



Appendix D

Option 2 – Eastern Option: GreenWay on Eastern Side of Rail Corridor



● Constriction

○ Powerpole

--- approx Rail Centerline Drawn

— Greenway Alignment (Base Case)

||||| Hawthorne Canal

□ Railway Boundary

■ Light Rail Stop

||||| Greenway 2A, Elevated

||||| Greenway 2A, At Grade

1:1,250 (at A3)

0 5 10 20 30 40 50

Metres

Map Projection: Transverse Mercator

Horizontal Datum: Geocentric Datum of Australia

Grid: Map Grid of Australia 1994, Zone 56

N

CLIENTS | PEOPLE | PERFORMANCE

NSW Transport

Sydney Light Rail Inner West Extension

Option 2A

Extended Greenway Eastern Side Corridor

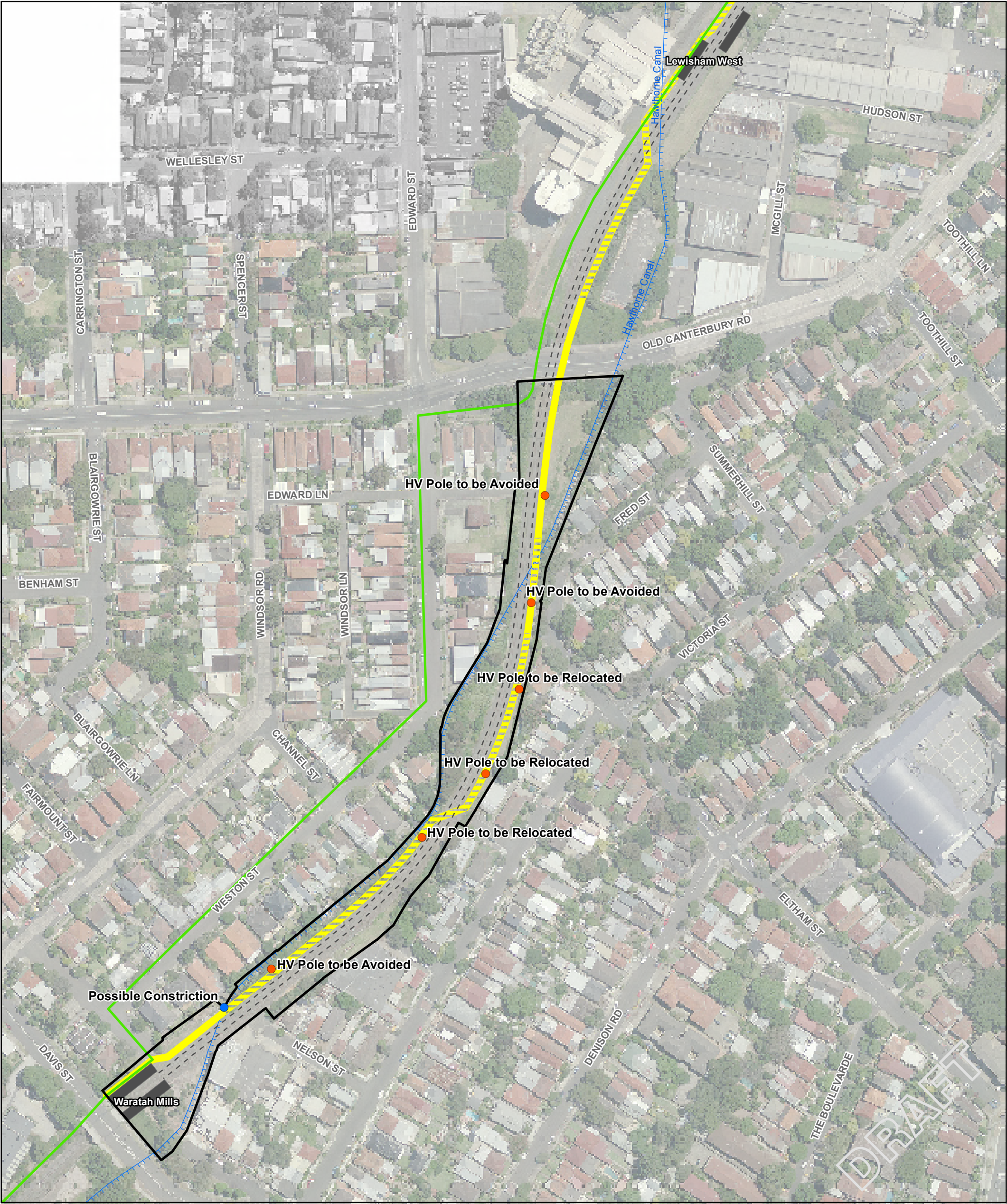
Job Number 21-19469

Revision A

Date 30 NOV 2010

Figure 2-1

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Legend

●

Constriction

●

Powerpole

Rail Centreline

Greenway Alignment (Base Case)

~~~~~

Hawthorne Canal

Railway Boundary

Light Rail Stop

Greenway 2B, Elevated

Greenway 2B, At Grade

1:2,000 (at A3)

0 10 20 40 60 80 100

Metres

Map Projection: Transverse Mercator

Horizontal Datum: Geocentric Datum of Australia

Grid: Map Grid of Australia 1994, Zone 56

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Option 2B

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Job Number 21-19469

Revision A

Date 30 NOV 2010

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Figure 2-2

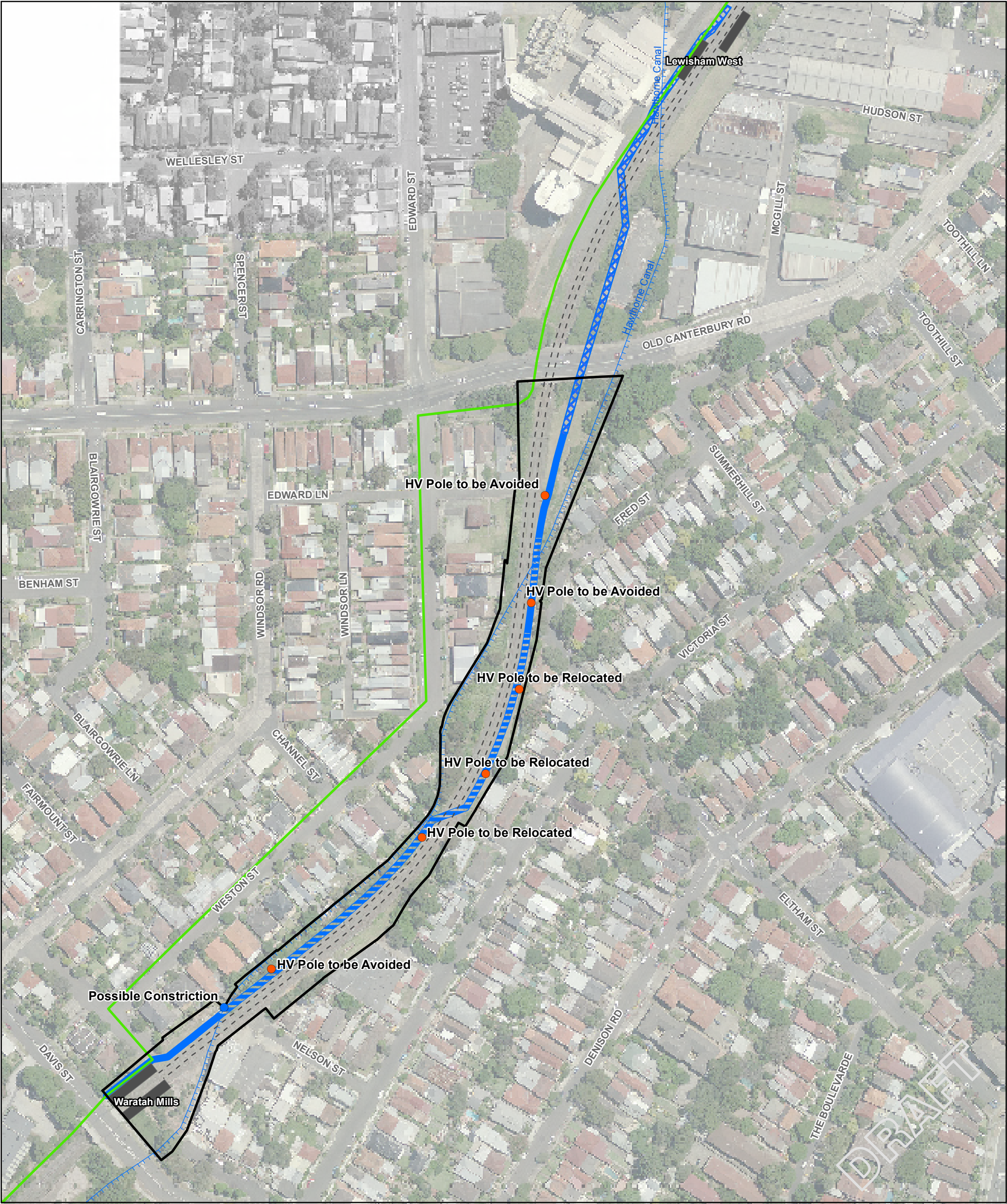
G:\2119469\GIS\Maps\21\_19469\_33\_Cycleway\_Options.mxd

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Data Source: Navigate StreetMap: Street Map - 25/03/2010. Created by: qjchung





**Legend**

●

 Constriction

○

 Powerpole

-----

 Rail Centreline

-----

 Greenway Alignment (Base Case)

-----

 Hawthorne Canal

▭

 Railway Boundary

▭

 Light Rail Stop

▨

 Greenway 2C, Elevated

▨

 Greenway 2C, At Grade

▨

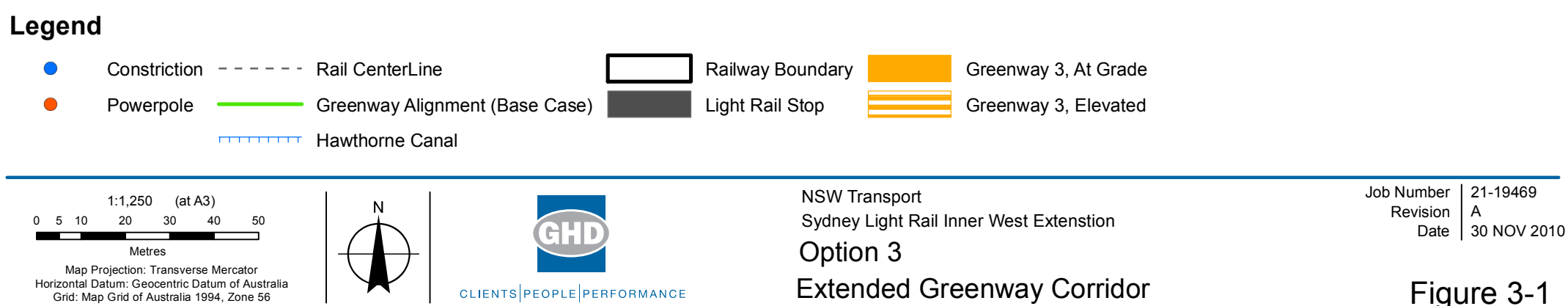
 Greenway 2C, Dive/Underpass



## Appendix E

# Option 3 – Adjustments to Light Rail to Single Track Operation









## Appendix F

# Option 4 – Outside of Rail Corridor Option (Eastern Side)







## Appendix G

# List of Background Information





- 1      *Sydney Light Rail Inner West Extension Study Final Report*, July 2010, prepared by GHD Pty Ltd
- 2      *Sydney Light Rail Extension – Stage 1 – Inner West Extension Environmental Assessment* (extract pages 111 to 124), September 2010, prepared by Parsons Brinckerhoff.
- 3      *Central Sydney Light Rail Route Evaluation Study Dynamic Envelope and Clearances*, August 2004, prepared by GHD Pty Ltd.
- 4      *Sydney and Suburbs Storm Water Drainage Long Cove Creek* drawings from, Sydney Water Corporation.





## Appendix H

# Cost Estimate





## **GreenWay Alternative at Weston Street - Costing Option 1B Adjacent to Hawthorne Canal**

|                         |                  |
|-------------------------|------------------|
