

**SECTION 1**  
**ROUTE STANDARDS**

WITHDRAWN

**REFER ARTC ROUTE ACCESS STANDARD (RAS):**

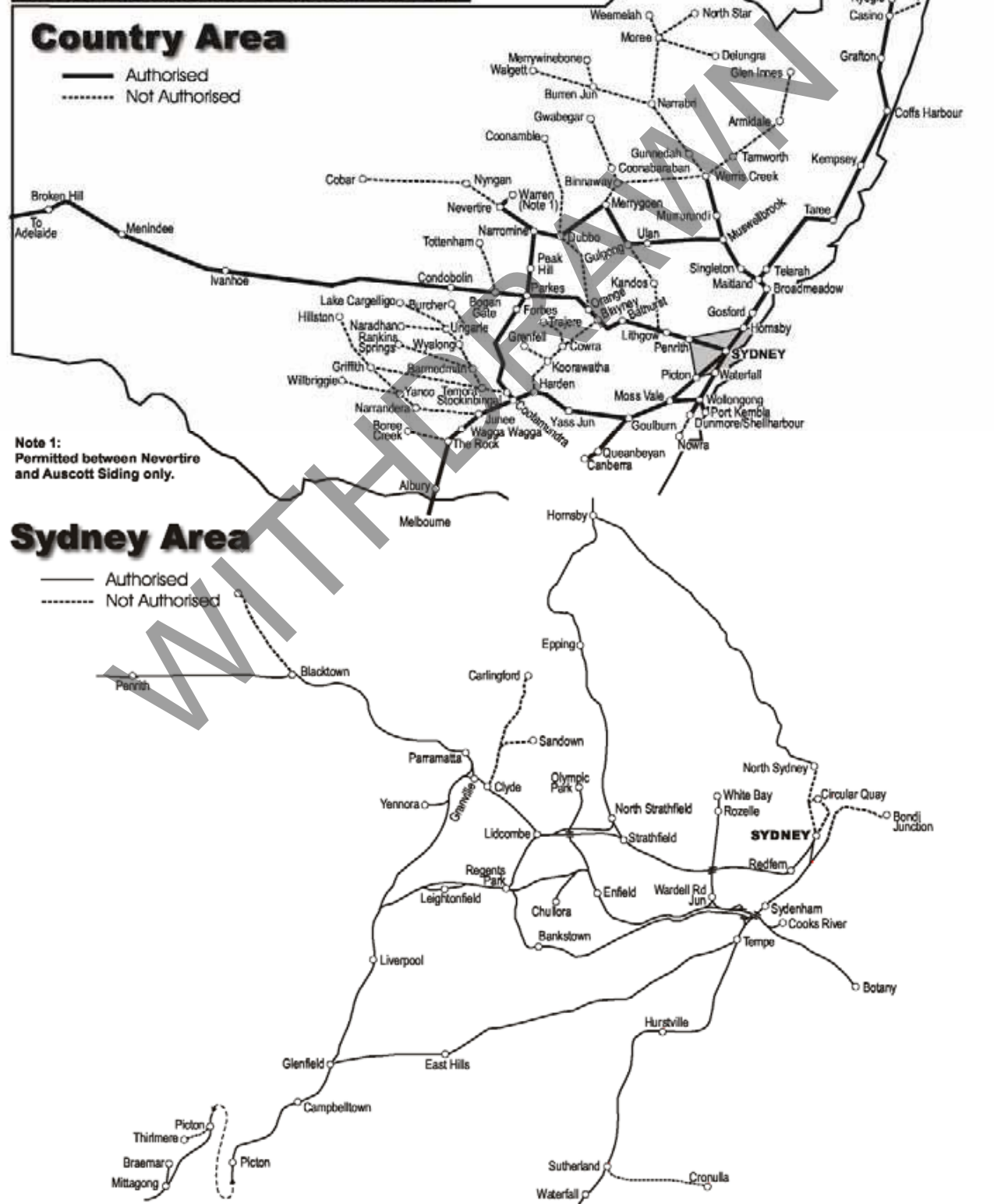
- Track classification – refer individual RAS section pages
- Train Speeds and Axle Load Limits (wagon) – RAS General Information section 2.2
- Wayside Monitoring Devices – RAS General Information section 2.9
- Rolling Stock Outlines – RAS General Information section 5

