attachment IV

map book.



Environment Effects Statement | May 2021

western outer ring main

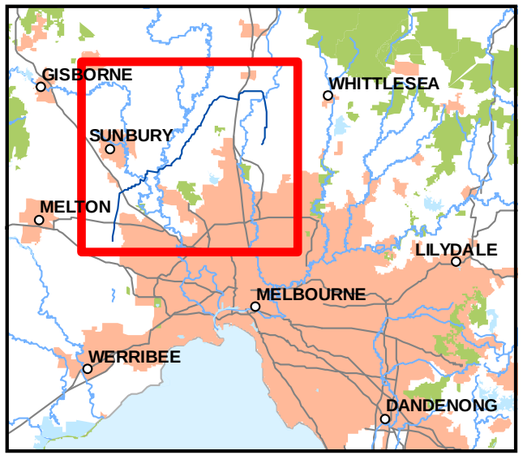
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Environment Effects Statement
Map book Overview



Legend

- Pipeline Kilometre Points
- Mapsheets
- Pipeline Alignment
- Major Watercourses
- Local Goverment Area

western outer ring main

a project of apa

N

Paper Size A3

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Kilometres

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Grid: GDA2020 MGA Zone 55

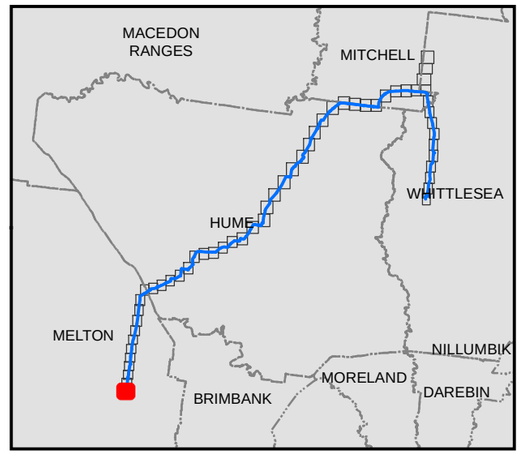
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Environment Effects Statement



Mapsheet 1 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Drainage line
- Collector road

MELTON

MSA

Open Trench Construction - Mainline

KP0 - Plumpton Regulating Station

Saric St

Savas Way

Taylors Rd

Sinclairs Rd

western outer ring main

a project of apa

N

Paper Size A3

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Metres

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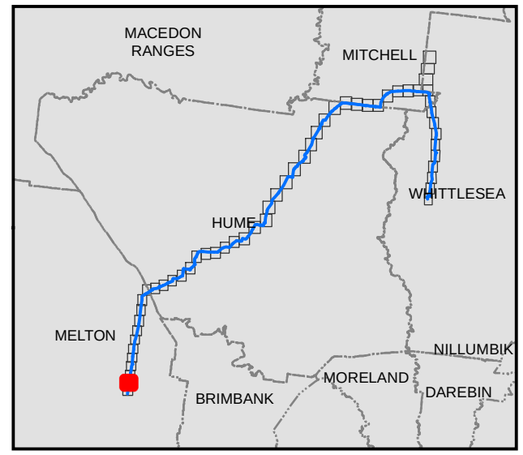
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Environment Effects Statement



Mapsheet 2 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line
- Collector road
- Proposed road

KP 1

MSA

Open Trench-Construction-Mainline

MELTON

Hume Dr

Saric St

Pienza Rd

Torrita St

Treviso St

western outer ring main

a project of apa

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Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
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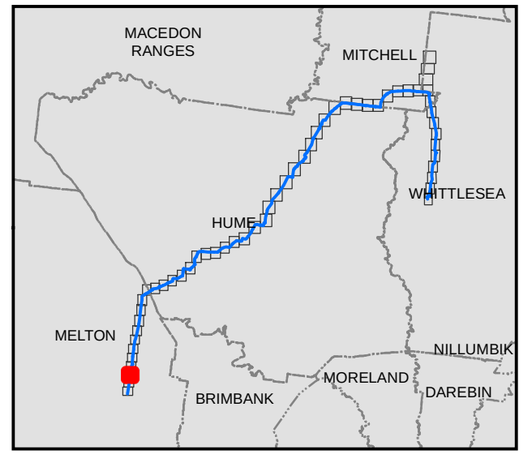
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Environment Effects Statement



Mapsheet 3 of 56

Legend

- Open Trench Construction - Mainline
- Preplaced Sleave
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Collector road
- Proposed road

western outer ring main — a project of apa

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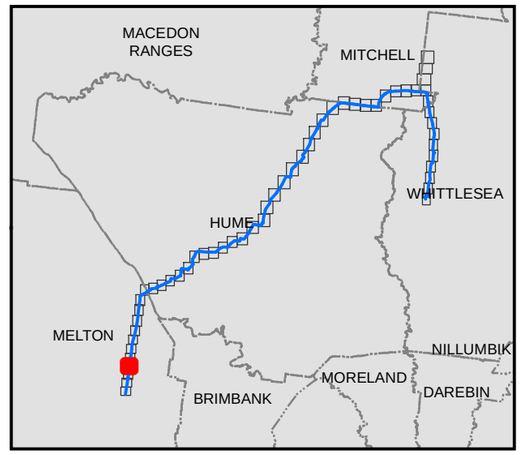
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Environment Effects Statement



Mapsheet 4 of 56

Legend

- Pipeline Kilometre Points
- Horizontal directional drilling
- Open Trench Construction - Mainline
- Preplaced Sleave
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Drainage line
- Collector road
- Proposed road

western outer ring main

a project of apa

N

Paper Size A3

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Metres

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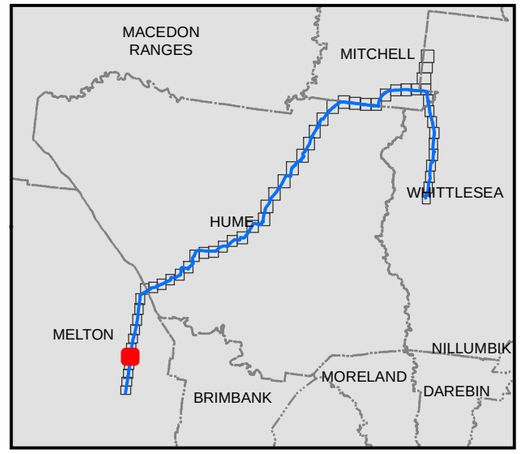
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Environment Effects Statement



Mapsheet 5 of 56

Legend

- Pipeline Kilometre Points
- Horizontal directional drilling
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Highway
- Collector road
- Proposed road

Melton Hwy
KP 3
MELTON
MSA
Verona St
Floresta St
Modena Rd
Monte St
Palazzo Rd
Casine Rd
Open Trench Construction - Mainline

western outer ring main

a project of apa

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Paper Size A3

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Metres

Map Projection: Transverse Mercator
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Grid: GDA2020 MGA Zone 55

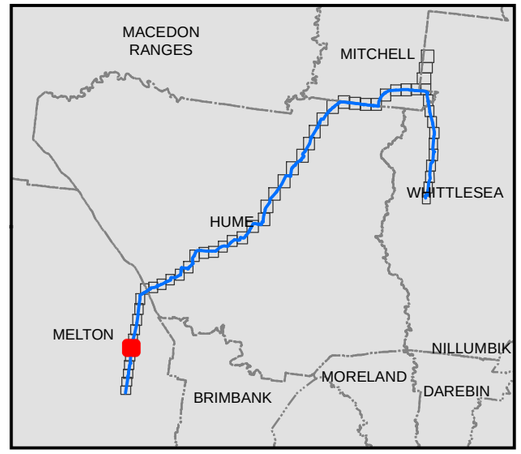
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Environment Effects Statement



Mapsheet 6 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting

KP 4

MELTON

Open Trench Construction - Mainline

western outer ring main

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Paper Size A3

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Metres

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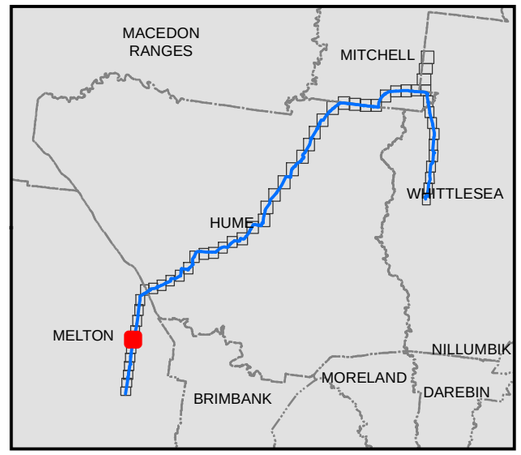
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Environment Effects Statement



Mapsheet 7 of 56

Legend

- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Drainage line

western outer ring main

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N

Paper Size A3

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Metres

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Grid: GDA2020 MGA Zone 55

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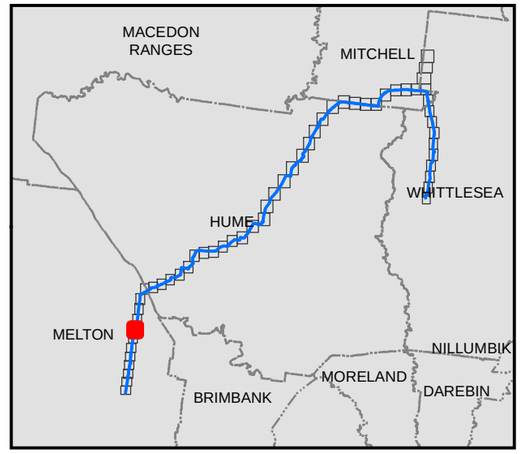
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Environment Effects Statement



Mapsheet 8 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting

western outer ring main

a project of apa

N

Paper Size A3

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Metres

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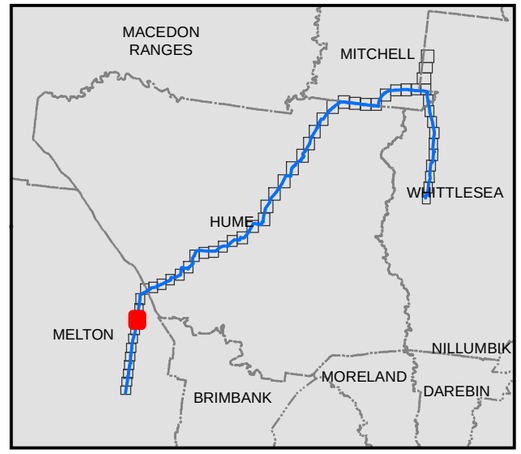
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Environment Effects Statement



Mapsheet 9 of 56

Legend

- Pipeline Kilometre Points
- Mainline valve location
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Collector road

western outer ring main

a project of apa

N

Paper Size A3

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Metres

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Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

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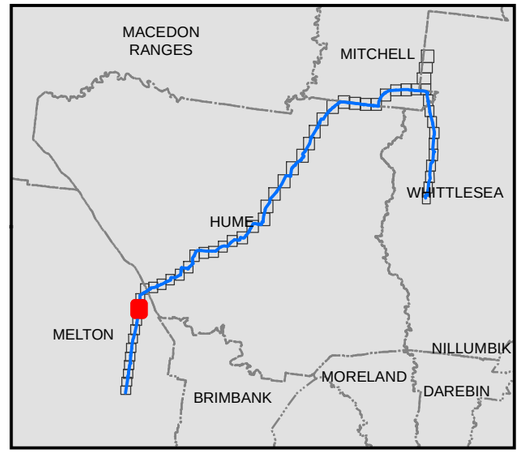
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Environment Effects Statement



Mapsheet 10 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting

western outer ring main

a project of apa

N

Paper Size A3

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

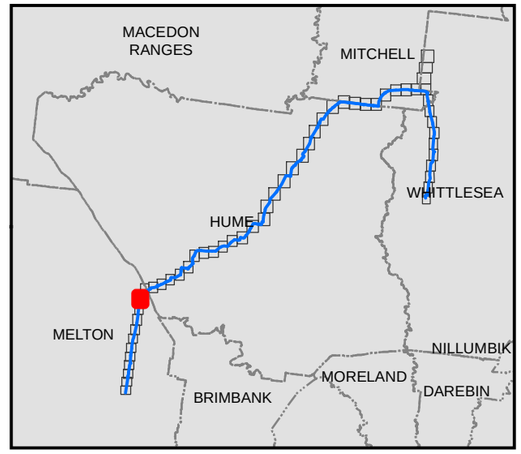
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Environment Effects Statement



Mapsheet 11 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Watercourse
- Water
- Drainage line
- Drain/Channel/Other
- Railway Track

KP 8

MELTON

Open Trench Construction - Mainline

BENDIGO LINE

TAME STREET DRAIN

western outer ring main

a project of apa

N

Paper Size A3

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Metres

Map Projection: Transverse Mercator
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Grid: GDA2020 MGA Zone 55

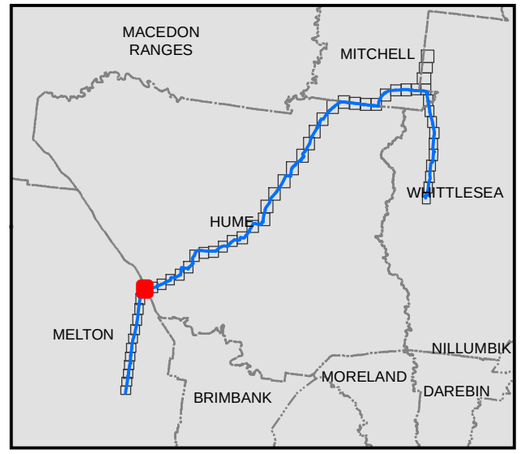
Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

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Environment Effects Statement



Mapsheet 12 of 56

Legend

- Pipeline Kilometre Points
- Horizontal directional drilling
- Horizontal Laser Bore - Pipe Jacking
- Open Trench Construction - Mainline
- Existing Easement
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Watercourse
- Water
- Drainage line
- Drain/Channel/Other
- Freeway
- Collector road
- Railway Track

HUME

MELTON

KP 9

Calder Fwy

Dillon Ct

TAME STREET DRAIN

BENDIGO LINE

Open Trench Construction - Mainline

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

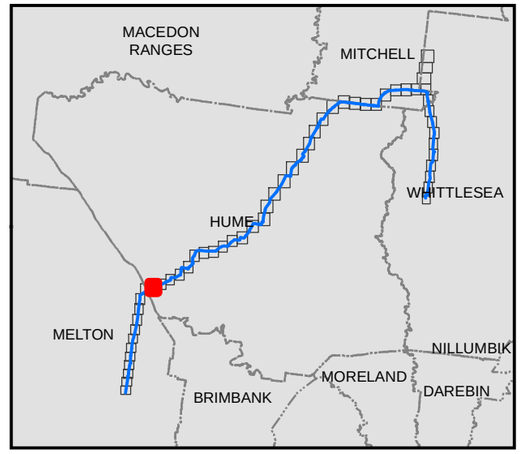
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Environment Effects Statement



Mapsheet 13 of 56

Legend

- Pipeline Kilometre Points
- Horizontal directional drilling
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Water
- Drainage line
- Freeway
- Collector road

western outer ring main — a project of apa

N

Paper Size A3

0 50 100

Metres

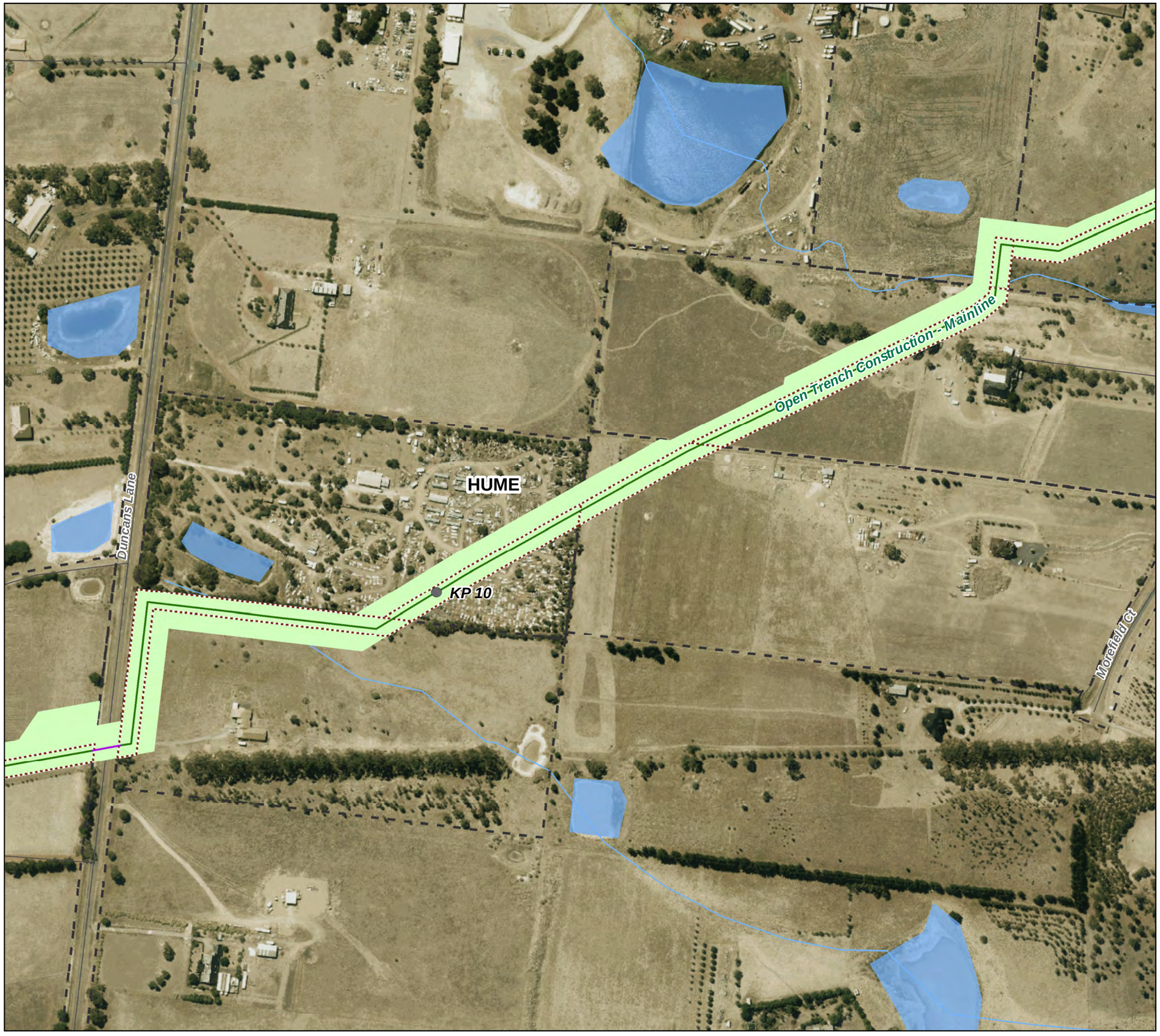
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Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

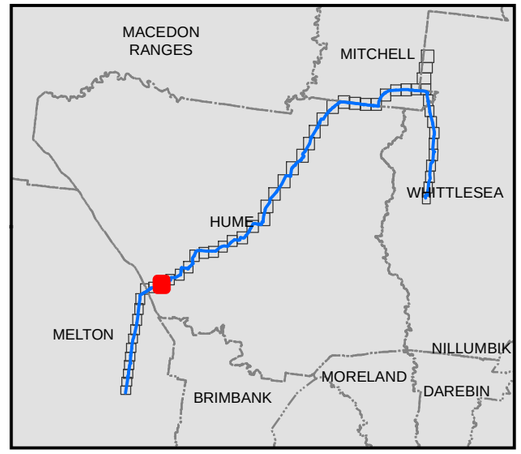
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Environment Effects Statement



Mapsheet 14 of 56

Legend

- Pipeline Kilometre Points
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Water
- Drainage line
- Collector road

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

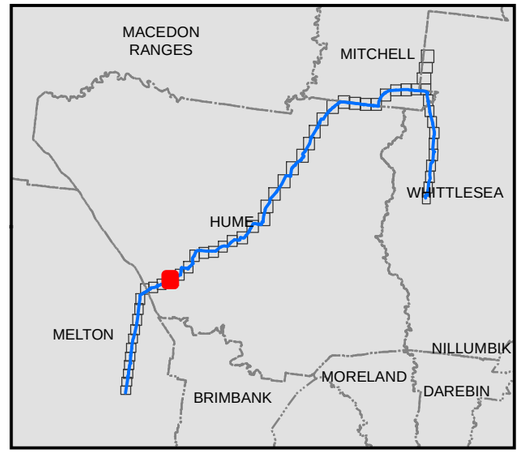
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Environment Effects Statement