| <b>Report Reference</b> | 210049           |
| <b>Issue Number</b>     | 3                |
| <b>Date of Report</b>   | 30 November 2010 |





## Document issue record

|                    |                                                                                       |
|--------------------|---------------------------------------------------------------------------------------|
| Document Title:    | GreenWay Alternative at Weston Street - Costing Option 1B Adjacent to Hawthorne Canal |
| Project Reference: | 210049                                                                                |
| Purpose of Issue:  | Estimate report                                                                       |

| Issue | Description of Amendment  | Originator / Author | Checker | Approver | Date     |
|-------|---------------------------|---------------------|---------|----------|----------|
| 1     | Initial Issue             | DQ                  | MS      | MS       | 25/11/10 |
| 2     | Revised scope and geotech | DQ                  | MS      | MS       | 30/11/10 |
| 3     | Wording adjusted          | DQ                  | MS      | MS       | 30/11/10 |
| 4     |                           |                     |         |          |          |
| 5     |                           |                     |         |          |          |
| 6     |                           |                     |         |          |          |

Previous issues of this document shall be destroyed or marked **SUPERSEDED**



# Contents Page

|             |                                      |   |
|-------------|--------------------------------------|---|
| 1           | Introduction .....                   | 1 |
| 2           | Estimate Basis and Assumptions ..... | 1 |
| 3           | Exclusions .....                     | 2 |
| Appendix 1. | Detail of Estimate .....             | 3 |





# 1 Introduction

Aquenta Consulting have been requested to provide high level costs on Option 1B of the GreenWay pathway along the Hawthorne Canal near Weston Street.

The total of the estimate, including client costs and contingencies, is \$6,100,000 excluding GST. The detail of the estimate is in Appendix 1 below.

## 2 Estimate Basis and Assumptions

This capital cost estimate is based on the following marked-up drawings provided by GHD on Friday 19 November 2010;

- 21-19469-SK-001-A
- 21-19469-SK-002-A
- 21-19469-SK-003-A
- 21-19469-SK-004-A
- 21-19469-SK-005-A
- 21-19469-SK-006-A
- 21-19469-SK-007-A
- 21-19469-SK-008-A
- Sketches SK-03 to SK-05

The estimate is based on these drawings and the following assumptions;

- The screen and barrier have been taken as relatively high specification security barriers
- No asphalt or other surfacing on top of the concrete finish has been allowed to the precast footpath slabs
- The 360UB girders have been taken as having a galvanised finish
