,000.00
				subtotal	\$ 38,100.00
10 Planting and Irrigation					
10.1	Supply and install 4.5m 1000L Oriental Planes in tree pits. Includes tree staking.	No.	\$ 1,500.00	21	\$ 31,500.00
10.2	Prepare planter bed including all excavation and supply and installation of planter medium and bark mulch.	m ²	\$ 45.00	650	\$ 29,250.00
10.3	Supply and install potted colour bedding plants.	No.	\$ 5.00	5277	\$ 26,385.00
10.4	Design, supply and install irrigation system to all garden beds and tree pits	LS	\$ 30,000.00	1	\$ 30,000.00
				subtotal	\$ 117,135.00
11 Defects Liability / Maintenance					
11.1	Maintain all planted material for a period of 12 months	Month	\$ 1,000.00	12	\$ 12,000.00
11.2	Maintain all hardworks for a period of 12 months	Month	\$ 500.00	12	\$ 6,000.00
				subtotal	\$ 18,000.00
				total	\$ 333,987.50
12 Design Fees & Contingency					
12.1	10% Construction Contingency. Includes Design Fees	LS	\$ -	1	\$ 30,362.50
				total project cost	\$ 364,350.00

A15

Architect's report no.11

architectus™

project	WAITAKERE CIVIC CENTRE	file ref	0311-F06-011-JM
job no.	0311	date	17-11-05
client	WAITAKERE CITY COUNCIL		

1.0 Client/Brief

- Work on the artworks is ongoing. A meeting was held yesterday on site to discuss the bronze handrail inserts with the contractor. Wiring for the Matariki lights is complete as is the integration with the lighting control system.
- The sample of the Montpelier carpet has been approved and the supply and installation has been instructed.
- The final plan for the One Stop Shop has been approved and work is underway on the cabinetry for this area.
- A number of revisions have been requested to level 1 and level 3 of the Civic Wing. Work on these is continuing.

Architecture
Urban Design
Planning
Interior Architecture

2.0 Design Issues

- A plan of the carpark and street lighting has now been issued for pricing.
- The proposal for the internal colour schemes has been approved and Canam have been instructed to proceed.
- Following the visit to ARC and North Shore City Council to review their desking arrangements Canam are to install two mock ups of the partitions in the open plan areas of the Admin building. The mock ups are to be built to a height of 1500mm and 1200mm above floor level to enable a comparison between the two options.
- Drawings for the AV control booth in the Chamber have been completed and reviewed by the AV consultant. These have now been issued for pricing.

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Directors:
Malcolm Bowes
Patrick Clifford
Michael Thomson

3.0 Value Management

- Additional savings are being instructed as identified.

Consultant:
John Sinclair

4.0 Coordination

- We are continuing to work with Canam and the various consultants and sub-contractors to ensure co-ordination of the building works.

Auckland
Brisbane
Melbourne
Shanghai
Sydney

5.0 Programme

- Canam are reporting works are on program although they have noted concerns with the window sub-contractors. This is being addressed by Canam to minimize any risk.
- Work has begun on the site works for the southern carpark area.
- The copper roof to the Council Chamber is now complete.
- Erection of the cedar rainscreen has commenced on the Civic Wing.
- The metal roof to level 6 of the Admin building is complete.
- Installation of the partitioning system in the Administration building is ongoing and erection of the ceiling grids and suspension systems is well underway in both buildings.
- Installation of the electrical and mechanical services continues with the general wiring to the lower levels now complete. Data wiring has also commenced.
- The structural steelwork for the loading bay area has been erected.

6.0 Shop Drawings

- The final revisions to the window shop drawings have been issued.
- Shop drawings for a number of minor trades such as the louvres are being reviewed.

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Canam Construction: Waitakere Civic Centre **Contractors Report : 10th November 2005**

Report Period : 27/10/05 to 10/11/05

Prepared by : Nick Page

Date of report : 9/11/05

1.0 Contract status

- 1.1 Contract acceptance letter received 7 October 2004.
- 1.2 Insurance Policy cover notes sent on ATC No6 18/10/04. Insurance is effective from 26/10/04.
- 1.3 Bond - The contractors bond has been issued.
- 1.4 Agreed Contract Commencement date – 3 November 2004
- 1.5 Original Completion date – 12 April 2006
- 1.6 Extension of Time Approved –30 days.
- 1.7 Approved completion date – 29 May 2006.

2.0 Financial

- 2.1 Last Claim Submitted- Our twelfth claim was submitted on 28/10/05.
- 2.2 Certificate due date –11/11/05
- 2.3 Payment due date – 18/11/05
- 2.4 Outstanding payment issues – Nil
- 2.5 Variations – We have been continuing to work closely with Rawlinsons on providing & reviewing pricing for variations & VPR's.
- 2.6 We have confirmed AVS 1 to 3. We have received and commented on AVS 4. There is still a large backlog of claims to be confirmed.

3.0 Territorial authorities

- 3.1 Certificating Authority - Waitakere City Council
- 3.2 Building Consent Issues – Issued 2 November 2004 excluding drainage. The drainage consent was issued on 2 December 2004.
- 3.3 Resource Consent issues – We have received the allocation of issues to the parties (CI 41G) and are dealing with those identified for Canam.
- 3.4 ARC inspections – None in the last 2 weeks.