Mapsheet 15 of 56

Legend

- Pipeline Kilometre Points
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Water
- Drainage line
- Arterial road
- Collector road

Bulla - Diggers Rest Rd

Open Trench Construction - Mainline

HUME

KP 11

Morefield Ct

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

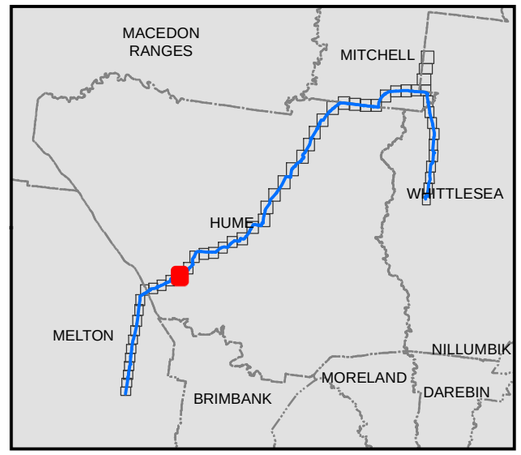
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Environment Effects Statement



Mapsheet 16 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Water
- Drainage line
- Arterial road
- Collector road

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

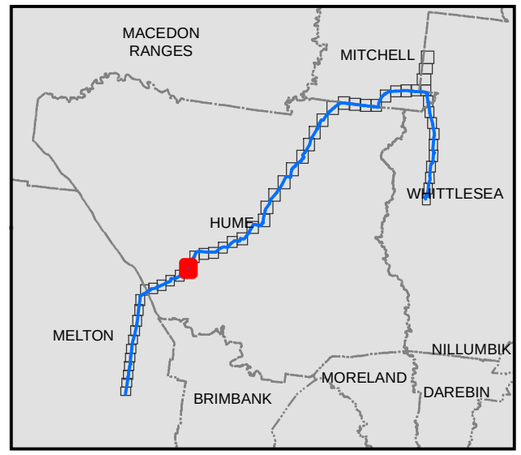
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Environment Effects Statement



Mapsheet 17 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Open Trench Construction- Special Crossing
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line
- Arterial road
- Collector road

MSA
JACKSONS CREEK
Bulla - Diggers Rest Rd
HUME
Open Trench Construction - Mainline
KP 13

western outer ring main
a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

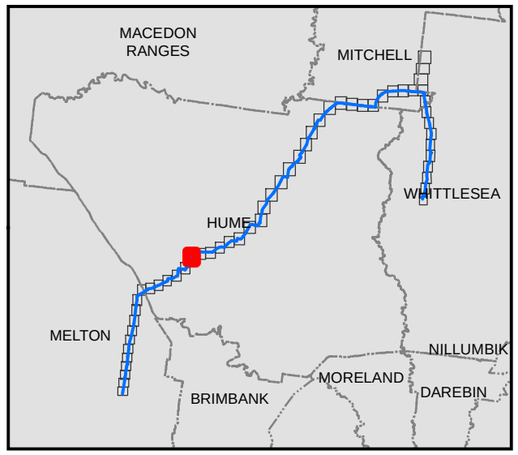
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Environment Effects Statement



Mapsheet 18 of 56

Legend

- Pipeline Kilometre Points
- Horizontal directional drilling
- Open Trench Construction - Mainline
- Open Trench Construction- Special Crossing
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Drainage line
- Arterial road
- Collector road

western outer ring main — a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

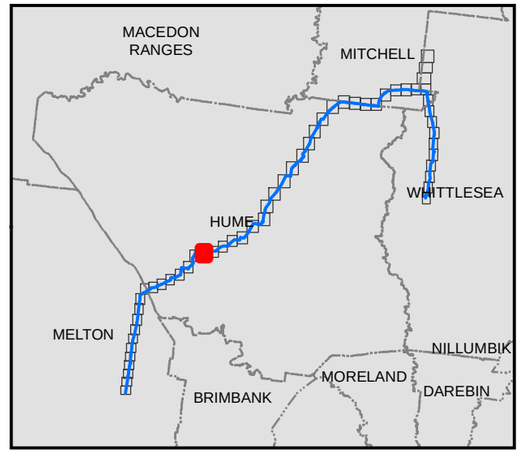
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Environment Effects Statement



Mapsheet 19 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Drainage line
- Arterial road
- Collector road

KP 15

Open Trench Construction - Mainline

HUME

Sunbury Rd

Batey Ct

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

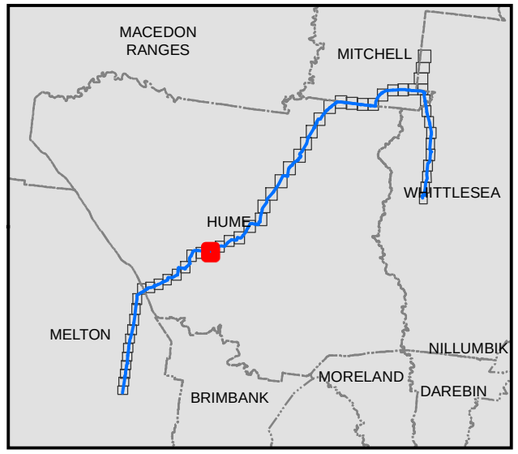
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Environment Effects Statement





Mapsheet 20 of 56

Legend

- Pipeline Kilometre Points
- Horizontal directional drilling
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Drainage line
- Collector road

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

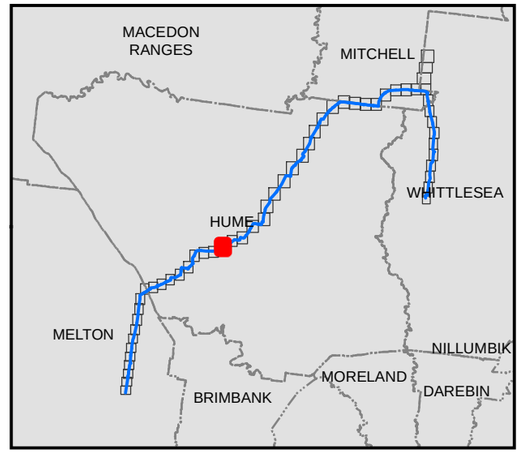
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Environment Effects Statement



Mapsheet 21 of 56

Legend

- Pipeline Kilometre Points
- Horizontal directional drilling
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Watercourse
- Water
- Drainage line
- Arterial road

DEEP CREEK

EMU CREEK

Open Trench Construction - Mainline

KP 17

HUME

Wildwood Rd

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

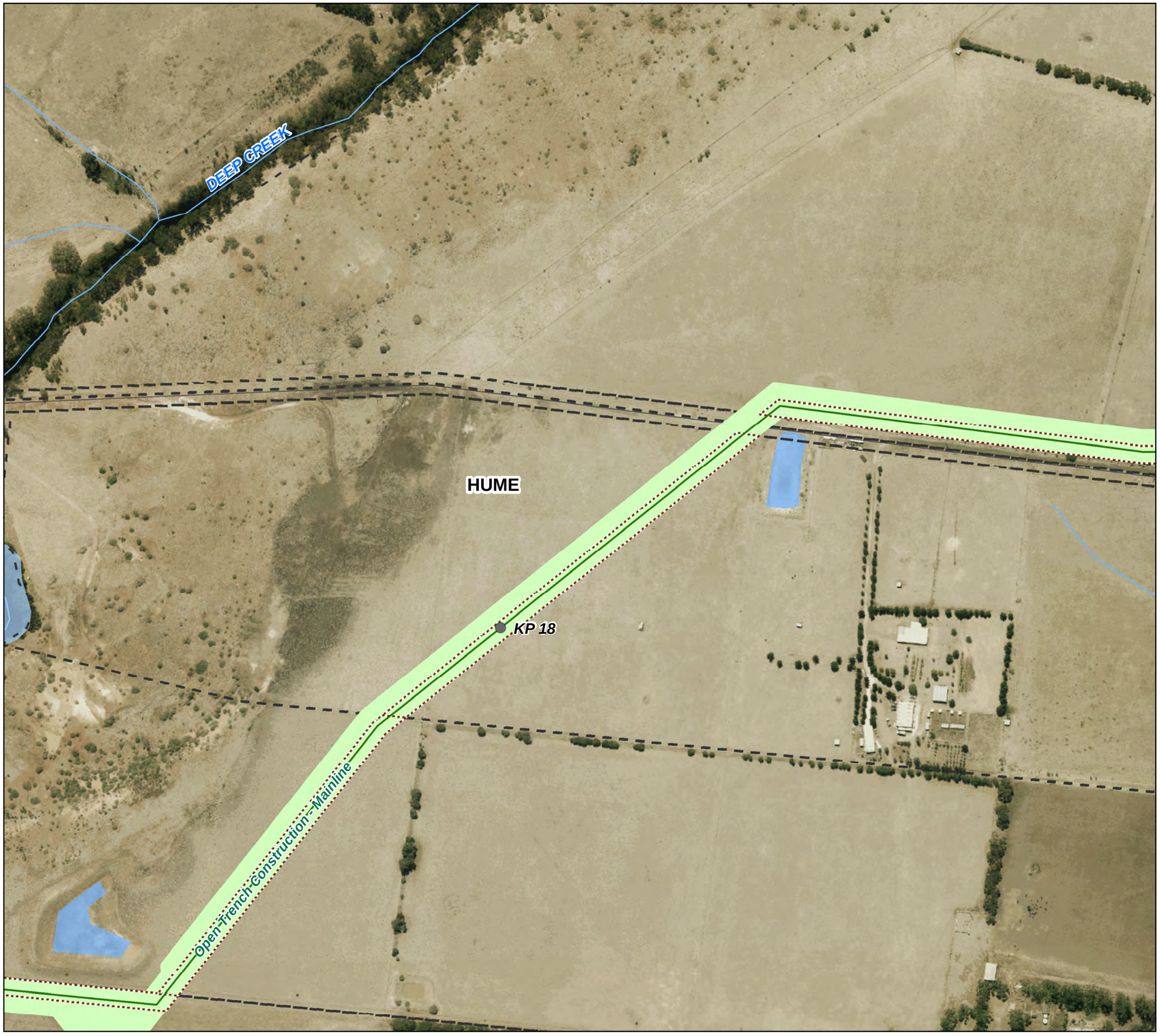
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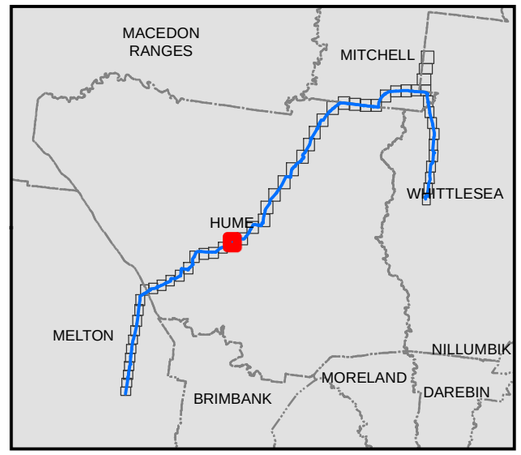
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Environment Effects Statement



Mapsheet 22 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Watercourse
- Water
- Drainage line
- Collector road

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

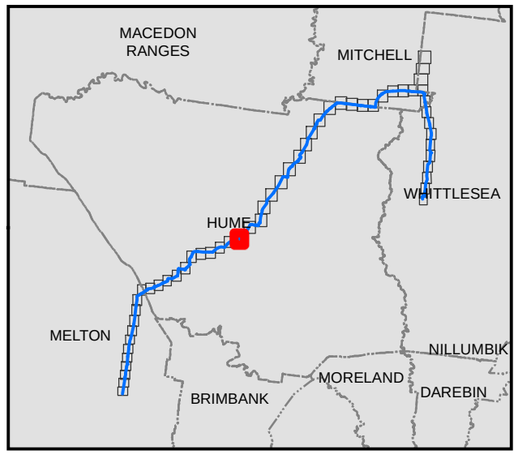
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Environment Effects Statement



Mapsheet 23 of 56

Legend

- Pipeline Kilometre Points
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Water
- Drainage line
- Drain/Channel/Other
- Collector road

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

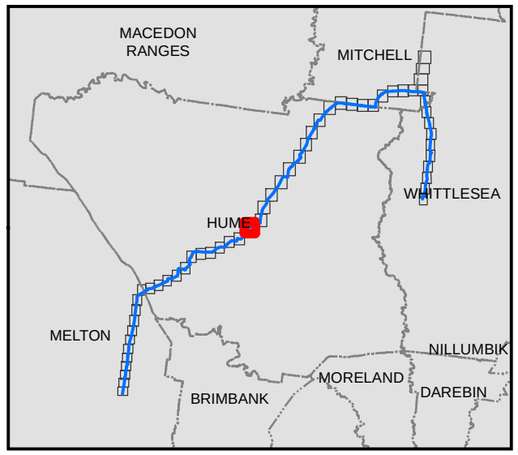
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Environment Effects Statement



Mapsheet 24 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Water
- Drainage line
- Drain/Channel/Other
- Collector road

HUME

KP 21

KP 20

Open Trench Construction - Mainline

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

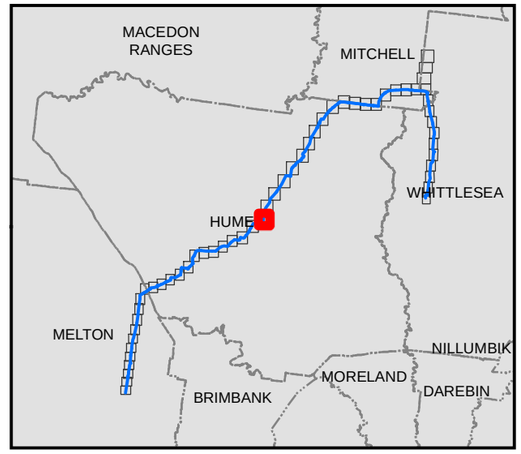
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Environment Effects Statement



Mapsheet 25 of 56

Legend

- Pipeline Kilometre Points
- Mainline valve location
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Water
- Arterial road
- Collector road

Open Trench Construction - Mainline
KP 22
HUME
Oaklands Rd
MLV 2 - Oaklands Road
KP 21

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

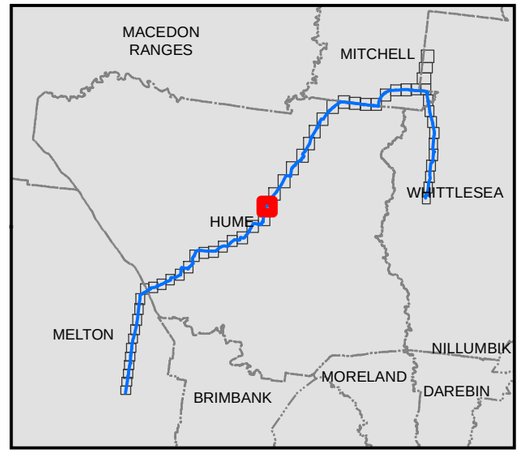
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Environment Effects Statement



Mapsheet 26 of 56

Legend

- Pipeline Kilometre Points
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Water
- Drainage line
- Arterial road
- Collector road

western outer ring main — a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

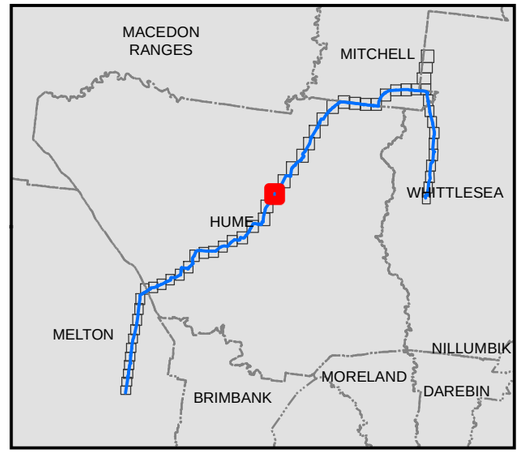
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Environment Effects Statement



Mapsheet 27 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Water
- Drainage line

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

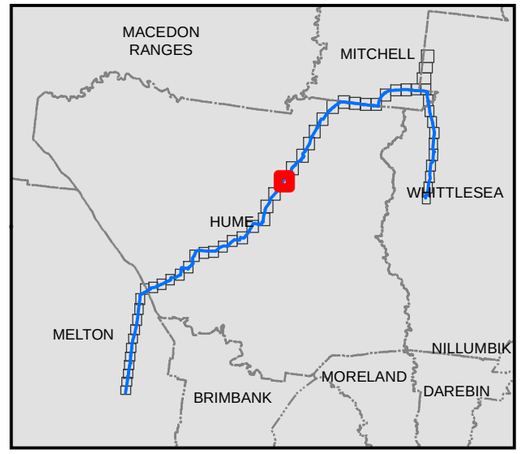
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Environment Effects Statement



Mapsheet 28 of 56

Legend

- Pipeline Kilometre Points
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- Open Trench Construction- Special Section within Road Reserve
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Drainage line
- Collector road

western outer ring main — a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

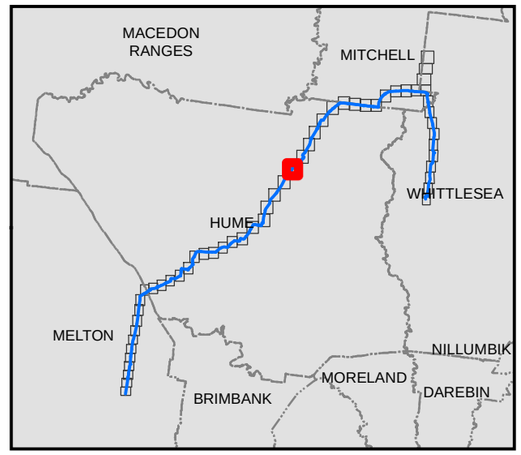
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Environment Effects Statement





Mapsheet 29 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Open Trench Construction- Special Section within Road Reserve
- Bored or open trench
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Water
- Drainage line
- Arterial road
- Collector road

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

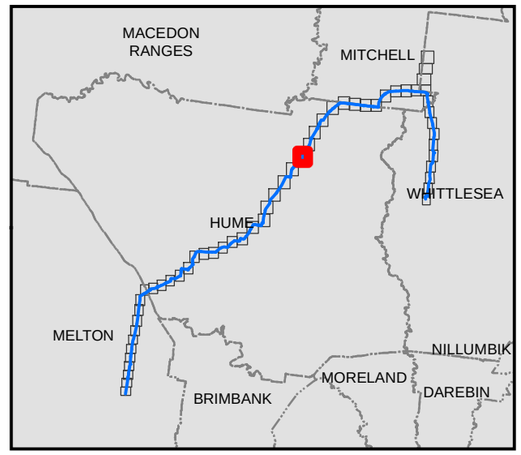
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Environment Effects Statement



Mapsheet 30 of 56

Legend

- Pipeline Kilometre Points
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line
- Arterial road
- Collector road
- Proposed road

KP 29
KP 28
HUME
Open Trench Construction - Mainline
Mickleham Rd
Poppy St
Tangelo St
Basil Pl
Sugarcane St
Cayenne Way
Mint Pl
Fennel St
Masala St
MSA
Cardamon Av
Peanut Av
Hazel Way
Ginger Cr
Bardwell Dr
Callaway Dr
Daisy St

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

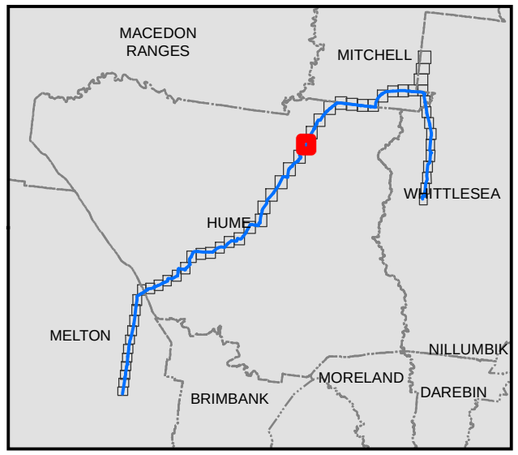
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Environment Effects Statement



Mapsheet 31 of 56

Legend

- Pipeline Kilometre Points
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Arterial road
- Collector road
- Proposed road

Donnybrook Rd
Kinnear Rd
Mickleham Rd
KP 30
HUME
Open Trench Construction - Mainline
MSA
Robin Rd
Joy Dr
Alice Av
Potter Cct
Brossard Rd
Herridge St
Heron Dr
Scandia Dr