**Restricted operation for vehicles with 'Note o'**

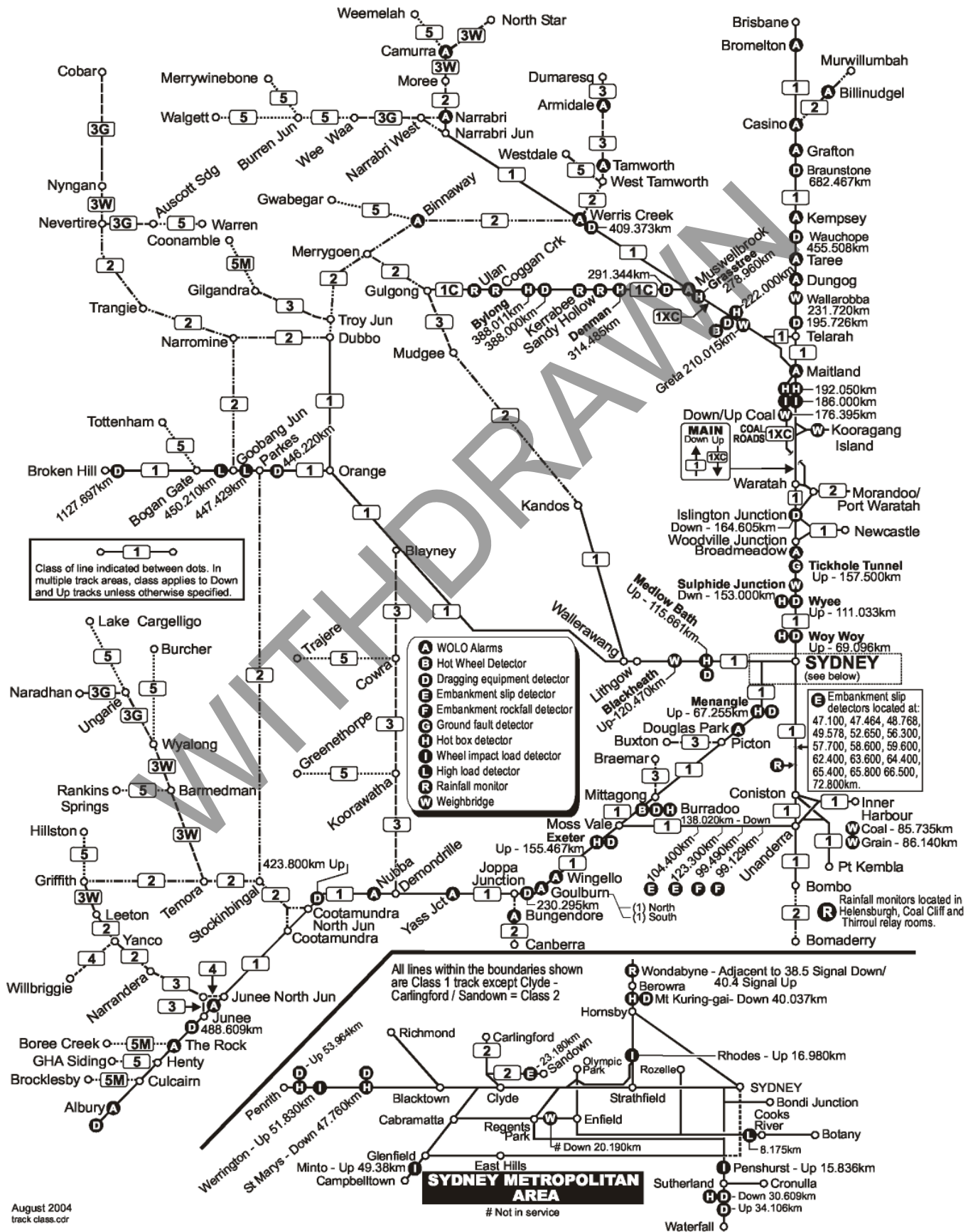
Vehicles complying with the RAC narrow square rolling stock outline to RIC Transit Space Standard C2100 have been identified with **Note o** as shown in **SECTION 10 – LOCOMOTIVES AND ROLLING STOCK DATA** pages.