- The pile, pile cap and precast headstock substructure arrangements have been allowed at 5m centres
- Assumed that the site is accessible by a standard piling rig and equipment
- Assumed that the existing track is being replaced as part of other works (as previous estimates), hence no allowance has been made in this estimate for lifting, replacing or relocating the track or ballast
- An allowance of \$50,000 per position has been made for the relocation of the overhead HV wiring pole. The relocation of only one pole has been included
- Contractors Indirect costs are included at 38% (as previous estimates)
- Client costs are as the previous GreenWay estimates, with the exception of the allowance for geotechnical investigation which has been increased to allow for the complexity of this location and the canal etc
- Contingency has been allowed at 30%



## 3 Exclusions

The following items have been excluded from the Capital Cost Estimate:

- Escalation
- Traffic management
- Restricted working hours
- Abnormal foundations
- Aboriginal and European heritage
- Land acquisition and legal costs
- Compliance with any DA conditions or Minister's approvals
- Finance Costs, Taxes etc
- GST.





## Appendix 1. Detail of Estimate

|                                              |      |                          |      |       |
|----------------------------------------------|------|--------------------------|------|-------|
| Project: Issue 3                             |      | Details: Estimate Detail |      |       |
| Building: Sydney Light Rail CBD Full measure |      |                          |      |       |
| Description                                  | Unit | Quantity                 | Rate | Total |

**GreenWay Option 1B**

|                                                             |    |     |           |                  |
|-------------------------------------------------------------|----|-----|-----------|------------------|
| 2500mm high screen, rail side                               | m  | 423 | 1,800.00  | 762,000          |
| 1500mm high barrier, privacy screen                         | m  | 423 | 600.00    | 254,000          |
| Precast RC slab, 3600mm wide overall, 200mm thick, 4% reinf | m  | 423 | 1,440.00  | 610,000          |
| 360UB44.7, galvanised                                       | t  | 33  | 8,500.00  | 281,000          |
| Type 1 substructure                                         | m  | 83  | 4,046.70  | 336,000          |
| Type 2 substructure                                         | m  | 56  | 4,197.82  | 236,000          |
| Type 3 substructure                                         | m  | 102 | 3,400.01  | 347,000          |
| Type 4 substructure                                         | m  | 182 | 400.00    | 73,000           |
| Relocate HV overhead wiring pole                            | ea | 1   | 50,000.00 | 50,000           |