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

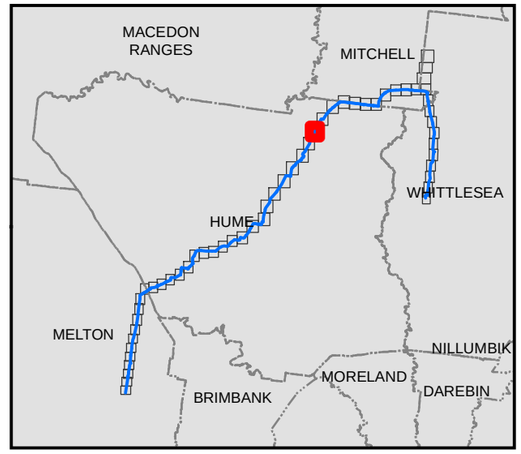
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Environment Effects Statement



Mapsheet 32 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line
- Arterial road
- Collector road
- Tracks

western outer ring main — a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
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Grid: GDA2020 MGA Zone 55

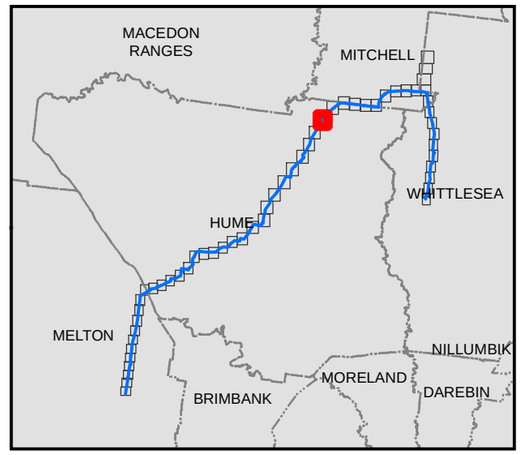
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Environment Effects Statement



Mapsheet 33 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line
- Collector road

Old Sydney Rd
KP 32
Open Trench Construction - Mainline
HUME
MSA
Beavers St
Chomley St
Heslop St
Illawara Dr

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
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Grid: GDA2020 MGA Zone 55

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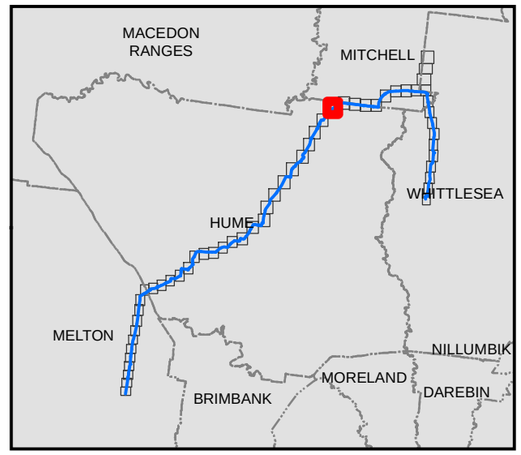
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Environment Effects Statement



Mapsheet 34 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Drainage line
- Drain/Channel/Other
- Collector road

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
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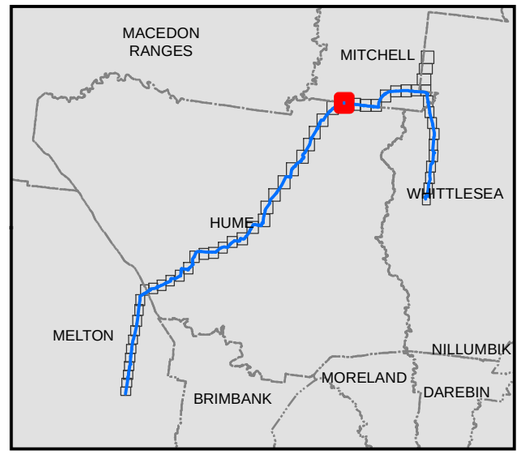
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Environment Effects Statement



Mapsheet 35 of 56

Legend

- Pipeline Kilometre Points
- Mainline valve location
- Open Trench Construction - Mainline
- Open Trench Construction- Special Crossing
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line
- Drain/Channel/Other
- Collector road

MITCHELL

KALKALLO CREEK

Gunns Gully Rd

MSA

Open Trench Construction - Mainline

MLV 3 - Gunns Gully Road

KP 34

KP 35

HUME

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

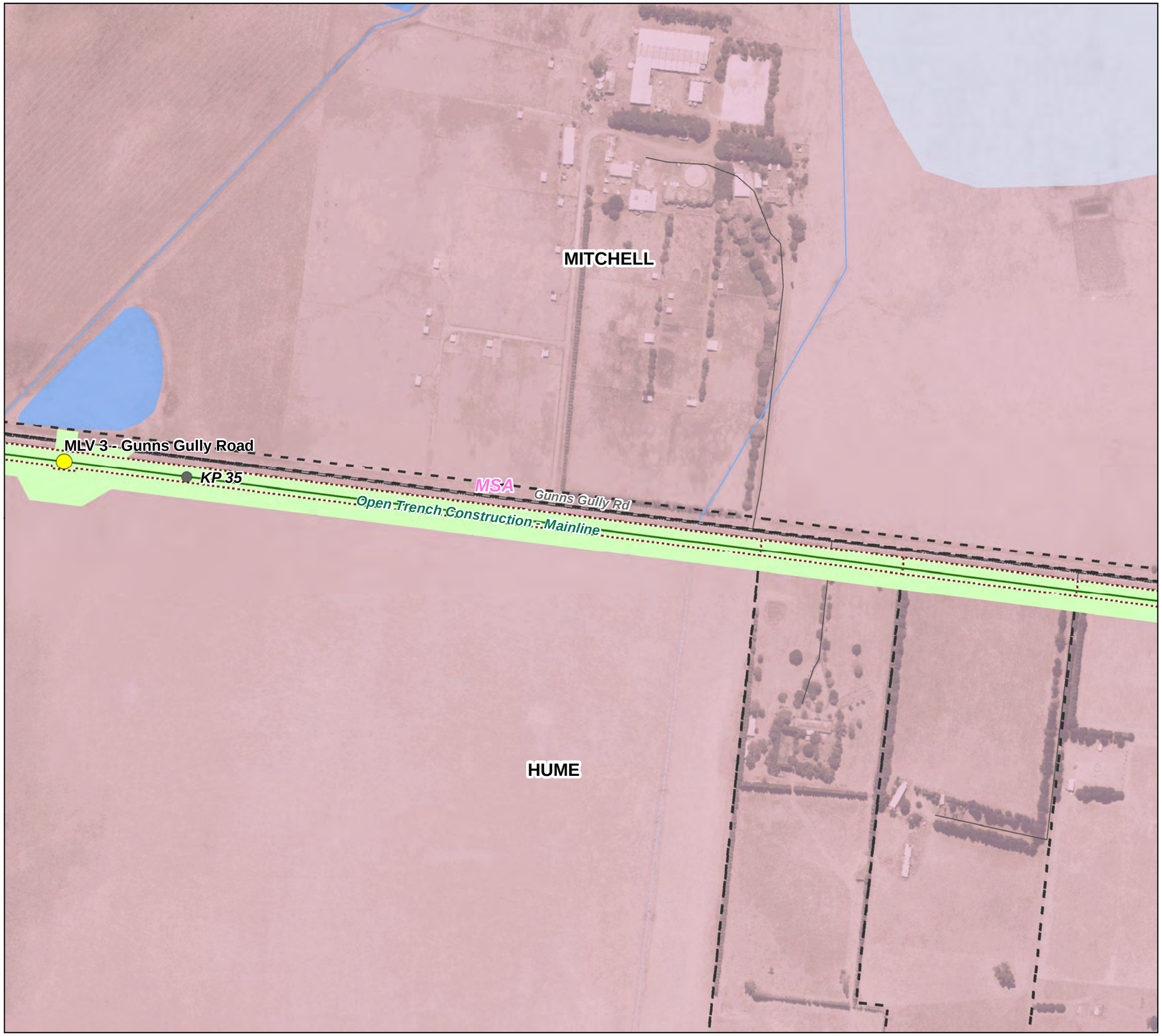
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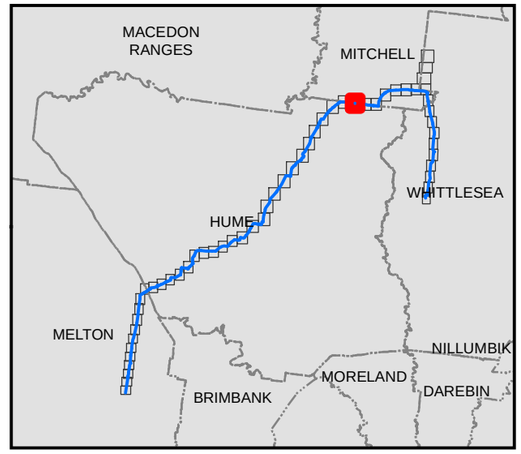
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Environment Effects Statement



Mapsheet 36 of 56

Legend

- Pipeline Kilometre Points
- Mainline valve location
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Flat
- Water
- Drainage line
- Drain/Channel/Other
- Collector road

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
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Grid: GDA2020 MGA Zone 55

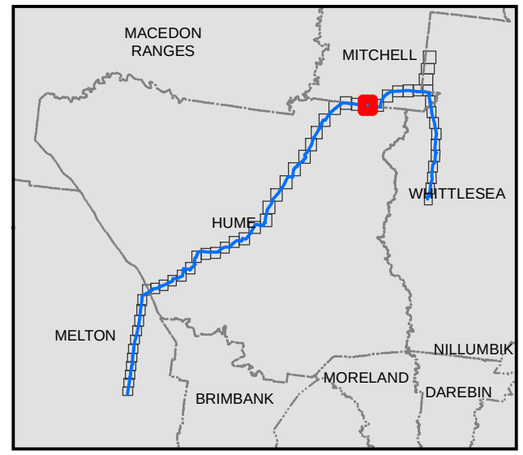
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Environment Effects Statement



Mapsheet 37 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Flat
- Drainage line
- Drain/Channel/Other
- Collector road

MITCHELL

MSA

KP 36

Gunns Gully Rd

Open Trench Construction - Mainline

HUME

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

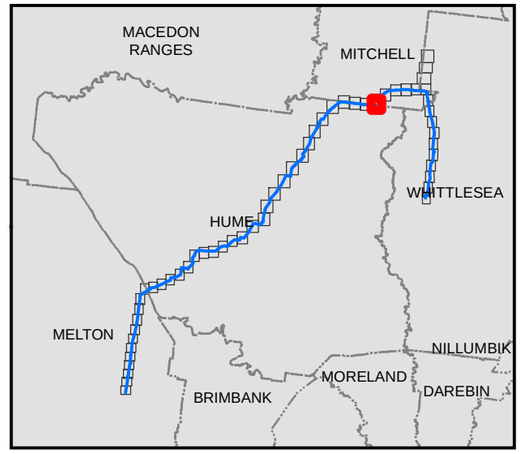
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Environment Effects Statement



Mapsheet 38 of 56

Legend

- Pipeline Kilometre Points
- Horizontal directional drilling
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Drainage line
- Drain/Channel/Other
- Freeway
- Collector road

MITCHELL

Hume Fwy

Open Trench Construction - Mainline

MSA

Gunns Gully Rd

KP 37

HUME

Gums Lane

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

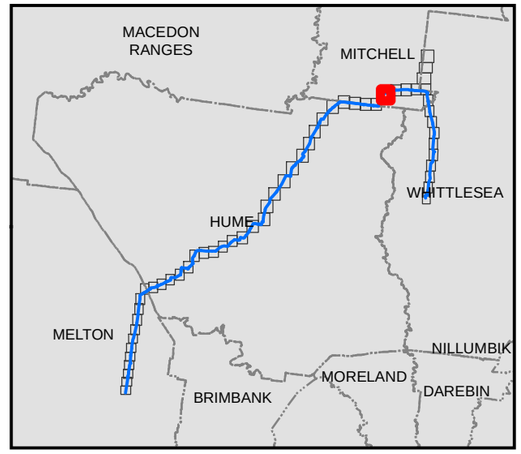
Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

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Environment Effects Statement



Mapsheet 39 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Freeway
- Collector road

Hume Fwy

Open Trench Construction - Mainline

KP 39

KP 38

MITCHELL

MSA

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

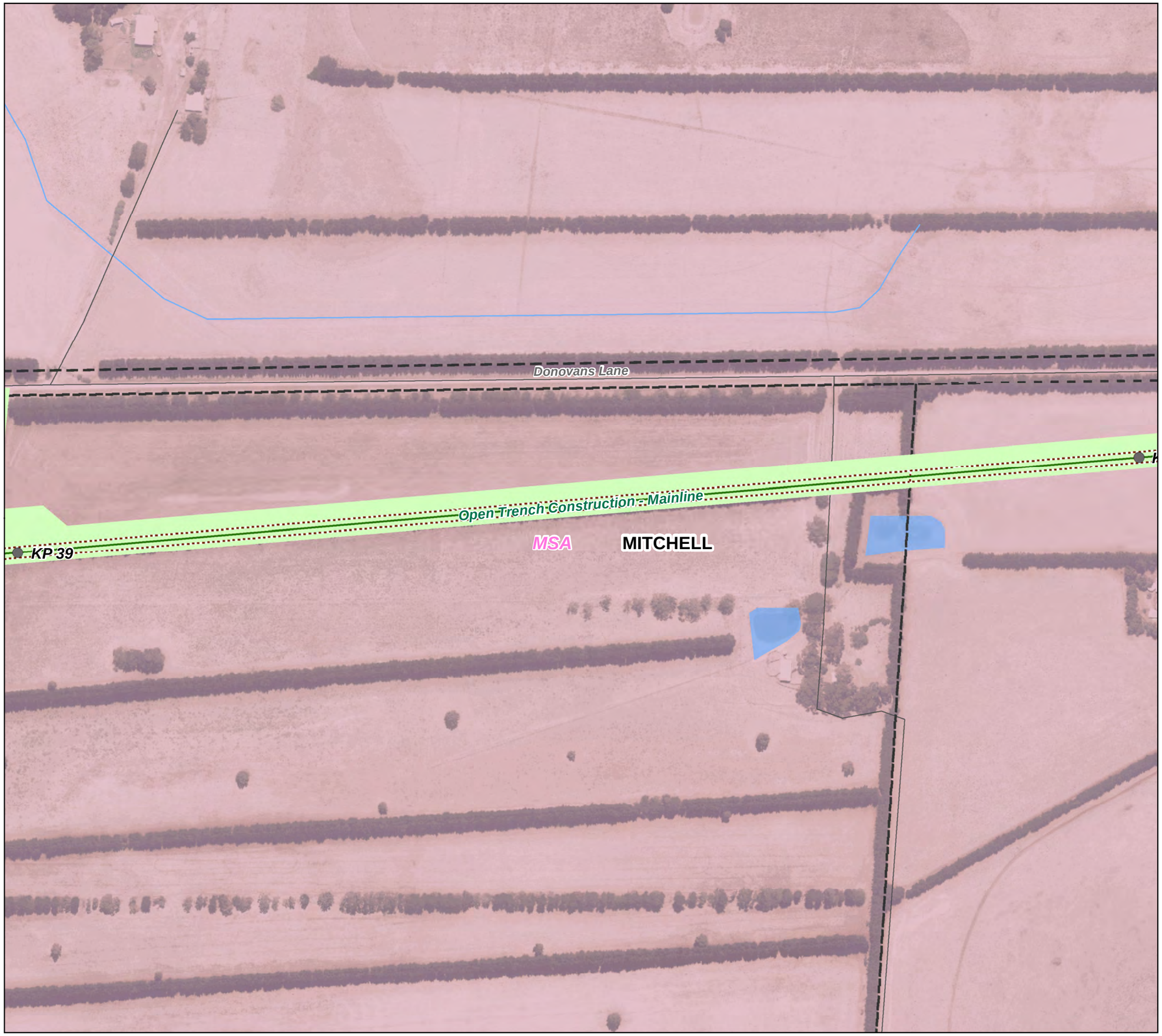
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Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

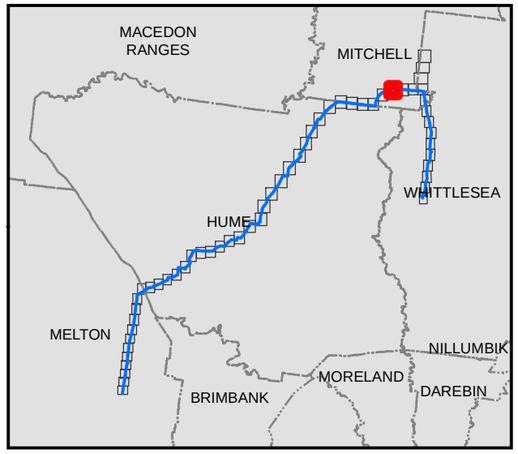
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Environment Effects Statement



Mapsheet 40 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line
- Collector road

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

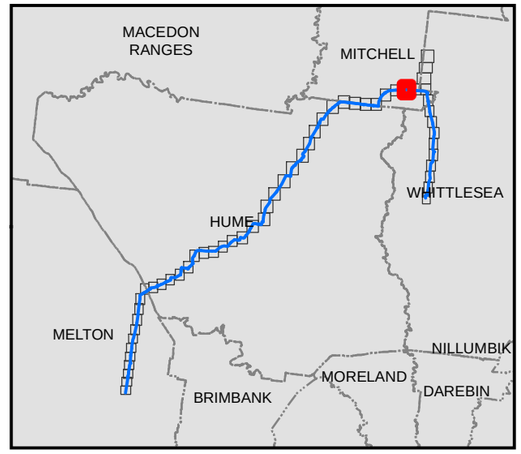
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Environment Effects Statement



Mapsheet 41 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- New Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line
- Collector road

Tributary of Merri Creek

Donovans Lane

KP 40

Open Trench Construction - Mainline

MSA

MITCHELL

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

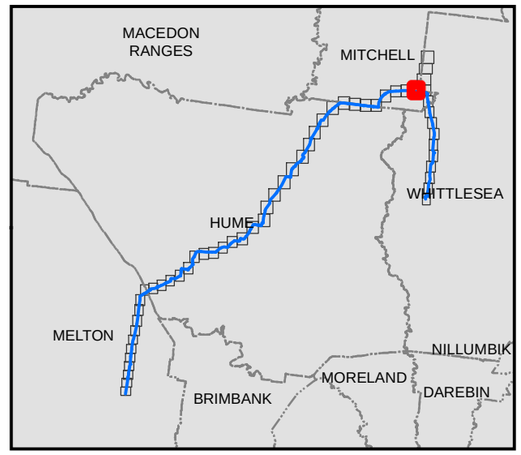
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Environment Effects Statement



Mapsheet 42 of 56

Legend

- Pipeline Kilometre Points
- Horizontal Laser Bore - Pipe Jacking
- Open Trench Construction - Mainline
- New Easement
- Access Options
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Drainage line
- Collector road
- Railway Track

WHITTLESEA

MSA

NORTH EASTERN

MITCHELL

KP 41

Open Trench Construction - Mainline

Tributary of Merri Creek

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

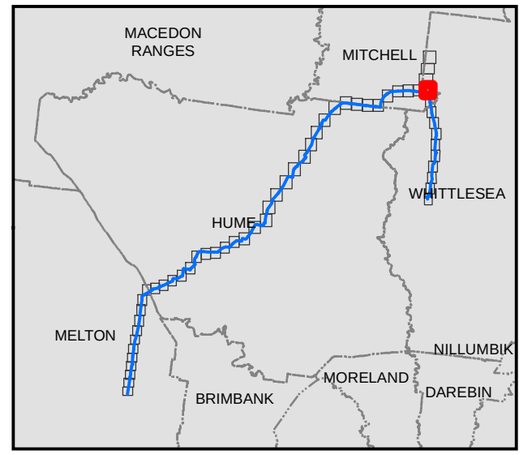
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Environment Effects Statement



Mapsheet 43 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Open Trench Construction- Special Crossing
- Existing Easement
- New Easement
- Access Options
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)