For loading of freight vehicles refer to **Section 5 – LOADING RESTRICTIONS, OUT OF GAUGE TRAINS, CONTAINER AND LOADING DIAGRAMS.**

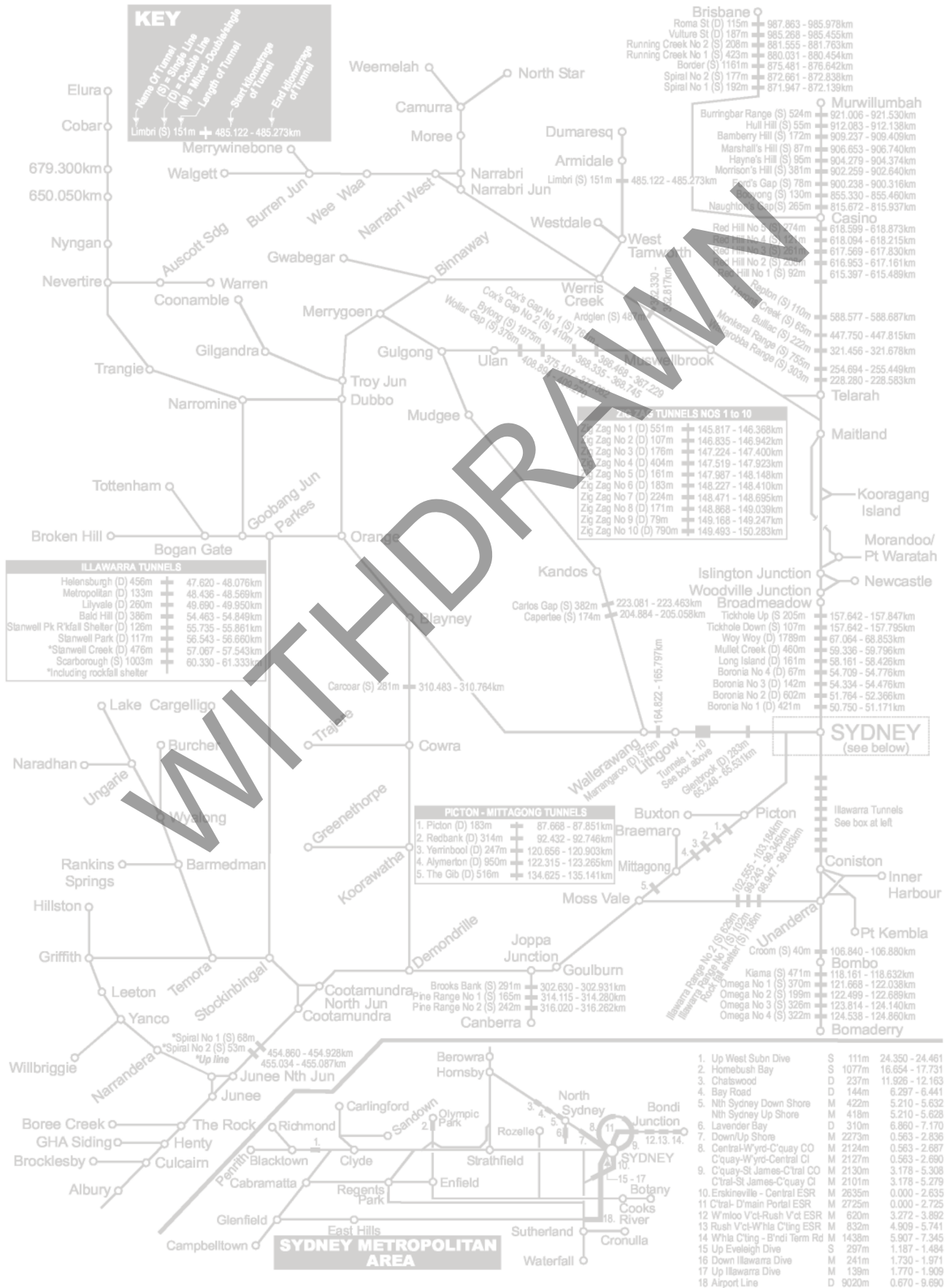
**Area of operation for vehicles 'Note o'**