| Mods to existing masonry                                    | m  | 139 | 200.00    | 28,000           |
| <b>Subtotal Contractors Direct Costs</b>                    |    |     |           | <b>2,977,000</b> |
| Contractors Indirects                                       |    |     | 0.38      | 1,132,000        |
| <b>Subtotal Contractors Direct and Indirect Costs</b>       |    |     |           | <b>4,109,000</b> |
| Client Costs;                                               |    |     |           |                  |
| Project managent & project controls                         |    |     | 0.06      | 179,000          |
| Design                                                      |    |     | 0.08      | 239,000          |
| Planing & environmental                                     |    |     | 0.01      | 30,000           |
| Geotechnical                                                |    |     |           | 90,000           |
| Communications & Community                                  |    |     | 0.02      | 45,000           |
| <b>Subtotal</b>                                             |    |     |           | <b>4,692,000</b> |
| Contingency                                                 |    |     | 0.30      | 1,408,000        |
| <b>Total</b>                                                |    |     |           | <b>6,100,000</b> |





## GHD

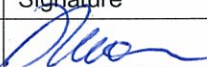

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## Document Status

| Rev No. | Author | Reviewer |                                                                                     | Approved for Issue |                                                                                       |          |
|---------|--------|----------|-------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------|----------|
|         |        | Name     | Signature                                                                           | Name               | Signature                                                                             | Date     |
| 0       | J Yip  | D Wunder |  | D Wunder           |  | 30/11/10 |
|         |        |          |                                                                                     |                    |                                                                                       |          |
|         |        |          |                                                                                     |                    |                                                                                       |          |
|         |        |          |                                                                                     |                    |                                                                                       |          |