MITCHELL

WHITTLESEA

MSA

Open Trench Construction - Mainline

KP 42

MITCHELL

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

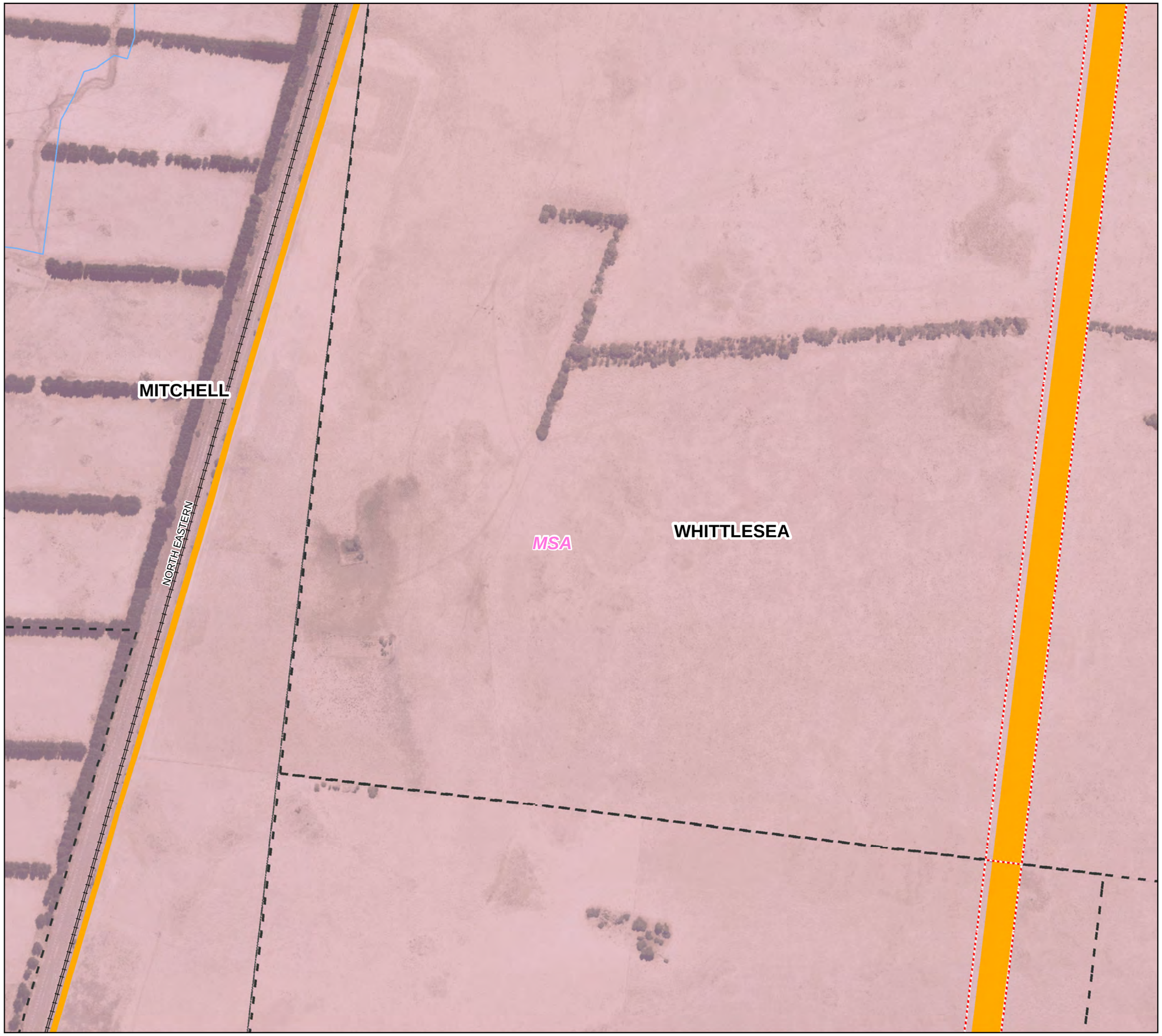
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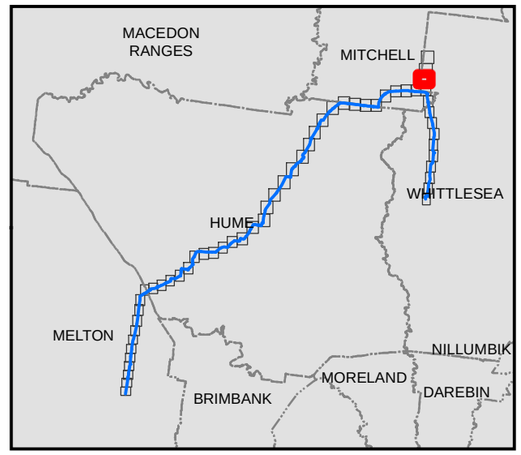
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Environment Effects Statement



Mapsheet 44 of 56

Legend

- Existing Easement
- Access Options
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Drainage line
- Railway Track

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

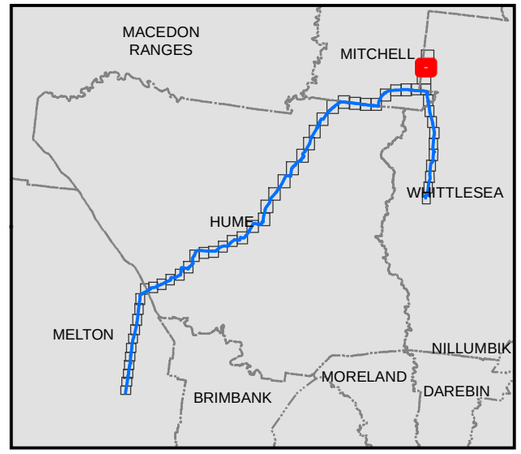
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Environment Effects Statement



Mapsheet 45 of 56

Legend

- Existing Easement
- Access Options
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line
- Railway Track

MITCHELL

NORTH EASTERN

MSA

WHITTLESEA

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

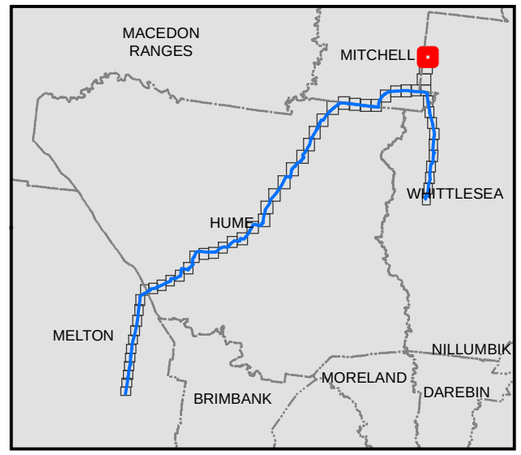
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Environment Effects Statement



Mapsheet 46 of 56

Legend

- Existing Easement
- Access Options
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Drainage line
- Collector road
- Railway Track

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

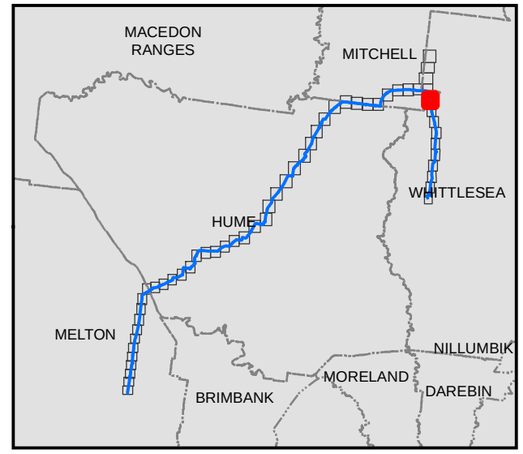
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Environment Effects Statement



Mapsheet 47 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Open Trench Construction- Special Crossing
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Watercourse
- Drainage line

Open Trench Construction - Mainline

MITCHELL

MSA

MERRI CREEK

KP 43

WHITTLESEA

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
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MITCHELL

MERRI CREEK

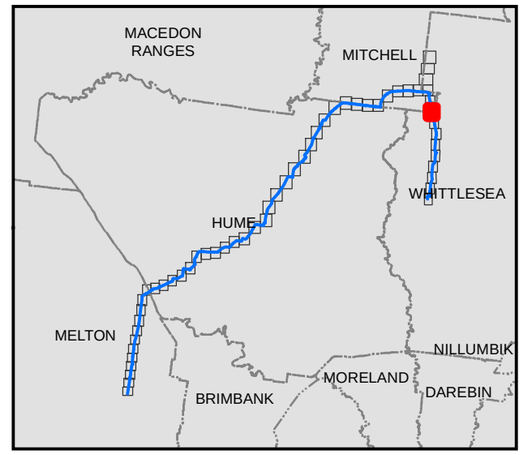
MSA

Open Trench Construction - Mainline

WHITTLESEA

KP 44

Environment Effects Statement



Mapsheet 48 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Watercourse
- Drainage line

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

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Grid: GDA2020 MGA Zone 55

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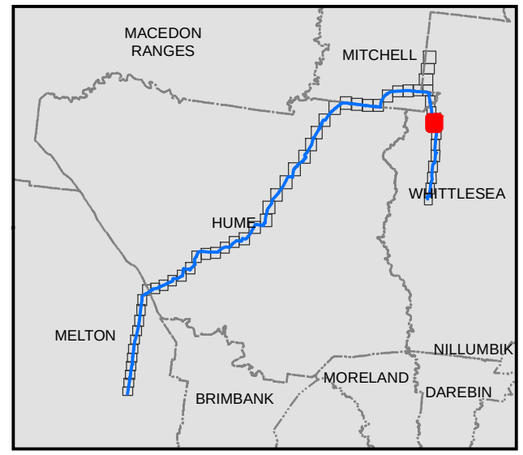
WHITTLESEA

MSA

Open Trench Construction - Mainline

KP 45

Environment Effects Statement



Mapsheet 49 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Drainage line
- Collector road

western outer ring main

a project of apa

N

Paper Size A3

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

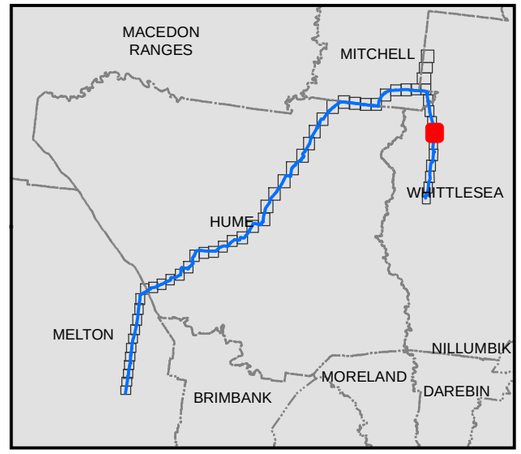
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Environment Effects Statement



Mapsheet 50 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Drainage line
- Collector road
- Proposed road

KP 45

WHITTLESEA

MSA

Open-Trench-Construction--Mainline

Quarter Cct

Society Vsta

Olivine Blvd

Hamlet Dr

Downtown Av

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

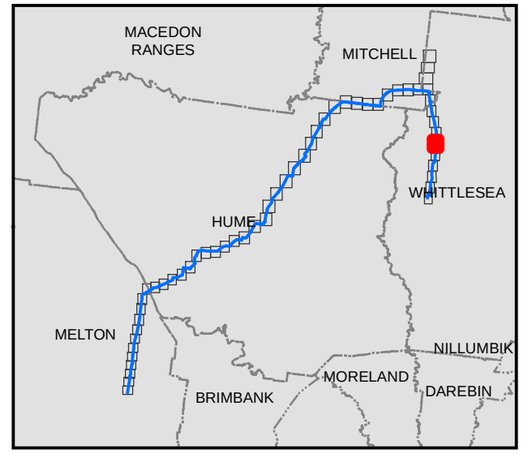
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Environment Effects Statement



Mapsheet 51 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Collector road
- Proposed road

KP 46

MSA

WHITTLESEA

Open Trench Construction - Mainline

Downtown Av
Metropolis Way
Hayes Hill Bvd
Federation Av
Institute Dr
Olivine Bvd
Grammar Av
Faculty Av
Foundation Av
Hub Lane
Degree Lane
Conservatory St
Cycad Av
Academy Lane
Coliseum Av
Olympic Dr
Eastrow Av
Oriel Rd
Coach Dr
Splendid Rd
Grovedon Cct
Pollen Pl
Lacebark Dr
Wool Way

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

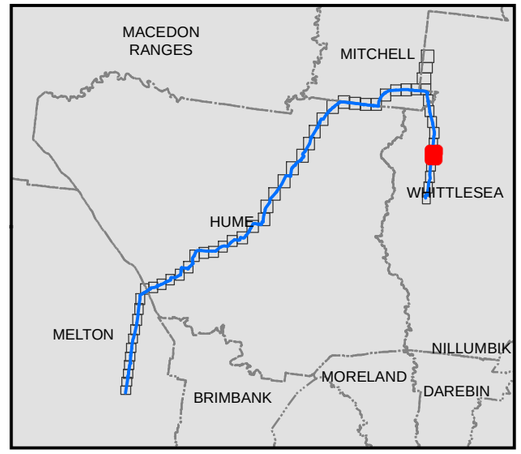
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Environment Effects Statement



Mapsheet 52 of 56

Legend

- Pipeline Kilometre Points
- Horizontal Bore - Special Crossing
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line
- Arterial road
- Collector road
- Proposed road

western outer ring main

a project of apa

N

Paper Size A3

0 50 100

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

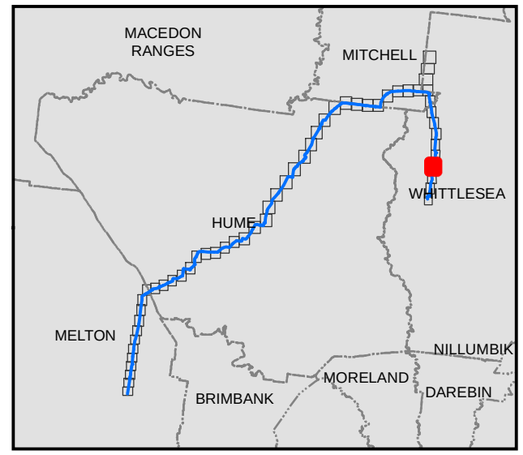
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Environment Effects Statement



Mapsheet 53 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line

KP 48

MSA

Open Trench Construction - Mainline

WHITTLESEA

CURLY SEDGE CREEK

western outer ring main

a project of apa

N

Paper Size A3

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

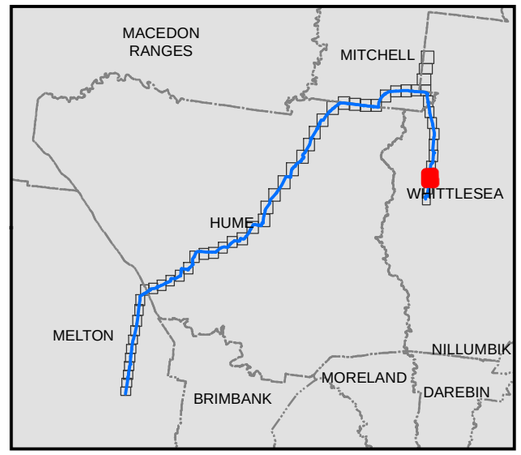
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Environment Effects Statement



Mapsheet 54 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line

CURLY SEDGE CREEK

KP 49

WHITTLESEA

Open Trench Construction - Mainline

MSA

western outer ring main

a project of apa

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Paper Size A3

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 55

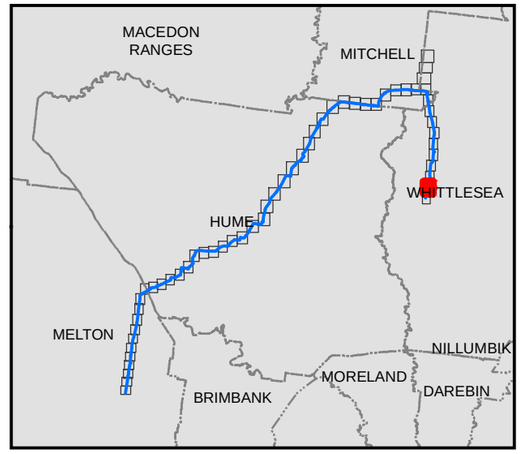
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Data source: VicMap, 2020, Pipleine KPs, MLV location, Pipeline Construction method TBC, Construction Corridor, Easements, Adjusted Parcels (Rev7) APA, 2020
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Environment Effects Statement



Mapsheet 55 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Open Trench Construction- Special Crossing
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Water
- Drainage line
- Collector road

Open Trench Construction - Mainline
MSA
KP 50
WHITTLESEA
Summerhill Rd

western outer ring main

a project of apa

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Paper Size A3

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Metres

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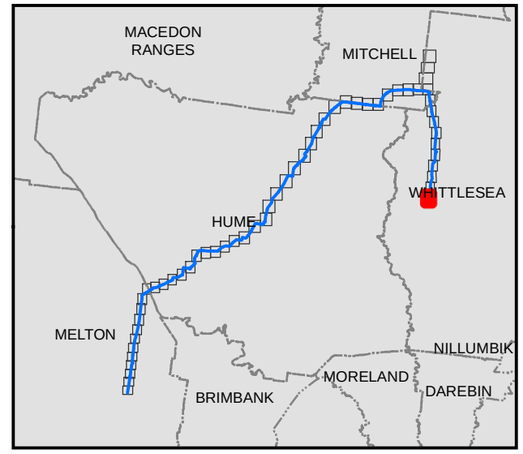
Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

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Data source: VicMap, 2020, Pipleine KPs, MLV location, Pipeline Construction method TBC, Construction Corridor, Easements, Adjusted Parcels (Rev7) APA, 2020
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Environment Effects Statement



Mapsheet 56 of 56

Legend

- Pipeline Kilometre Points
- Open Trench Construction - Mainline
- Open Trench Construction- Special Crossing
- Open Trench Construction- Special Section within WCS
- Existing Easement
- Temporary construction corridor
- Land parcel intercepting
- Melbourne Strategic Assessment (MSA)
- Drainage line
- Collector road

KP 50.784

KP 51.045- Wollert Compressor Station

MSA

WHITTLESEA

western outer ring main

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N

Paper Size A3

0 50 100

Metres

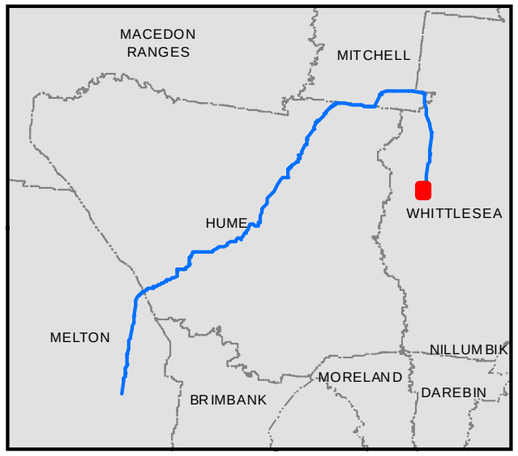
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Job Number: 31-1259997 | Revision: H | Date:11 Jun 2021

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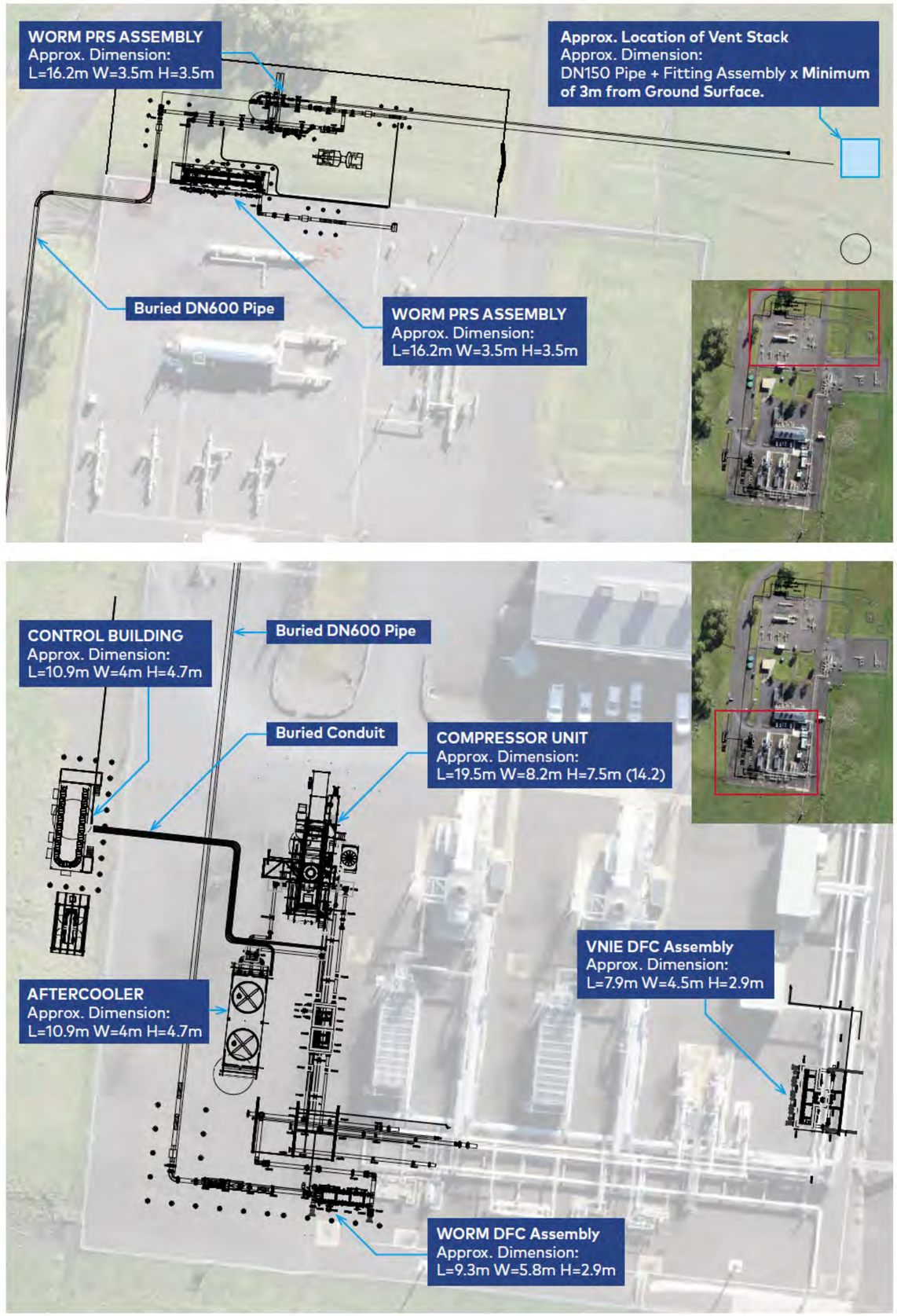
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WOLLERT COMPRESSOR STATION LAYOUT