**Classification of lines and location of field devices**



**Location of tunnels**

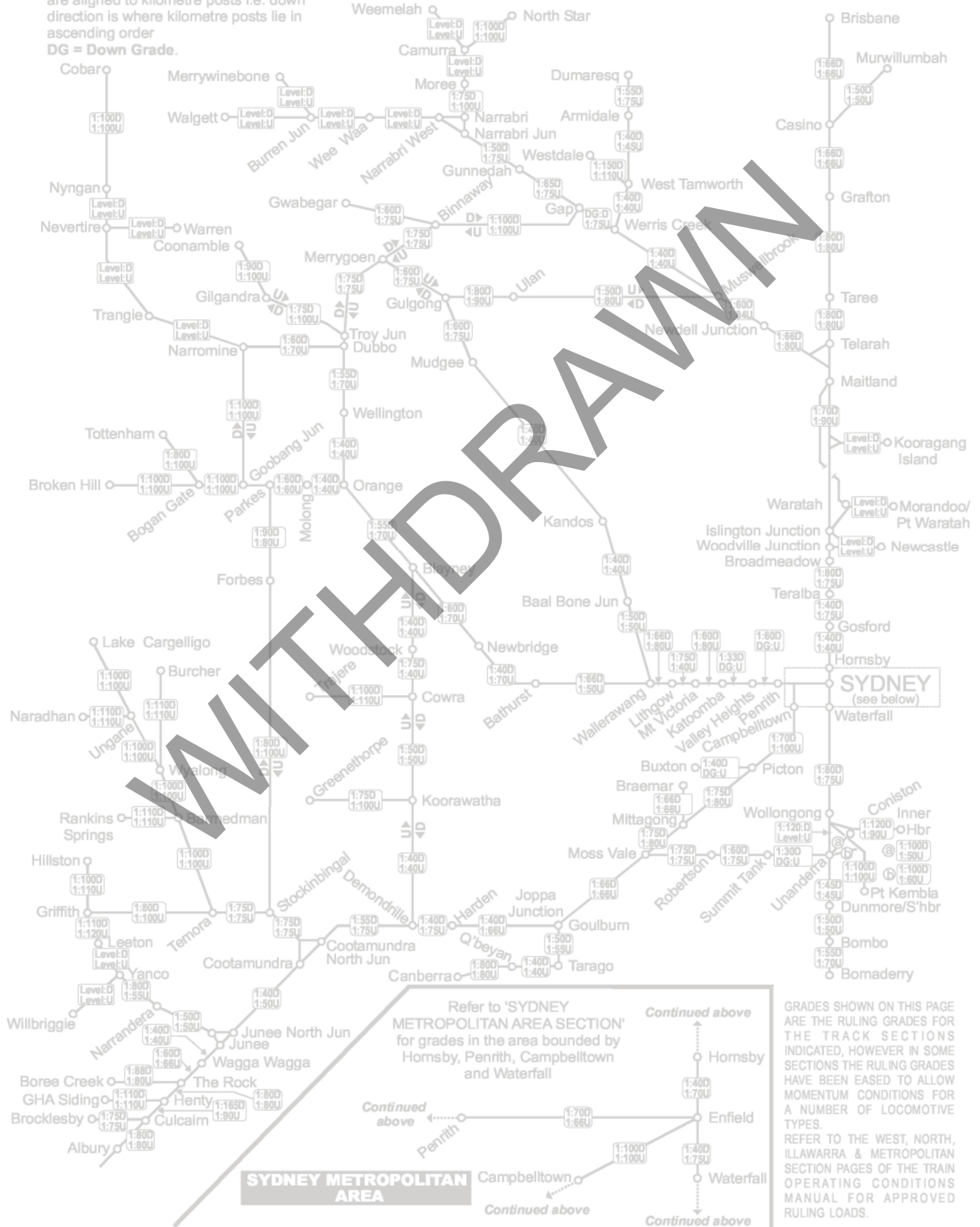




**Ruling grades – RIC Network**

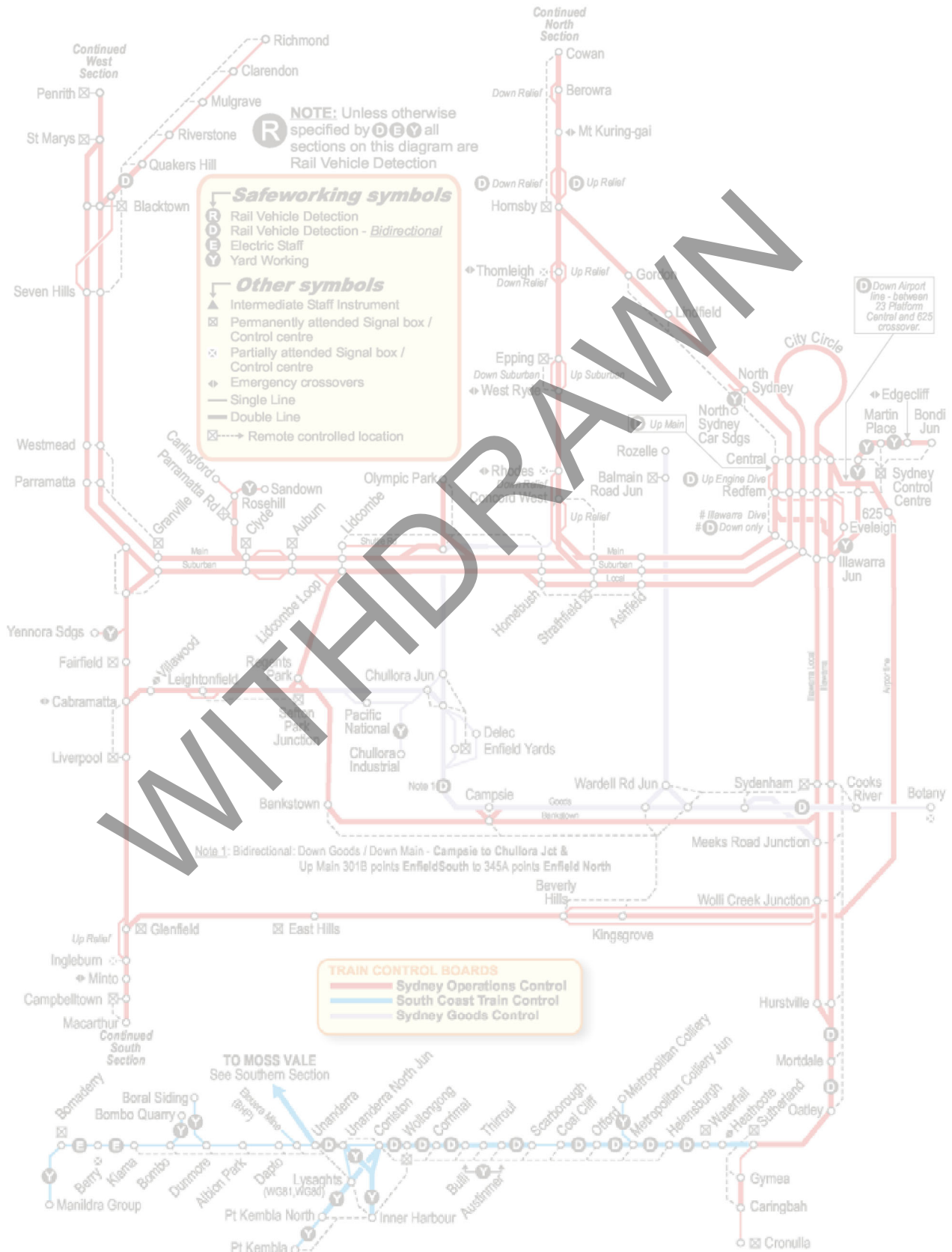
Down and Up directions as indicated below are aligned to kilometre posts i.e. down direction is where kilometre posts lie in ascending order

**DG = Down Grade.**



GRADES SHOWN ON THIS PAGE ARE THE RULING GRADES FOR THE TRACK SECTIONS INDICATED, HOWEVER IN SOME SECTIONS THE RULING GRADES HAVE BEEN EASED TO ALLOW MOMENTUM CONDITIONS FOR A NUMBER OF LOCOMOTIVE TYPES. REFER TO THE WEST, NORTH, ILLAWARRA & METROPOLITAN SECTION PAGES OF THE TRAIN OPERATING CONDITIONS MANUAL FOR APPROVED RULING LOADS.