4.0 Programme Status

- 4.1 Construction Start Date – 3 November 2004
- 4.2 Projected Construction Completion Date – 29 May 2006.
- 4.3 An Updated Contract Programme showing progress to date is attached. Progress over the last two weeks has been satisfactory. We are still expecting to meet or better our contract completion date.

4.4 Construction Progress

Site Establishment

Canam site establishment is complete. Site roading work is on ongoing as required for plant access.

Foundations

Foundation & ground slab work to the link area is almost complete. The main link stair area remains to complete.

Panels

Panel casting is complete. Only some panels to the link lift and stair area remain to be erected.

Structure Admin Tower

The tower structure is complete with the exception of minor finishing & remedial work.

Structure Link

The main entry stair & L3 bridge area and the balance of the L2 plant room slab remain to be completed. Work is continuing in these areas.

Structure Civic

The structure to the Civic is now complete except for remedial work.

Carpentry & Fitout Admin

Work to the L1 to L6 external walls is proceeding. Core 2 framing is continuing in L1 to L6. Roof carpentry is almost complete. We are continuing with steel stud partitions to L1 to L3. Ceiling framing is continuing.

Carpentry & Fitout Civic

Framing to the inside of the council chamber area is nearing completion. The level 4 plant room is nearing completion. Fitout partitions will be commencing as soon as the skylight is completed which is expected this week.

Drainage

The balance of the drainage work on the Smythe Rd end is almost complete.

Siteworks

Forming of the main carpark has commenced. A problem has emerged with the existing ground in the main carpark area, where the clay subgrade level averages 300mm below the nominal subgrade level. This is overlain with old railway ballast and various soil materials. We are currently working around the problem area but urgently require direction from Engineer as to how we are to proceed.

Structural steel

Structural steel to the Civic and Admin is complete except for remedials. Structural steel to the link is almost complete except for the L2 plant room.

We note that the requirement for extra piles and panels to the link bridge pier (Panel 22) will prevent erection of a portion of the link bridge roof steelwork and associated completion work.

Windows & Cladding

Delivery of windows from Thermosash continues to be delayed due to capacity problems in their factory. In the last two weeks they have however met their revised target delivery dates and have advised us that they are taking measures to ensure that deliveries from now on meet the revised schedule. The windows to the Civic building are virtually complete. Delivery of the first major windows for the Admin block has commenced. We are continuing to work with Thermosash to try and minimise and mitigate the effects of the delays and are meeting with them regularly to review progress.

Brickwork on Gridline AD is continuing. Alcopla installation is continuing. Cedar battening on the Civic will be commencing next week.

Roofing

The membrane roof to the Civic is progressing and the copper roof installation is nearing completion. The main admin roof has is nearing completion.

Services

Shop drawings for Mechanical, Fire & Security are complete with only some minor issues still to be resolved. Data details have been revised for the new WCC data requirements. First fix of services is progressing on L1 – L6 in the Admin & L1- L3 in the Civic. Plant room installations are underway.

4.5 Planned for the next three weeks.

List of items planned to commence or continue in the next three weeks;

- Continuation of brickwork on Admin grid AD.
- Completion of roofing to the main admin building
- Carpentry to L1 to L6 admin continuing
- Gib linings continuing to Admin L1 to L3
- Partitions to Admin L1 to 5 continuing
- Link area footings & panel erection completion
- Continuation of carpentry to the council chamber
- Continuation of roof waterproofing & completion of copper cladding to Civic
- Continuation of external wall linings to the Civic
- Continuation of first fix to L1 – L6 services
- Completion of windows to the Civic
- Continuation of installation of windows Admin building
- Completion of L1 glass block walls to admin
- Continuation of drainage & siteworks

5.0 Subcontractor's engaged

5.1 Subcontractors engaged since the last report; Nil

6.0 Weather conditions / delays

- 6.1 General weather conditions during last fortnight –. The weather last week was variable, causing some delays to roofing.
- 6.2 Days lost due to inclement and/or adverse weather conditions in last period – No major time delays.

7.0 Health & Safety

- 7.1 Accidents during last period – A bricklayer was hit on the hard hat by a brick but was able to continue working and did not suffer any actual injury.
- 7.2 No Graffiti attacks in the last week.

8.0 Information required / outstanding

- 8.1 Other Outstanding issues – Refer minutes of Technical Issues meeting 3rd November 2005 for a listing. Significant issues requiring urgent reply include the following list. Some of these issues are now are at a point where critical path delays will be caused if final resolution is not achieved very shortly.

Joinery details, including the associated services and noggings (We have received the second batch of drawings. The balance of the details remain extremely critical as they may impact on service installations and carpentry and cause manufacturing & delivery delays).

Colour Schemes – There are a few outstanding colours still awaited

Final L1 revised ceiling layouts (Critical)

Lift door jamb details (Urgent)

Link bridge window & associated structural details (Critical)

Green roof temporary protection system

Resolution of the carpark subgrade issues

Updated link bridge revised Rawlinsons schedule

Revised Rawlinsons siteworks schedule