Drawing 1 of 11



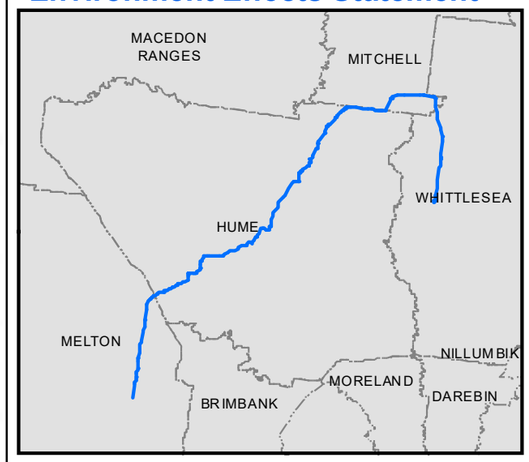
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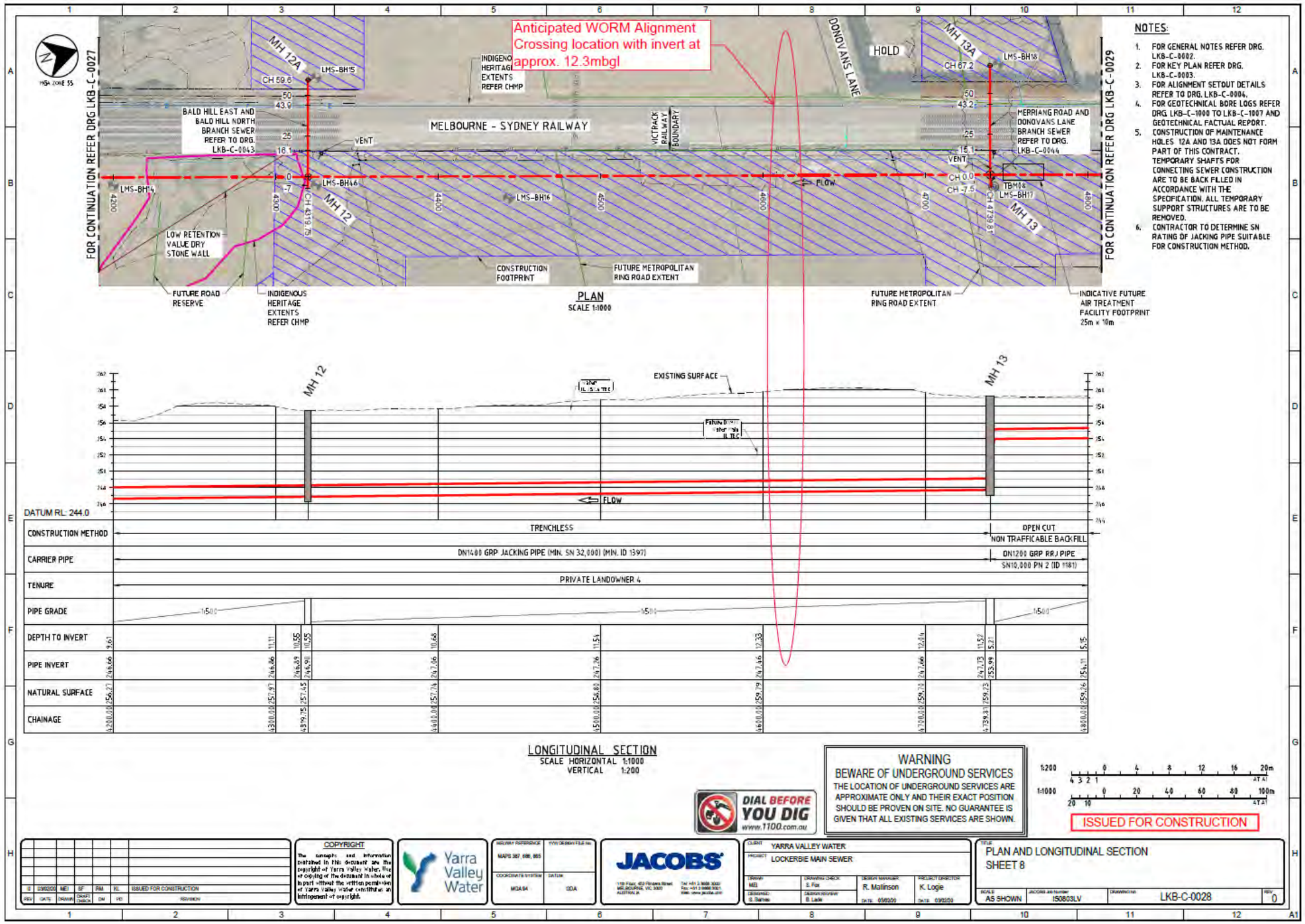
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Job Number: 31-1259997 | Revision: A | Date: 06 May



TYPICAL PLAN AND LONGITUDINAL SECTION DWG: LKB-C-0028

Drawing 2 of 11



NOTES:

1. FOR GENERAL NOTES REFER DRG. LKB-C-0002.
2. FOR KEY PLAN REFER DRG. LKB-C-0003.
3. FOR ALIGNMENT SETOUT DETAILS REFER TO DRG. LKB-C-0004.
4. FOR GEOTECHNICAL BORE LOGS REFER DRG. LKB-C-1000 TO LKB-C-1007 AND GEOTECHNICAL FACTUAL REPORT.
5. CONSTRUCTION OF MAINTENANCE HOLES 12A AND 13A DOES NOT FORM PART OF THIS CONTRACT. TEMPORARY SHAFTS FOR CONNECTING SEWER CONSTRUCTION ARE TO BE BACK FILLED IN ACCORDANCE WITH THE SPECIFICATION. ALL TEMPORARY SUPPORT STRUCTURES ARE TO BE REMOVED.
6. CONTRACTOR TO DETERMINE SN RATING OF JACKING PIPE SUITABLE FOR CONSTRUCTION METHOD.

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DIAL BEFORE YOU DIG www.1100.com.au

1:200 0 4 8 12 16 20m AT A1
1:1000 0 20 40 60 80 100m AT A1

ISSUED FOR CONSTRUCTION

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Yarra Valley Water

JACOBS

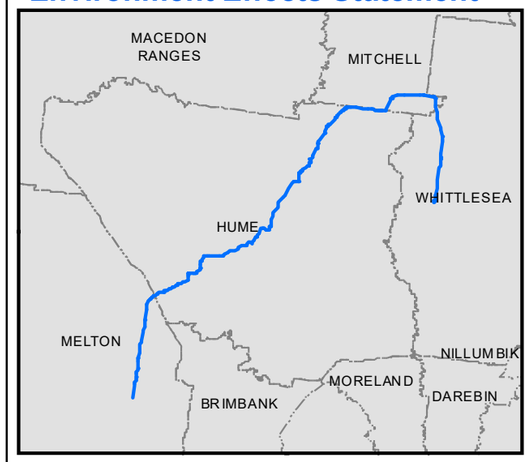
CLIENT: YARRA VALLEY WATER
PROJECT: LOCKERBIE MAIN SEWER
DESIGN MANAGER: R. Mallinson 05/2020
PROJECT DIRECTOR: K. Logie 05/2020
TITLE: PLAN AND LONGITUDINAL SECTION SHEET 8
SCALE: AS SHOWN
DRAWING No: LKB-C-0028
REV: 0

western outer ring main

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Paper Size A3

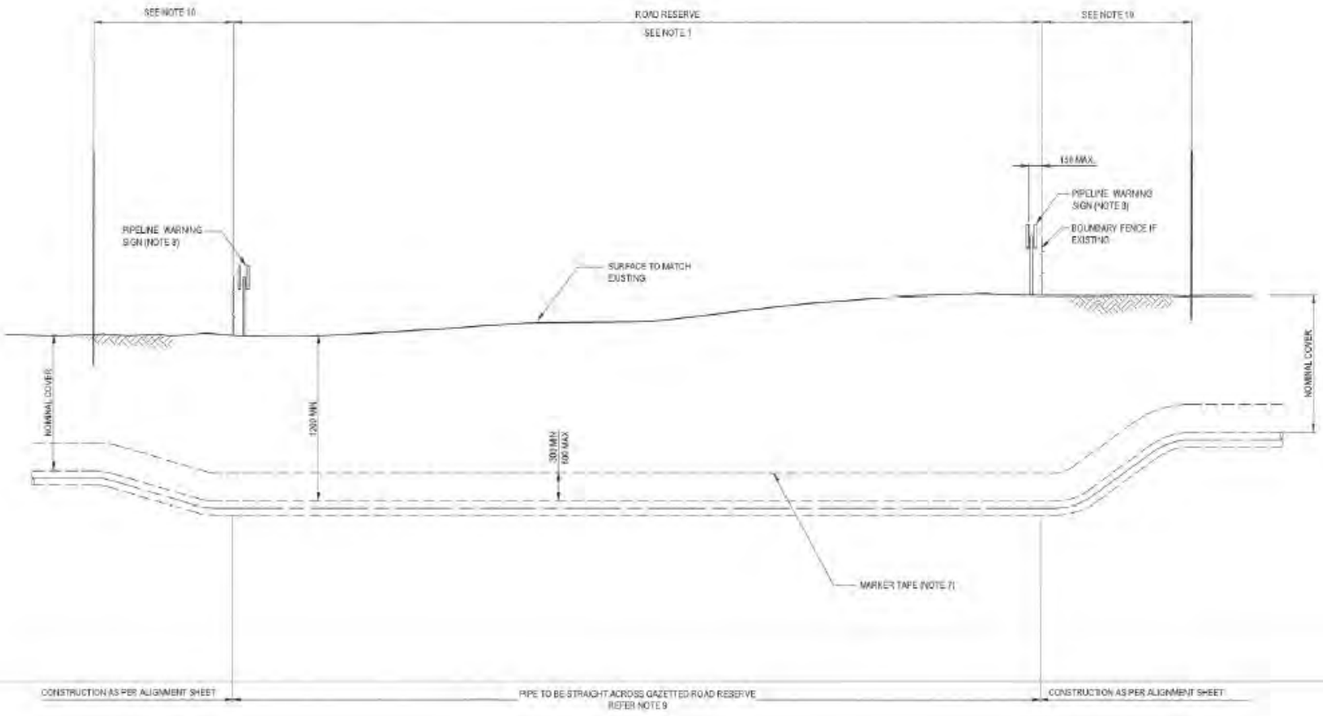


TYPICAL UNMADE GAZETTED ROAD CROSSING
DWG: 530-DWG-L-5000

Drawing 3 of 11

CONSTRUCTION NOTES

1. ROAD RESERVE CROSSING SHALL BE OPEN CUT.
2. APPROVAL SHALL BE OBTAINED BY THE CONTRACTOR FROM THE ROAD AUTHORITY PRIOR TO COMMENCING WORK AT THE CROSSING.
3. THE COMPANY SHALL BE GIVEN WRITTEN NOTICE 5 DAYS PRIOR TO COMMENCING WORK AT THE CROSSING.
4. THE RELEVANT AUTHORITIES SHALL BE GIVEN WRITTEN NOTICE AND DETAILED LOCATIONS OF ALL BURIED SERVICES SHALL BE OBTAINED PRIOR TO EXCAVATION.
5. ANY EXISTING BURIED PIPE OR UTILITY WITHIN CLOSE PROXIMITY OF THE PIPELINE PATH OR EXCAVATION AREA SHALL BE HAND DUG TO ESTABLISH ITS EXACT LOCATION AND ELEVATION PRIOR TO MACHINE EXCAVATION.
6. WALL THICKNESS & PIPE COATING FOR THE CROSSING SHALL BE AS NOMINATED ON THE ALIGNMENT SHEETS & DATA TABLES.
7. MARKER TAPE SHALL BE INSTALLED 300mm ABOVE TOP OF PIPE AND OVER THE FULL WIDTH OF THE LEGAL ROAD RESERVE PLUS AN ADDITIONAL 50m ON BOTH SIDES. MARKER TAPE MUST BE LAID FLAT. BACKFILL TO BE PLACED ON TOP OF TAPE SO AS TO NOT DAMAGE OR DISPLACE MARKER TAPE. TAPE SHALL COMPLY WITH AS/NZ 2648.1.
8. PIPELINE WARNING SIGNS SHALL BE INSTALLED AS PER DWG 530-DWG-L-0503. BOTH SIGNS TO BE CLEARLY VISIBLE FROM THE ROAD.
9. PIPE SHALL BE LAID STRAIGHT WITH NOMINATED DEPTH OF COVER FOR WIDTH OF ROAD RESERVE.
10. SAG BENDS AND OVER BENDS TO RESUME NORMAL PIPELINE DEPTH SHALL BE IN ACCORDANCE WITH APPLICABLE SECTION OF THE CONSTRUCTION SPECIFICATION.
11. BACKFILL AND RESURFACING SHALL BE TO THE REQUIREMENTS OF THE RELEVENT AUTHORITY FOR THE WIDTH OF THIS ROAD RESERVE.



LEGAL PLANNED ROAD RESERVE - PROFILE

0	ISSUED FOR USE			JH		NE	AB					
REV	PROJ No	REVISION	DATE	DRW	DES	CHK	APP	REFERENCE DRGS	DRG No			

APA Group

	NAME	DATE
DRAWN	J. HALLIDAY	
DESIGNED		
VALIDATED		
ACCEPTED	A. BAILEY	20/01/0

A1 | SCALE: NTS

STANDARD DRAWING
TYPICAL UNMADE GAZETTED ROAD CROSSING
GENERAL CROSSING

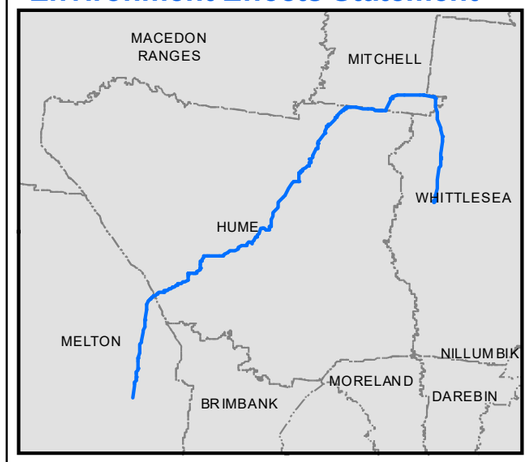
PROJECT No | DRG No: 530-DWG-L-5000 | REV: 0

western outer ring main — a project of apa

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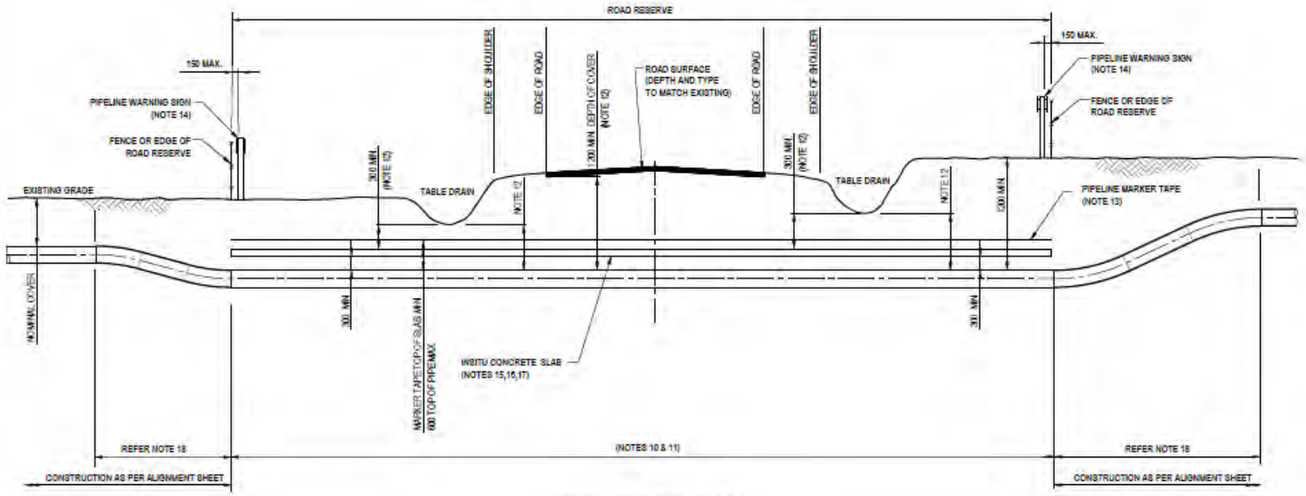
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Job Number: 31-1259997 | Revision: A | Date: 06 May



TYPICAL SEALED ROAD CROSSING - OPEN CUT PIPELINE CROSSING DWG: 530-DWG-L-5001

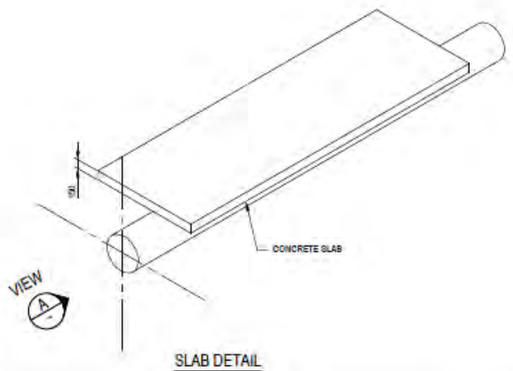
Drawing 4 of 11



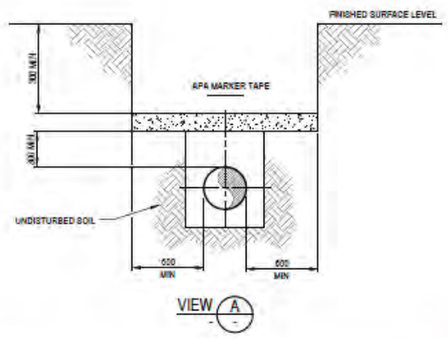
ROAD - OPEN CUT PROFILE

NOTES:

1. ROAD OPENING PERMITS AND APPLICABLE ROAD AUTHORITY SPECIFICATIONS SHALL BE OBTAINED PRIOR TO COMMENCING WORK AT THE CROSSING. ROAD AUTHORITY SPECIFICATIONS SHALL APPLY IN CONJUNCTION WITH REQUIREMENTS OF THIS DRAWING.
2. APA SHALL BE GIVEN WRITTEN NOTICE 3 DAYS PRIOR TO COMMENCING WORK AT THE CROSSING.
3. THE RELEVANT AUTHORITIES SHALL BE GIVEN WRITTEN NOTICE AND DETAILED LOCATIONS OF ALL BURIED SERVICES SHALL BE OBTAINED PRIOR TO EXCAVATION.
4. ANY EXISTING BURIED PIPE OR UTILITY WITHIN CLOSE PROXIMITY OF THE PIPELINE PATH OR EXCAVATION AREA SHALL BE HAND DUG TO ESTABLISH ITS EXACT LOCATION AND ELEVATION PRIOR TO MACHINE EXCAVATION.
5. TRAFFIC CONTROL AND SAFETY PROCEDURES SHALL BE MAINTAINED IN ACCORDANCE WITH REQUIREMENTS OF THE RELEVANT ROAD AUTHORITIES AND AS 1742.3. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PROTECT THE PUBLIC BY THE USE OF SIGNS, SIGNALS, BARRICADES, FLAG PERSONS OR WATCH PERSONS.
6. THE BITUMEN LAYER OVER THE TRENCH SHALL BE SAW CUT IN STRAIGHT LINES AND UNIFORM WIDTH PRIOR TO EXCAVATION.
7. TRENCH BACKFILL TO ROAD SUB BASE LEVEL AND WITHIN ROAD RESERVE BOUNDARY – MATERIAL FOR PADDING AROUND THE PIPE SHALL COMPLY WITH THE CONSTRUCTION SPECIFICATION. MATERIAL FOR FURTHER BACKFILL SHALL COMPLY WITH THE ROAD AUTHORITY SPECIFICATION, BUT SHALL BE AT LEAST EQUIVALENT TO SELECTED BACKFILL, FREE OF ORGANIC MATERIAL AND ROCKS LARGER THAN 100mm. TOP LAYER SHALL BE FREE OF ROCK GREATER THAN 20mm. BACKFILL COMPACTION SHALL COMPLY WITH THE ROAD AUTHORITY SPECIFICATION, BUT SHALL BE AT LEAST EQUIVALENT TO LAYERS NOT EXCEEDING 150mm COMPACTED, EACH LAYER SHALL BE COMPACTED TO 95% STANDARD DRY DENSITY AND TESTED USING A STANDARD COMPACTION TEST AS PER AS 1289.5.1.1.
8. BITUMEN ROAD- ROAD BASE, SUB-BASE, AND BITUMEN SHALL BE REPAIRED IN ACCORDANCE WITH THE ROAD AUTHORITY SPECIFICATIONS.
9. THE WORK AREA AND SURFACE DRAINAGE SHALL BE REINSTATED AS PER THE ROAD AUTHORITY SPECIFICATIONS.
10. PIPE SHALL BE INSTALLED STRAIGHT ACROSS THE WIDTH OF THE ROAD RESERVE UNLESS APPROVED OTHERWISE IN WRITING BY APA REPRESENTATIVE.
11. WALL THICKNESS AND PIPE COATING FOR THE CROSSING SHALL BE AS NOMINATED ON THE ALIGNMENT SHEETS, & SHALL APPLY FOR WIDTH OF ROAD RESERVE.
12. MINIMUM PIPE COVER AS SPECIFIED SHALL BE MAINTAINED AT ALL POINTS WITHIN THE CROSSING LIMITS
13. MARKER TAPE MUST BE LAID FLAT. BACKFILL TO BE PLACED ON TOP OF TAPE, SUCH THAT NO DAMAGE OR DISPLACEMENT OF THE MARKER TAPE OCCURS. TAPE SHALL COMPLY WITH AS/NZS 2648.1
14. PIPELINE WARNING SIGNS SHALL BE INSTALLED AS PER PIPELINE MARKER SIGNS GUIDELINE 530-SID-L-0001
15. CONCRETE SLAB AND MARKER TAPE SHALL BE INSTALLED ACROSS THE FULL LENGTH OF THE ROAD RESERVE AS PER TABLE BELOW.
16. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF FC = 20MPa AT 28 DAYS
17. FOR ALTERNATIVE PRE-CAST SLAB OPTION, REFER DRAWING 530-DWG-L-1007
18. SAG BENDS AND OVER BENDS TO RESUME NORMAL PIPELINE DEPTH IN ACCORDANCE WITH APPLICABLE SECTION OF CONSTRUCTION SPECIFICATION.