**Safeworking Systems – Sydney Metropolitan and Illawarra**



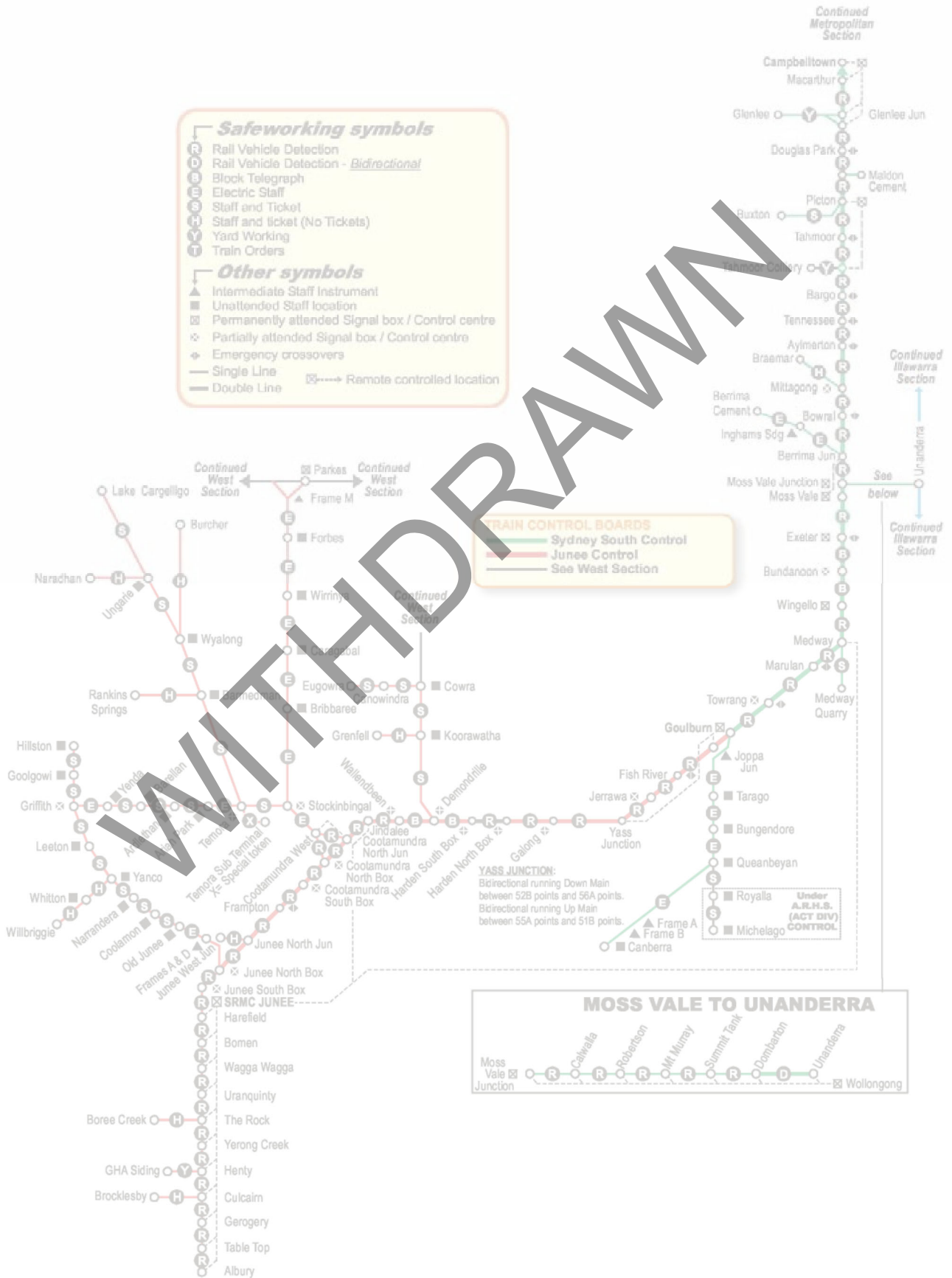
Safeworking Systems – South

**Safeworking symbols**

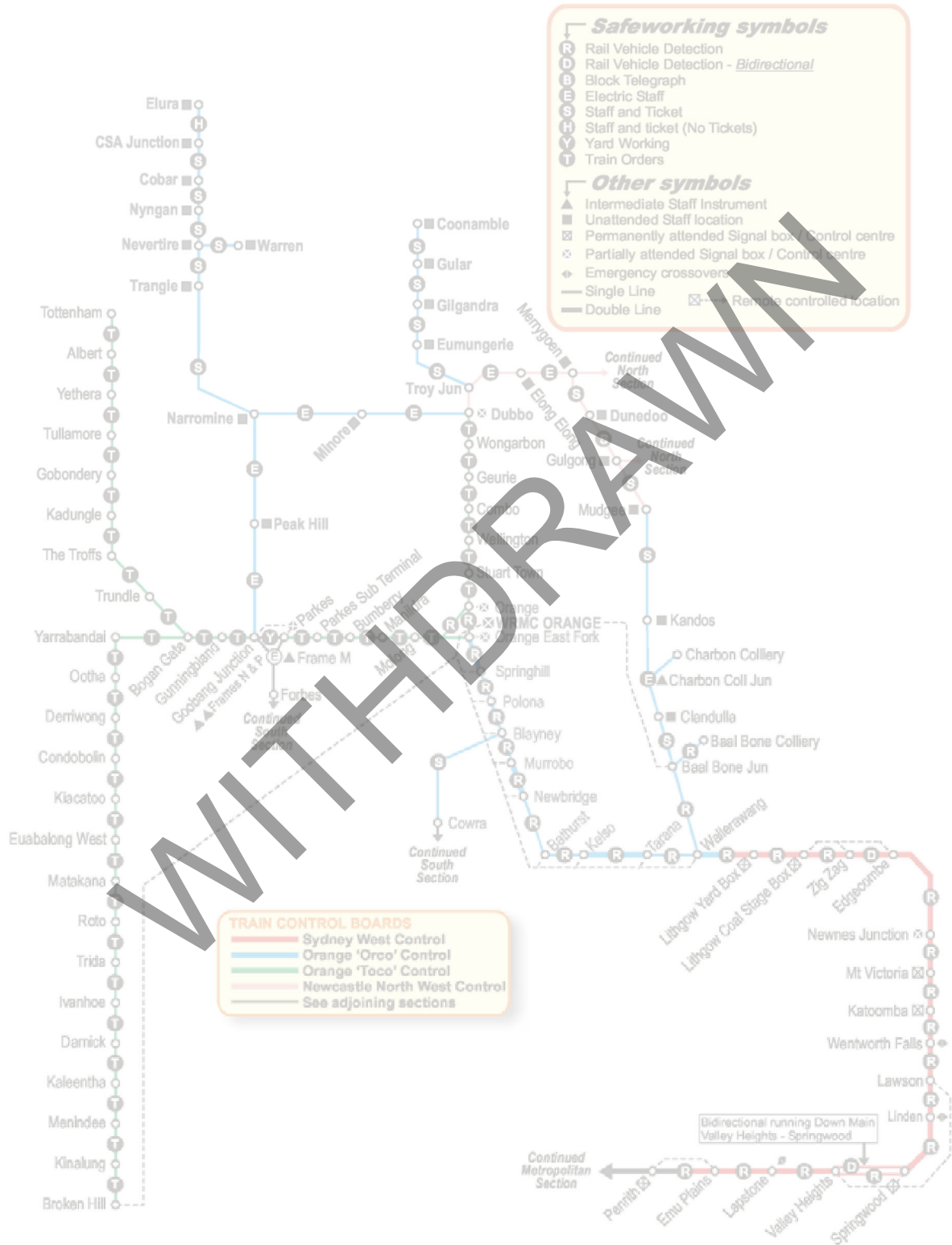
- R Rail Vehicle Detection
- D Rail Vehicle Detection - *Bidirectional*
- B Block Telegraph
- E Electric Staff
- S Staff and Ticket
- H Staff and ticket (No Tickets)
- Y Yard Working
- T Train Orders

**Other symbols**

- ▲ Intermediate Staff Instrument
- Unattended Staff location
- Permanently attended Signal box / Control centre
- ◻ Partially attended Signal box / Control centre
- ⊕ Emergency crossovers
- Single Line
- == Double Line
- ⊠ Remote controlled location



Safeworking Systems – West





Safeworking Systems – North

**Safeworking symbols**

- R Rail Vehicle Detection
- D Rail Vehicle Detection - Bidirectional
- B Block Telegraph
- E Electric Staff
- S Staff and Ticket
- H Staff and ticket (No Tickets)
- Y Yard Working
- T Train Orders
- X Telephone block

**Other symbols**

- ▲ Intermediate Staff Instrument
- Unattended Staff location
- ⊠ Permanently attended Signal box / Control centre
- ◊ Partially attended Signal box / Control centre
- ⬇ Emergency crossovers
- Single Line
- == Double Line
- ⊠ Remote controlled location

**TRAIN CONTROL BOARDS**

- Sydney North Control
- Newcastle Coast Control
- Newcastle North Control
- Newcastle North West Control
- Newcastle Hunter Control
- Queensland Train Control
- See adjoining sections