SLAB DETAIL



PIPELINE DEPTH OF COVER (AT ROAD SURFACE AND TABLE DRAIN)	CONCRET SLABBING REQUIREMENTS	
	PIPELINE LOCATION CLASSES (AS PER AS/NZS 2885.0)	
	PRIMARY LOCATION CLASS T1, SECONDARY LOCATION CLASS: S, C, I CIC FUTURE DEVELOPMENT IS EXPECTED	PRIMARY LOCATION CLASS: R1, R2 (WITHOUT SECONDARY LOCATION CLASSES)
1200mm (MIN) TO 1500mm (MAX)	CONCRETE SLAB SHALL BE INSTALLED ACROSS FULL WIDTH OF ROAD RESERVE	CONCRETE SLAB SHALL BE INSTALLED ACROSS FULL WIDTH OF ROAD RESERVE. (NOTE AT TABLE DRAIN, MINIMUM PIPE COVER OF 750mm MAY BE ACCEPTABLE SUBJECT TO APPROVAL BY APA)
DEEPER THAN 1500mm	CONCRETE SLAB SHALL BE INSTALLED ACROSS FULL WIDTH OF ROAD RESERVE	CONCRETE SLAB MAY NOT BE REQUIRED SUBJECT TO APPROVAL BY APA

REV	PROJ No	REVISION	DATE	DRN	DES	CHK	APP	REFERENCE DRGs	DRG No
								PIPELINE MARKER SIGNS GUIDELINE	530-SID-L-0001
								CONCRETE SLAB	530-DWG-L-1007
								DANGER SIGN PLATE	530-DWG-L-0510
								HIGH LEVEL WARNING MARKER INSTALLATION ASSEMBLY	530-DWG-L-0508
1		ISSUED FOR USE	30/01/23	PF		TC	MF	POST ASSEMBLY	530-DWG-L-0502
0		ISSUED FOR USE	29/01/18	JH		MC	WB	MARKER TAPE INSTALLATION	530-DWG-L-0504

ISSUED FOR USE

	NAME	DATE
DRAWN	J. HALLAJIAN	14/01/16
DESIGNED		
VALIDATED		
ACCEPTED	W. SALEY	29/01/16
SCALE	NTS	
APA ID		
A1		

STANDARD DRAWING

TYPICAL SEALED ROAD CROSSING - OPEN CUT PIPELINE CROSSING

GENERAL

PROJECT No | DRG No: 530-DWG-L-5001 | REV: 1

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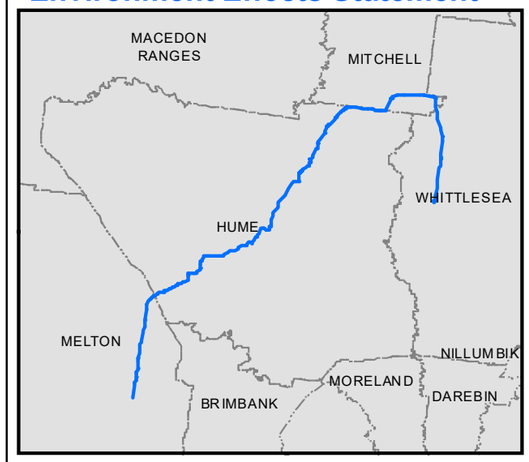
western outer ring main

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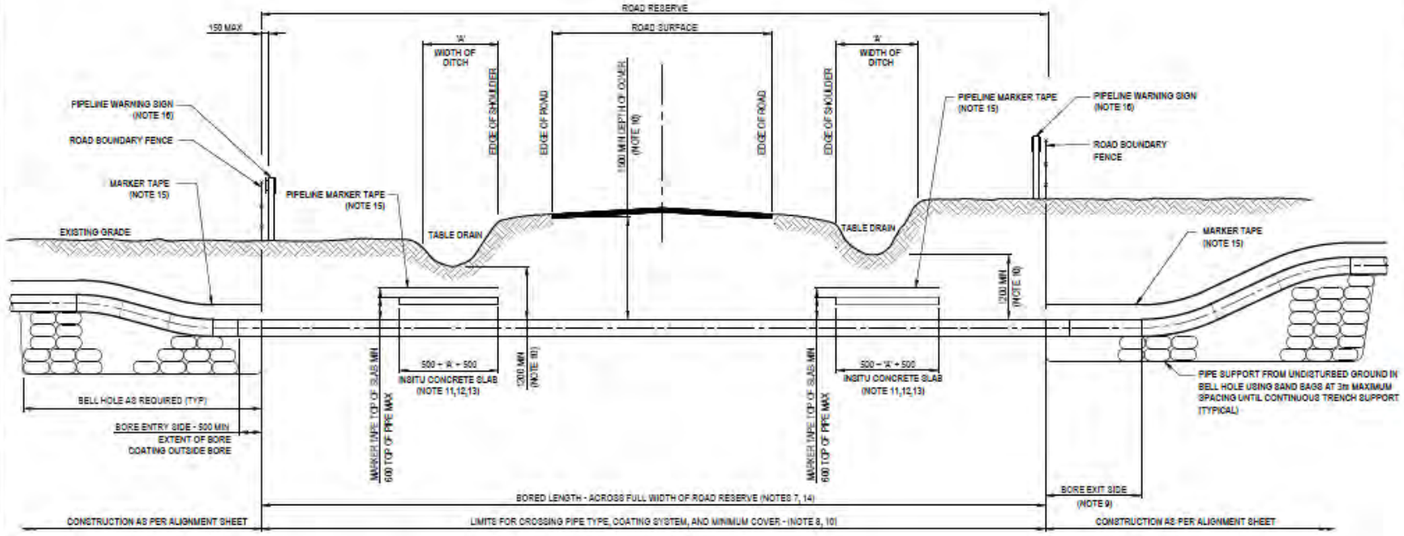
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Job Number: 31-1259997 | Revision: A | Date: 06 May



TYPICAL ROAD CROSSING - BORED (WITHOUT CASING) CROSSING GENERAL DWG: 530-DWG-L-5002

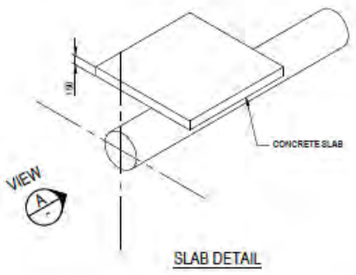
Drawing 5 of 11



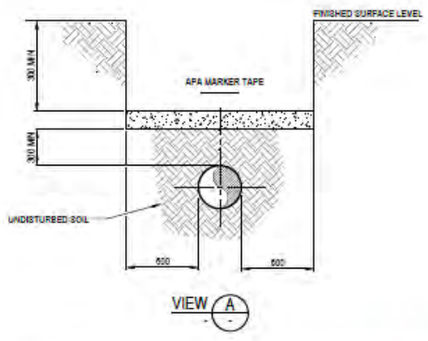
ROAD - BORED PROFILE

NOTES:

1. ROAD OPENING PERMITS AND APPLICABLE ROAD AUTHORITY SPECIFICATIONS SHALL BE OBTAINED PRIOR TO COMMENCING WORK AT THE CROSSING. ROAD AUTHORITY SPECIFICATIONS SHALL APPLY IN CONJUNCTION WITH REQUIREMENTS OF THIS DRAWING.
2. APA SHALL BE GIVEN WRITTEN NOTICE 3 DAYS PRIOR TO COMMENCING WORK AT THE CROSSING.
3. THE RELEVANT AUTHORITIES SHALL BE GIVEN WRITTEN NOTICE AND DETAILED LOCATIONS OF ALL BURIED SERVICES SHALL BE OBTAINED PRIOR TO EXCAVATION.
4. ANY EXISTING BURIED PIPE OR UTILITY WITHIN CLOSE PROXIMITY OF THE PIPELINE PATH OR EXCAVATION AREA SHALL BE HAND DUG TO ESTABLISH ITS EXACT LOCATION AND ELEVATION PRIOR TO MACHINE EXCAVATION.
5. TRAFFIC CONTROL AND SAFETY PROCEDURES SHALL BE MAINTAINED IN ACCORDANCE WITH REQUIREMENTS OF THE RELEVANT ROAD AUTHORITIES AND AS1742.3. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PROTECT TRAFFIC BY THE USE OF SIGNS, SIGNALS, BARRICADES, FLAG PERSONS OR WATCH PERSONS.
6. THE WORK AREA AND SURFACE DRAINAGE SHALL BE REINSTATED AS PER THE ROAD AUTHORITY REQUIREMENTS.
7. BORED CROSSING SHALL BE ACROSS FULL WIDTH OF ROAD RESERVE UNLESS APPROVED OTHERWISE IN WRITING BY APA. ANY OPEN CUT ALTERNATIVE SECTION WITHIN ROAD RESERVE SHALL BE AS PER 530-DWG-L-5001
8. WALL THICKNESS AND PIPE COATING FOR THE CROSSING SHALL BE AS NOMINATED ON THE ALIGNMENT SHEETS, AND SHALL APPLY TO THE WIDTH OF THE ROAD RESERVE.
9. BORE COATING TO BE EXTENDED 2000mm MINIMUM ON EXIT SIDE TO PROVIDE INSPECTION AREA FOR COATING DAMAGE DUE TO ROCKS AND/OR HOLE COLLAPSE.
10. MINIMUM PIPE COVER AS SPECIFIED SHALL BE MAINTAINED AT ALL POINTS WITHIN THE CROSSING LIMITS UNLESS APPROVED OTHERWISE IN WRITING BY APA.
11. CONCRETE SLABS SHALL BE INSTALLED UNDER TABLE DRAINS WHERE THE PIPE COVER AT THE INVERT IS LESS THAN 1500mm UNLESS OTHERWISE APPROVED IN WRITING BY APA
12. CONCRETE SHALL HAVE A MINIMUM STRENGTH FC = 20MPa AT 28 DAYS
13. FOR ALTERNATIVE PRE-CAST SLAB OPTION, REFER DRAWING 530-DWG-L-1007
14. THE BORE DIAMETER SHALL BE A MINIMUM OF 100mm LARGER THAN THE PIPE DIAMETER TO FACILITATE INSTALLATION OF GROUT. ANNULAR GAP BETWEEN PIPE AND BOREHOLE SHALL BE FULLY GROUTED USING A FLOWABLE CEMENTIOUS TYPE GROUT TO A MIN OF 1.5MPa. GROUTING PROCEDURE SHALL BE APPROVED BY APA 4 WEEKS PRIOR TO START OF BORE.
15. MARKER TAPE SHALL BE INSTALLED AT A NOMINAL 300mm ABOVE TOP OF PIPE AND OVER A MINIMUM LENGTH OF 2000mm FROM BORE END ON BOTH SIDES. REFER DRAWING 530-DWG-L-0504.
16. PIPELINE WARNING SIGNS SHALL BE INSTALLED AS PER PIPELINE MARKER SIGNS GUIDELINE 580-GD-L-0001
17. PIPE SHALL BE HYDROSTATICALLY PRE-TESTED PRIOR TO INSTALLATION. UNLESS OTHERWISE APPROVED BY APA.



SLAB DETAIL



VIEW A

REV	PROJ No	REVISION	DATE	DRN	DES	CHK	APP	REFERENCE DRGs	DRG No
								PIPELINE MARKER SIGNS GUIDELINE	580-GD-L-0001
								TYPICAL DEAD STEND CROSSING - OPEN CUT	530-DWG-L-5001
								CONCRETE SLAB	530-DWG-L-1000
								DANGER SIGN PLATE	530-DWG-L-0510
								HIGH LEVEL WARNING MARKER INSTALLATION ASSEMBLY	530-DWG-L-0508
1		ISSUED FOR USE	30/01/19	PF		FL	MF	POST ASSEMBLY	530-DWG-L-0507
0		ISSUED FOR USE	25/01/19	JH		MC	WB	MARKER TAPE INSTALLATION	530-DWG-L-0504

ISSUED FOR USE

	NAME	DATE
DRAWN	J. HALLAJIAN	14/01/19
DESIGNED		
VALIDATED		
ACCEPTED	W. BAILEY	29/01/19
SCALE	NTS	
APA ID		

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STANDARD DRAWING
TYPICAL ROAD CROSSING - BORED (WITHOUT CASING) CROSSING GENERAL

PROJECT No | DRG No: 530-DWG-L-5002 | REV: 1

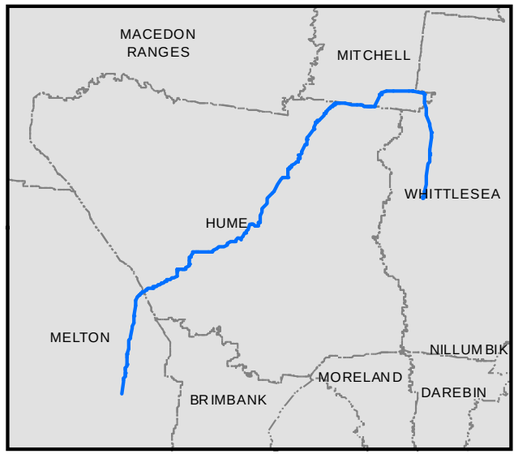
western outer ring main

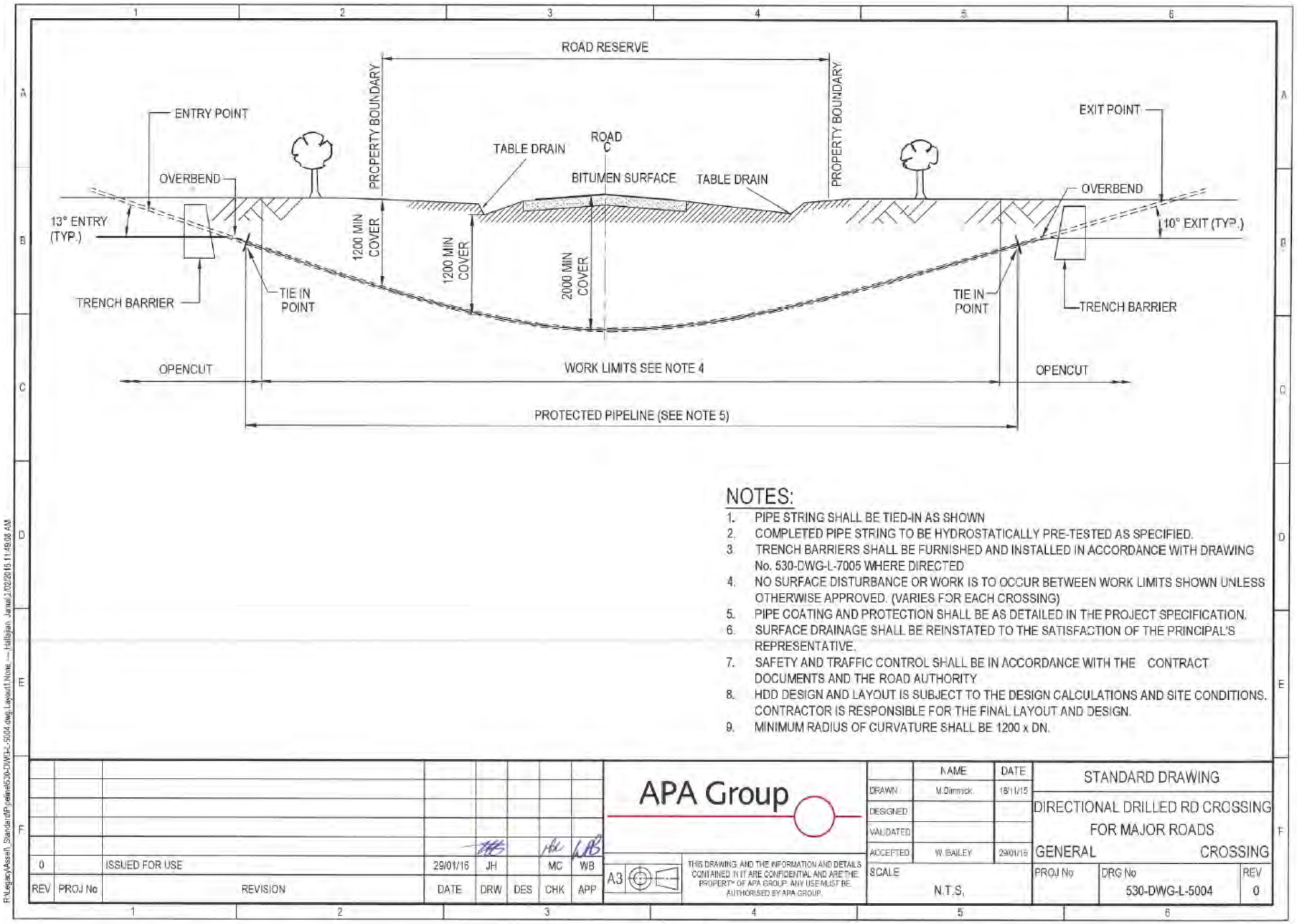
a project of apa

N

Paper Size A3

Job Number: 31-1259997 | Revision: A | Date: 06 May





NOTES:

1. PIPE STRING SHALL BE TIED-IN AS SHOWN
2. COMPLETED PIPE STRING TO BE HYDROSTATICALLY PRE-TESTED AS SPECIFIED.
3. TRENCH BARRIERS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH DRAWING No. 530-DWG-L-7005 WHERE DIRECTED
4. NO SURFACE DISTURBANCE OR WORK IS TO OCCUR BETWEEN WORK LIMITS SHOWN UNLESS OTHERWISE APPROVED. (VARIES FOR EACH CROSSING)
5. PIPE COATING AND PROTECTION SHALL BE AS DETAILED IN THE PROJECT SPECIFICATION.
6. SURFACE DRAINAGE SHALL BE REINSTATED TO THE SATISFACTION OF THE PRINCIPAL'S REPRESENTATIVE.
7. SAFETY AND TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE ROAD AUTHORITY
8. HDD DESIGN AND LAYOUT IS SUBJECT TO THE DESIGN CALCULATIONS AND SITE CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR THE FINAL LAYOUT AND DESIGN.
9. MINIMUM RADIUS OF CURVATURE SHALL BE 1200 x DN.

REV	PROJ No	REVISION	DATE	DRW	DES	CHK	APP
0		ISSUED FOR USE	29/01/16	JH		MC	WB

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	NAME	DATE
DRAWN	M.Dimmick	18/11/15
DESIGNED		
VALIDATED		
ACCEPTED	W.BAILEY	29/01/16
SCALE	N.T.S.	

STANDARD DRAWING

DIRECTIONAL DRILLED RD CROSSING FOR MAJOR ROADS GENERAL CROSSING

PROJ No	DRG No	REV
	530-DWG-L-5004	0

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DIRECTIONAL DRILLED ROAD CROSSING FOR MAJOR ROADS GENERAL CROSSING DWG: 530-DWG-L-5004

Drawing 6 of 11

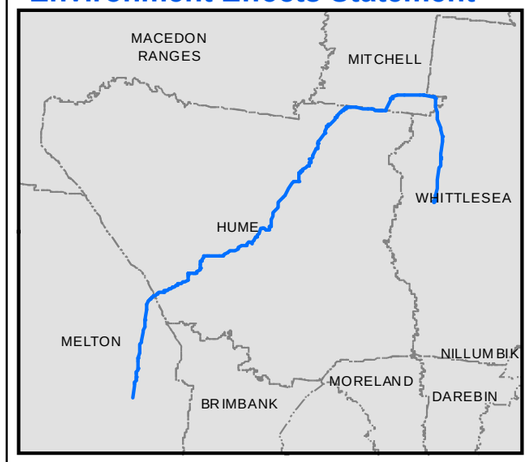
western outer ring main

a project of apa

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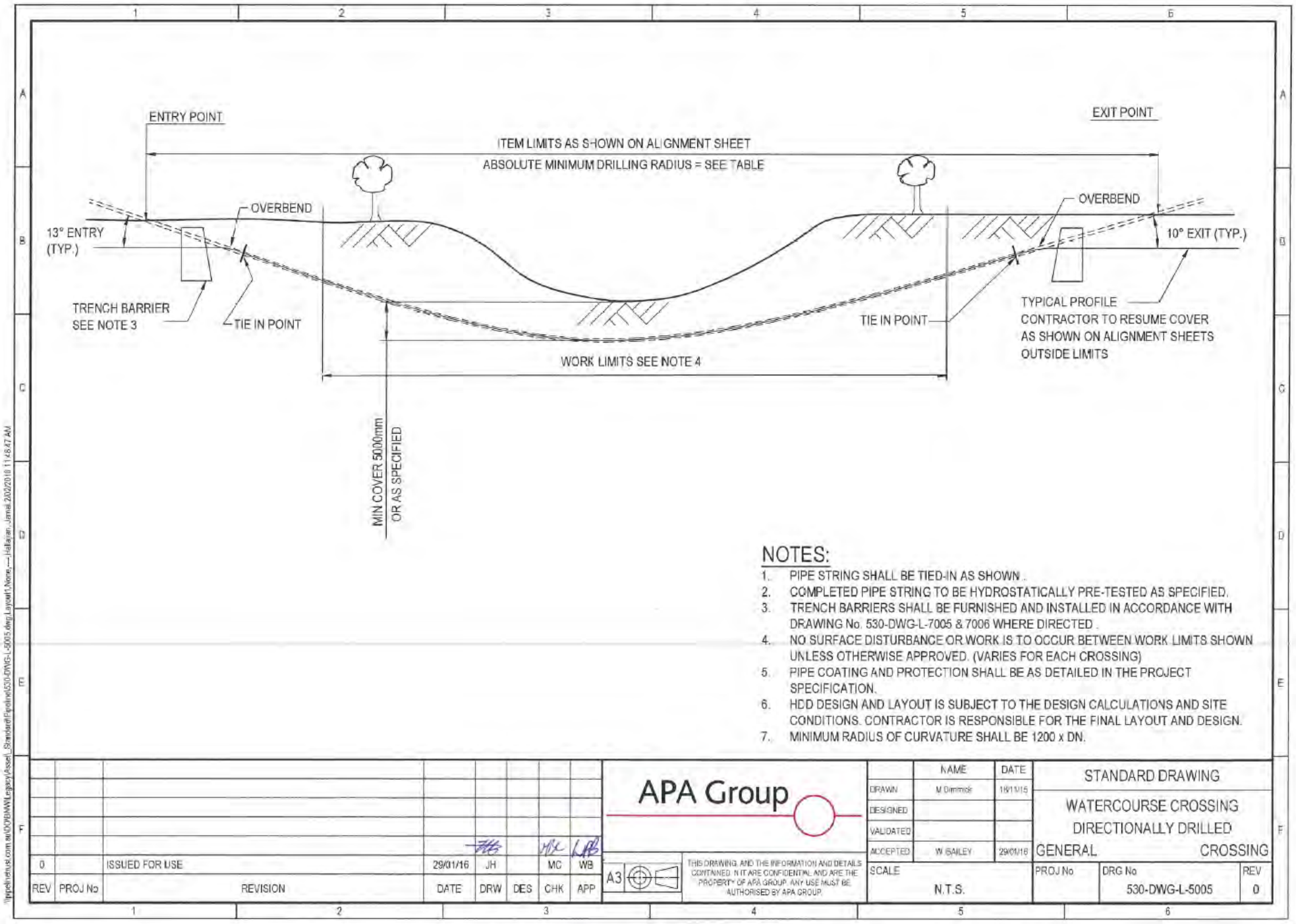
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Job Number: 31-1259997 | Revision: A | Date: 06 May



WATERCOURSE CROSSING DIRECTIONALLY DRILLED - GENERAL CROSSING
DWG: 530-DWG-L-5005

Drawing 7 of 11



NOTES:

1. PIPE STRING SHALL BE TIED-IN AS SHOWN .
2. COMPLETED PIPE STRING TO BE HYDROSTATICALLY PRE-TESTED AS SPECIFIED.
3. TRENCH BARRIERS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH DRAWING No. 530-DWG-L-7005 & 7006 WHERE DIRECTED .
4. NO SURFACE DISTURBANCE OR WORK IS TO OCCUR BETWEEN WORK LIMITS SHOWN UNLESS OTHERWISE APPROVED. (VARIES FOR EACH CROSSING)
5. PIPE COATING AND PROTECTION SHALL BE AS DETAILED IN THE PROJECT SPECIFICATION.
6. HDD DESIGN AND LAYOUT IS SUBJECT TO THE DESIGN CALCULATIONS AND SITE CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR THE FINAL LAYOUT AND DESIGN.
7. MINIMUM RADIUS OF CURVATURE SHALL BE 1200 x DN.

REV	PROJ No	REVISION	DATE	DRW	DES	CHK	APP
0		ISSUED FOR USE	29/01/16	JH		MC	WB

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	NAME	DATE
DRAWN	M Dimmick	18/11/15
DESIGNED		
VALIDATED		
ACCEPTED	W BAILEY	29/01/16

STANDARD DRAWING
WATERCOURSE CROSSING DIRECTIONALLY DRILLED GENERAL CROSSING

SCALE N.T.S.

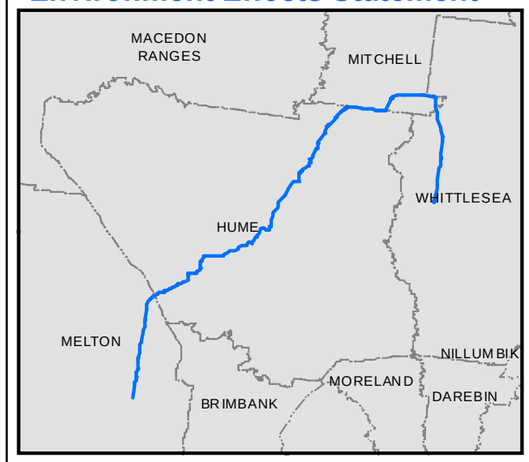
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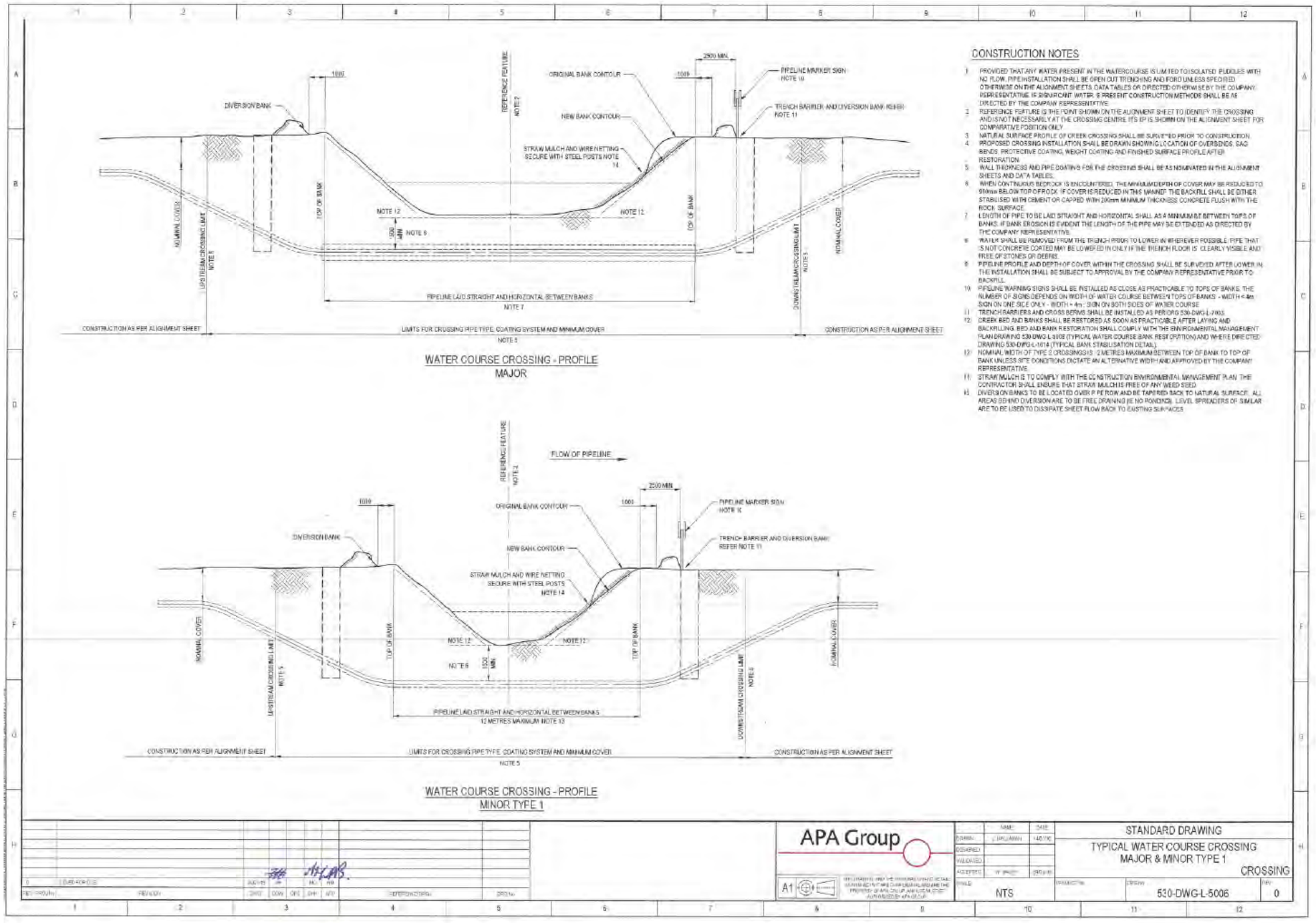
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western outer ring main — a project of apa

Paper Size A3

Job Number: 31-1259997 | Revision: A | Date: 06 May





CONSTRUCTION NOTES

1. PROVIDED THAT ANY WATER PRESENT IN THE WATERCOURSE IS LIMITED TO ISOLATED PUDDLES WITH NO FLOW, PIPE INSTALLATION SHALL BE OPEN CUT TRENCHING AND FORD UNLESS SPECIFIED OTHERWISE ON THE ALIGNMENT SHEETS, DATA TABLES OR DIRECTED OTHERWISE BY THE COMPANY REPRESENTATIVE. IF SIGNIFICANT WATER IS PRESENT CONSTRUCTION METHODS SHALL BE AS DIRECTED BY THE COMPANY REPRESENTATIVE.
2. REFERENCE FEATURE IS THE POINT SHOWN ON THE ALIGNMENT SHEET TO IDENTIFY THE CROSSING AND IS NOT NECESSARILY AT THE CROSSING CENTRE. ITS EP IS SHOWN ON THE ALIGNMENT SHEET FOR COMPARATIVE POSITION ONLY.
3. NATURAL SURFACE PROFILE OF CREEK CROSSING SHALL BE SURVEYED PRIOR TO CONSTRUCTION.
4. PROPOSED CROSSING INSTALLATION SHALL BE DRAWN SHOWING LOCATION OF OVERBENDS, SAG BENDS, PROTECTIVE COATING, WEIGHT COATING AND FINISHED SURFACE PROFILE AFTER RESTORATION.
5. WALL THICKNESS AND PIPE COATING FOR THE CROSSING SHALL BE AS NOMINATED IN THE ALIGNMENT SHEETS AND DATA TABLES.
6. WHEN CONTINUOUS BEDROCK IS ENCOUNTERED, THE MINIMUM DEPTH OF COVER MAY BE REDUCED TO 0.9m(as BELOW TOP OF ROCK. IF COVER IS REDUCED IN THIS MANNER THE BACKFILL SHALL BE EITHER STABILISED WITH CEMENT OR CAPPED WITH 200mm MINIMUM THICKNESS CONCRETE FLUSH WITH THE ROCK SURFACE.
7. LENGTH OF PIPE TO BE LAID STRAIGHT AND HORIZONTAL SHALL AS A MINIMUM BE BETWEEN TOPS OF BANKS. IF BANK EROSION IS EVIDENT THE LENGTH OF THE PIPE MAY BE EXTENDED AS DIRECTED BY THE COMPANY REPRESENTATIVE.
8. WATER SHALL BE REMOVED FROM THE TRENCH PRIOR TO LOWER IN WHEREVER POSSIBLE. PIPE THAT IS NOT CONCRETE COATED MAY BE LOWERED IN ONLY IF THE TRENCH FLOOR IS CLEARLY VISIBLE AND FREE OF STONES OR DEBRIS.
9. PIPELINE PROFILE AND DEPTH OF COVER WITHIN THE CROSSING SHALL BE SURVEYED AFTER LOWER IN THE INSTALLATION SHALL BE SUBJECT TO APPROVAL BY THE COMPANY REPRESENTATIVE PRIOR TO BACKFILL.
10. PIPELINE WARNING SIGNS SHALL BE INSTALLED AS CLOSE AS PRACTICABLE TO TOPS OF BANKS. THE NUMBER OF SIGNS DEPENDS ON WIDTH OF WATER COURSE BETWEEN TOPS OF BANKS: - WIDTH < 4m: SIGN ON ONE SIDE ONLY. - WIDTH > 4m : SIGN ON BOTH SIDES OF WATER COURSE
11. TRENCH BARRIERS AND CROSS BERMS SHALL BE INSTALLED AS PER DWG 530-DWG-L-7103.
12. CREEK BED AND BANKS SHALL BE RESTORED AS SOON AS PRACTICABLE AFTER LAYING AND BACKFILLING. BED AND BANK RESTORATION SHALL COMPLY WITH THE ENVIRONMENTAL MANAGEMENT PLAN DRAWING 530-DWG-L-5108 (TYPICAL WATER COURSE BANK RESTORATION) AND WHERE DIRECTED DRAWING 530-DWG-L-1614 (TYPICAL BANK STABILISATION DETAIL).
13. NOMINAL WIDTH OF TYPE 2 CROSSINGS IS : 2 METRES MAXIMUM BETWEEN TOP OF BANK TO TOP OF BANK UNLESS SITE CONDITIONS DICTATE AN ALTERNATIVE WIDTH AND APPROVED BY THE COMPANY REPRESENTATIVE.
14. STRAW MULCH IS TO COMPLY WITH THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN. THE CONTRACTOR SHALL ENSURE THAT STRAW MULCH IS FREE OF ANY WEED SEED.
15. DIVERSION BANKS TO BE LOCATED OVER PIPE ROW AND BE TAPERED BACK TO NATURAL SURFACE. ALL AREAS BEHIND DIVERSION ARE TO BE FREE DRAINING (IE NO PONDING). LEVEL SPREADERS OR SIMILAR ARE TO BE USED TO DISSIPATE SHEET FLOW BACK TO EXISTING SURFACES.

APA Group

	NAME	DATE
DRAWN	J.DELUMAH	14/5/19
DESIGNED		
REVIEWED		
ACCEPTED	W. [illegible]	[illegible]

STANDARD DRAWING
TYPICAL WATER COURSE CROSSING
MAJOR & MINOR TYPE 1
CROSSING

SCALE: NTS | DRAWING: 530-DWG-L-5006 | REV: 0

TYPICAL WATER COURSE CROSSING MAJOR & MINOR TYPE 1 CROSSING

DWG: 530-DWG-L-5006

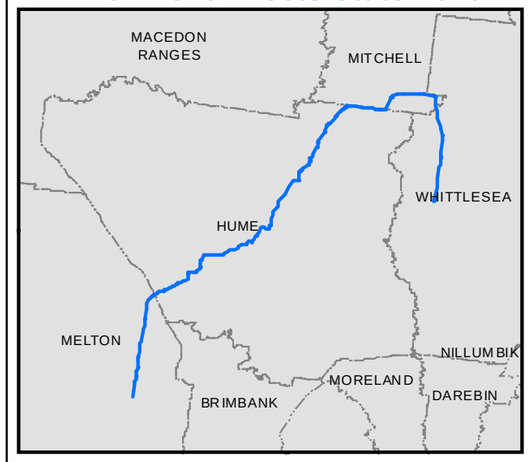
Drawing 8 of 11

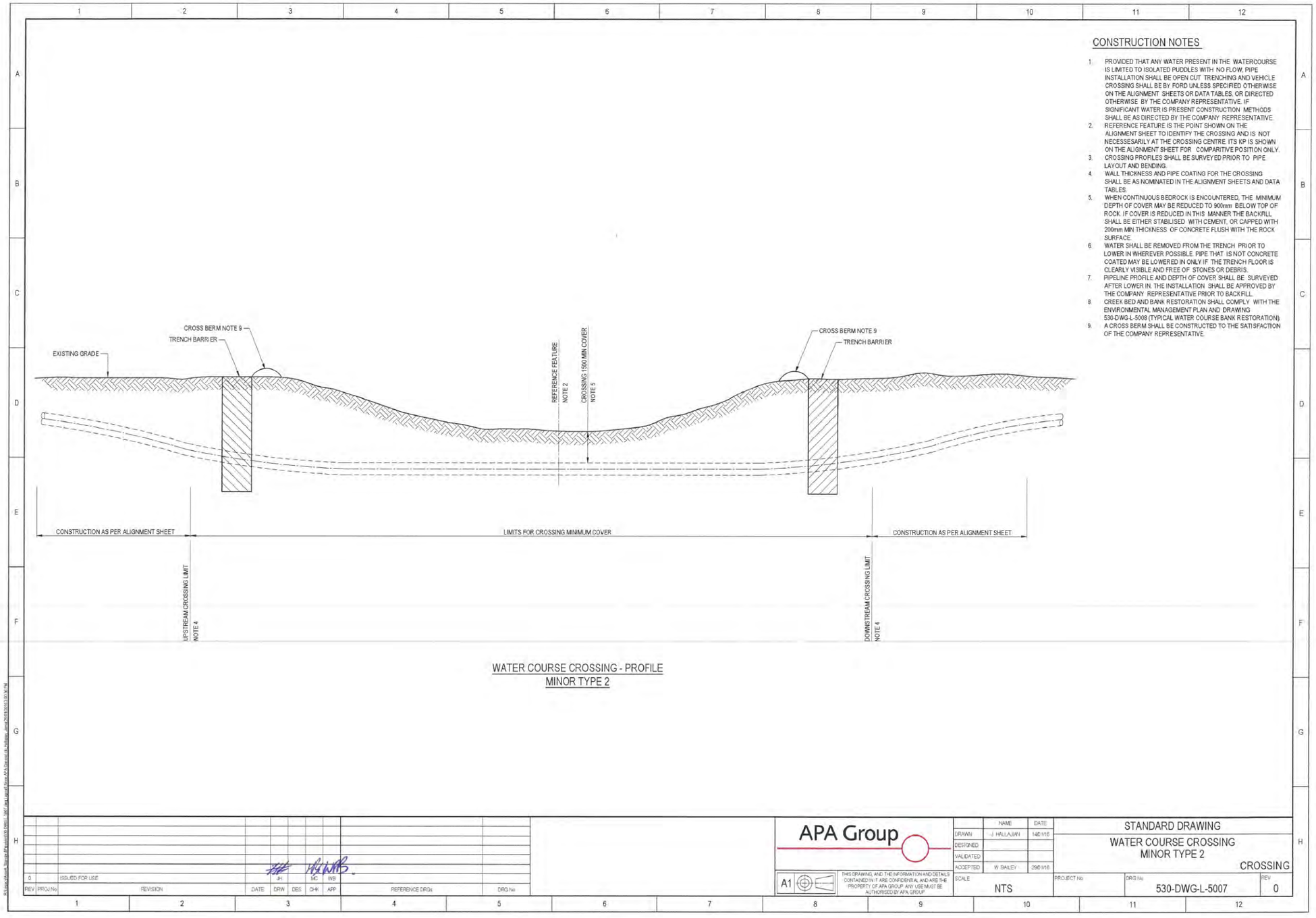
western outer ring main — a project of apa

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Paper Size A3

Job Number: 31-1259997 | Revision: A | Date: 06 May





WATER COURSE CROSSING - PROFILE
MINOR TYPE 2

CONSTRUCTION NOTES

1. PROVIDED THAT ANY WATER PRESENT IN THE WATERCOURSE IS LIMITED TO ISOLATED PUDDLES WITH NO FLOW, PIPE INSTALLATION SHALL BE OPEN CUT TRENCHING AND VEHICLE CROSSING SHALL BE BY FORD UNLESS SPECIFIED OTHERWISE ON THE ALIGNMENT SHEETS OR DATA TABLES, OR DIRECTED OTHERWISE BY THE COMPANY REPRESENTATIVE. IF SIGNIFICANT WATER IS PRESENT CONSTRUCTION METHODS SHALL BE AS DIRECTED BY THE COMPANY REPRESENTATIVE.
2. REFERENCE FEATURE IS THE POINT SHOWN ON THE ALIGNMENT SHEET TO IDENTIFY THE CROSSING AND IS NOT NECESSESARILY AT THE CROSSING CENTRE. ITS KP IS SHOWN ON THE ALIGNMENT SHEET FOR COMPARITIVE POSITION ONLY.
3. CROSSING PROFILES SHALL BE SURVEYED PRIOR TO PIPE LAYOUT AND BENDING.
4. WALL THICKNESS AND PIPE COATING FOR THE CROSSING SHALL BE AS NOMINATED IN THE ALIGNMENT SHEETS AND DATA TABLES.
5. WHEN CONTINUOUS BEDROCK IS ENCOUNTERED, THE MINIMUM DEPTH OF COVER MAY BE REDUCED TO 900mm BELOW TOP OF ROCK. IF COVER IS REDUCED IN THIS MANNER THE BACKFILL SHALL BE EITHER STABILISED WITH CEMENT, OR CAPPED WITH 200mm MIN THICKNESS OF CONCRETE FLUSH WITH THE ROCK SURFACE.
6. WATER SHALL BE REMOVED FROM THE TRENCH PRIOR TO LOWER IN WHEREVER POSSIBLE. PIPE THAT IS NOT CONCRETE COATED MAY BE LOWERED IN ONLY IF THE TRENCH FLOOR IS CLEARLY VISIBLE AND FREE OF STONES OR DEBRIS.
7. PIPELINE PROFILE AND DEPTH OF COVER SHALL BE SURVEYED AFTER LOWER IN. THE INSTALLATION SHALL BE APPROVED BY THE COMPANY REPRESENTATIVE PRIOR TO BACKFILL.
8. CREEK BED AND BANK RESTORATION SHALL COMPLY WITH THE ENVIRONMENTAL MANAGEMENT PLAN AND DRAWING 530-DWG-L-5008 (TYPICAL WATER COURSE BANK RESTORATION).
9. A CROSS BERM SHALL BE CONSTRUCTED TO THE SATISFACTION OF THE COMPANY REPRESENTATIVE.

REV	PROJ No	REVISION	DATE	DRW	DES	CHK	APP	REFERENCE DRGs	DRG No
0		ISSUED FOR USE		JH		MC	WB		

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	NAME	DATE
DRAWN	J. HALLAJIAN	14/01/16
DESIGNED		
VALIDATED		
ACCEPTED	W. BAILEY	29/01/16

STANDARD DRAWING
WATER COURSE CROSSING
MINOR TYPE 2
CROSSING

SCALE	PROJECT No	DRG No	REV
NTS		530-DWG-L-5007	0

WATER COURSE CROSSING MINOR TYPE 2

DWG: 530-DWG-L-5007

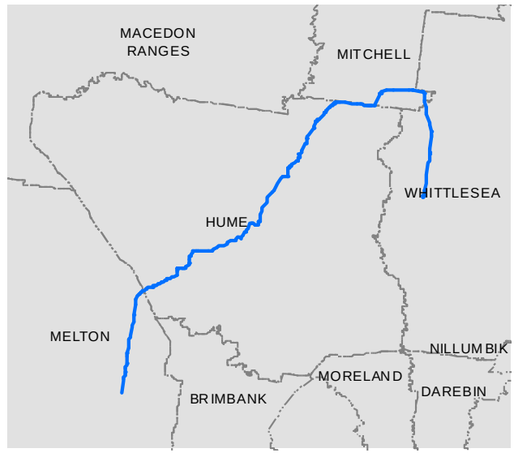
Drawing 9 of 11

western outer ring main

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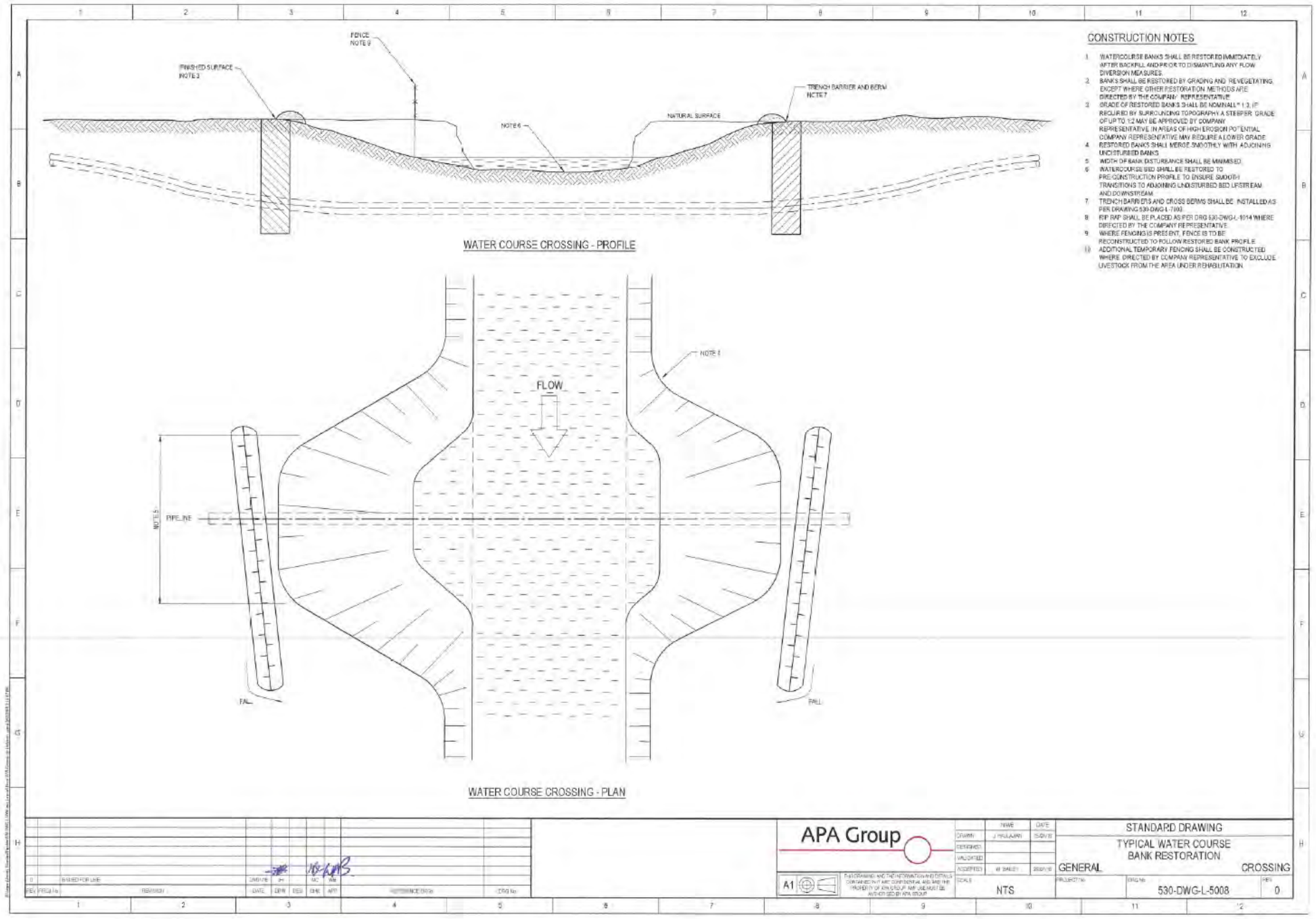
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Paper Size A3



TYPICAL WATER COURSE BANK RESTORATION GENERAL CROSSING
DWG:530-DWG-L-5008

Drawing 10 of 11



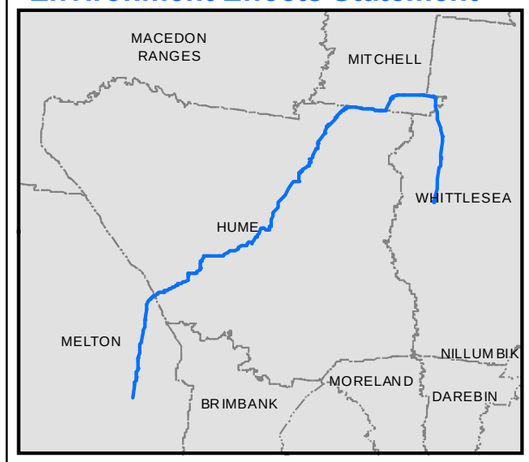
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western outer ring main

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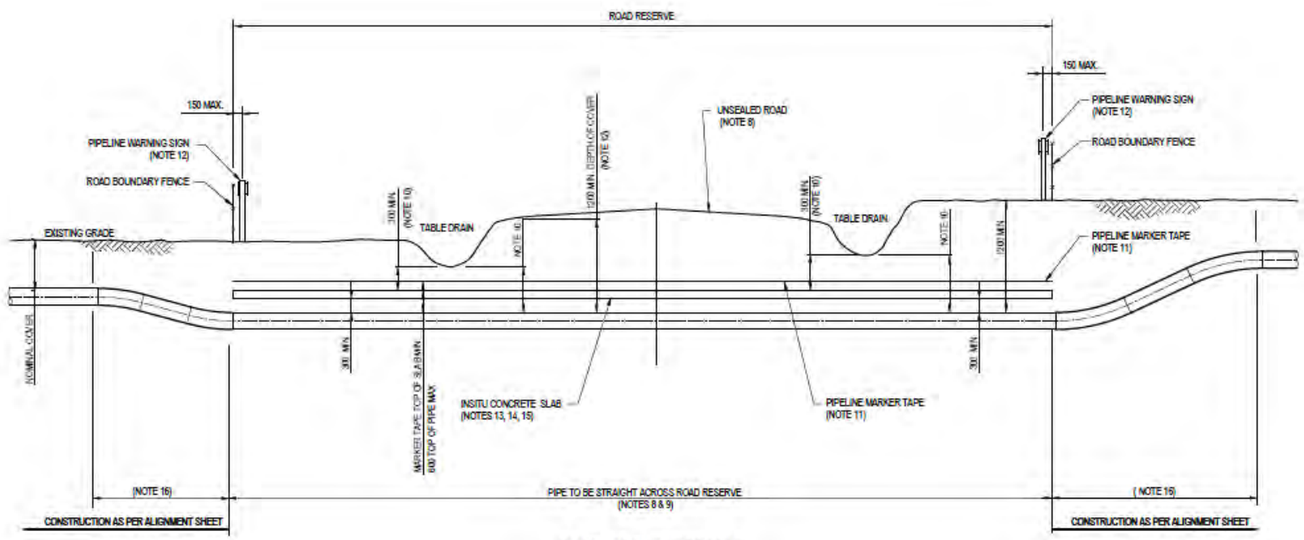
Paper Size A3

Job Number: 31-1259997 | Revision: A | Date: 06 May



TYPICAL UNSEALED ROAD CROSSING - OPEN CUT CROSSING GENERAL DWG: 530-DWGL-5016

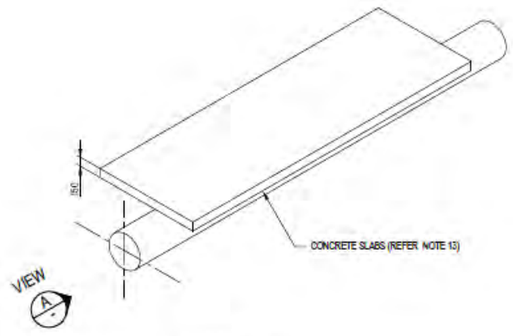
Drawing 11 of 11



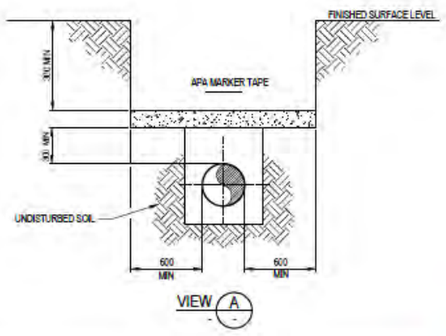
ROAD - OPEN CUT PROFILE

NOTES:

1. ROAD OPENING PERMITS AND APPLICABLE ROAD AUTHORITY SPECIFICATIONS SHALL BE OBTAINED PRIOR TO COMMENCING WORK AT THE CROSSING. ROAD AUTHORITY SPECIFICATIONS SHALL APPLY IN CONJUNCTION WITH REQUIREMENTS OF THIS DRAWING.
2. APA SHALL BE GIVEN WRITTEN NOTICE 3 DAYS PRIOR TO COMMENCING WORK AT THE CROSSING.
3. THE RELEVANT AUTHORITIES SHALL BE GIVEN WRITTEN NOTICE AND DETAILED LOCATIONS OF ALL BURIED SERVICES SHALL BE OBTAINED PRIOR TO EXCAVATION.
4. ANY EXISTING BURIED PIPE OR UTILITY WITHIN CLOSE PROXIMITY OF THE PIPELINE PATH OR EXCAVATION AREA SHALL BE HAND DUG TO ESTABLISH ITS EXACT LOCATION AND ELEVATION PRIOR TO MACHINE EXCAVATION.
5. TRAFFIC CONTROL AND SAFETY PROCEDURES SHALL BE MAINTAINED IN ACCORDANCE WITH REQUIREMENTS OF THE RELEVANT ROAD AUTHORITIES AND AS 1742.3. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PROTECT THE PUBLIC BY THE USE OF SIGNS, SIGNALS, BARRICADES, FLAG PERSONS OR WATCH PERSONS.
6. TRENCH BACKFILL TO ROAD SUB BASE LEVEL AND WITHIN ROAD RESERVE BOUNDARY - MATERIAL FOR PADDING AROUND THE PIPE SHALL COMPLY WITH THE CONSTRUCTION SPECIFICATION. MATERIAL FOR FURTHER BACKFILL SHALL COMPLY WITH THE ROAD AUTHORITY SPECIFICATION, BUT SHALL BE AT LEAST EQUIVALENT TO SELECTED BACKFILL, FREE OF ORGANIC MATERIAL AND ROCKS LARGER THAN 100mm. TOP LAYER SHALL BE FREE OF ROCK GREATER THAN 20mm. BACKFILL COMPACTION SHALL COMPLY WITH THE ROAD AUTHORITY SPECIFICATION, BUT SHALL BE AT LEAST EQUIVALENT TO LAYERS NOT EXCEEDING 150mm COMPACTED, EACH LAYER SHALL BE COMPACTED TO 95% STANDARD DRY DENSITY AND TESTED USING A STANDARD COMPACTION TEST AS PER AS 1289.5.1.1.
7. THE WORK AREA AND SURFACE DRAINAGE SHALL BE REINSTATED AS PER THE ROAD AUTHORITY SPECIFICATIONS.
8. PIPE SHALL BE INSTALLED STRAIGHT ACROSS THE WIDTH OF THE ROAD RESERVE UNLESS APPROVED OTHERWISE IN WRITING BY APA REPRESENTATIVE.
9. WALL THICKNESS AND PIPE COATING FOR THE CROSSING SHALL BE AS NOMINATED ON THE ALIGNMENT SHEETS AND SHALL APPLY FOR WIDTH OF ROAD RESERVE.
10. MINIMUM PIPE COVER AS SPECIFIED SHALL BE MAINTAINED AT ALL POINTS WITHIN THE CROSSING LIMITS.
11. MARKER TAPE MUST BE LAID FLAT. BACKFILL TO BE PLACED ON TOP OF TAPE, SUCH THAT NO DAMAGE OR DISPLACEMENT OF THE MARKER TAPE OCCURS. TAPE SHALL COMPLY WITH AS/NZS 2648.1
12. PIPELINE WARNING SIGNS SHALL BE INSTALLED AS PER PIPELINE MARKER SIGNS GUIDELINE 580-GD-L-0001
13. CONCRETE SLAB AND MARKER TAPE SHALL BE INSTALLED ACROSS THE FULL LENGTH OF THE ROAD RESERVE AS PER TABLE BELOW.
14. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF FC = 20MPa AT 28 DAYS.
15. FOR ALTERNATIVE PRE-CAST SLAB OPTION, REFER DRAWING 530-DWGL-1007
16. SAG BENDS AND OVER BENDS TO RESUME NORMAL PIPELINE DEPTH IN ACCORDANCE WITH APPLICABLE SECTION OF CONSTRUCTION SPECIFICATION.



SLAB DETAIL



PIPELINE DEPTH OF COVER (AT ROAD SURFACE AND TABLE DRAIN)	CONCRET SLABBING REQUIREMENTS	
	PIPELINE LOCATION CLASSES (AS PER AS/NZS 2885.6)	
	PRIMARY LOCATION CLASS T1, T2 SECONDARY LOCATION CLASS: S, C, I CIC FUTURE DEVELOPMENT IS EXPECTED	PRIMARY LOCATION CLASS: R1, R2 (WITHOUT SECONDARY LOCATION CLASSES)
1200mm (MIN) TO 1500mm (MAX)	CONCRETE SLAB SHALL BE INSTALLED ACROSS FULL WIDTH OF ROAD RESERVE	CONCRETE SLAB SHALL BE INSTALLED ACROSS FULL WIDTH OF ROAD RESERVE. (NOTE AT TABLE DRAIN, MINIMUM PIPE COVER OF 750 mm MAY BE ACCEPTABLE SUBJECT TO APPROVAL BY APA
DEEPER THAN 1500mm	CONCRETE SLAB SHALL BE INSTALLED ACROSS FULL WIDTH OF ROAD RESERVE	CONCRETE SLAB MAY NOT BE REQUIRED SUBJECT TO APPROVAL BY APA

REV	PROJ No	REVISION	DATE	DRW	DES	CHK	APP
1		ISSUED FOR USE	30/01/20	PF		FL	MF

REFERENCE DRGs	DRG No
PIPELINE MARKER SIGNS GUIDELINE	580-GD-L-0001
CONCRETE SLAB	530-DWGL-1007
DANGER SIGN PLATE	530-DWGL-0016
HIGH LEVEL WARNING MARKER INSTALLATION ASSEMBLY	530-DWGL-0800
POST ASSEMBLY	530-DWGL-0801
MARKER TAPE	530-DWGL-0804

ISSUED FOR USE

	NAME	DATE
DRAWN	P FARHURST	17/9/19
DESIGNED		
VALIDATED		
ACCEPTED	M FARDI	
SCALE	N.T.S.	
APA ID		
A1		

STANDARD DRAWING
TYPICAL UNSEALED ROAD CROSSING - OPEN CUT
CROSSING GENERAL

PROJECT No | DRG No: 530-DWG-L-5016 | REV: 1

western outer ring main — a project of apa

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Paper Size A3

Job Number: 31-1259997 | Revision: A | Date: 06 May