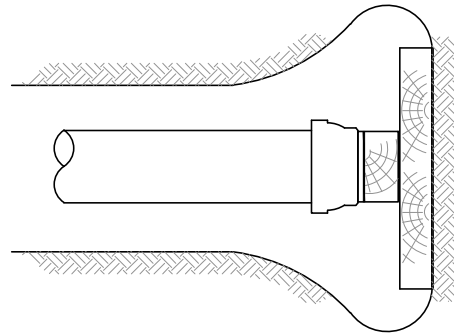
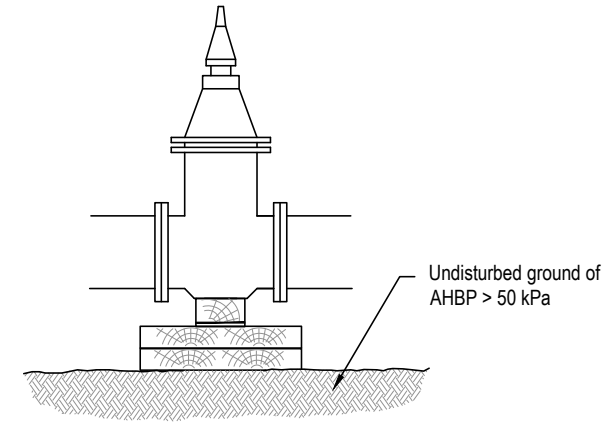


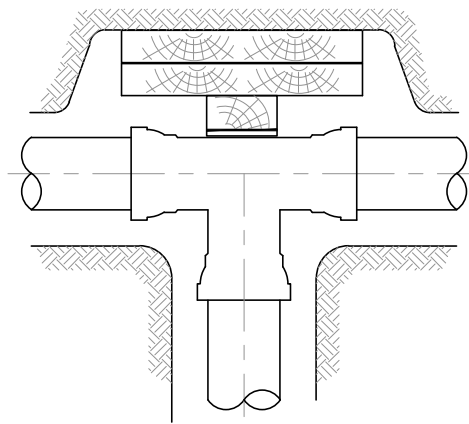
**FIGURE 206-A: BEND TIMBER / RECYCLED PLASTIC RESTRAINT**



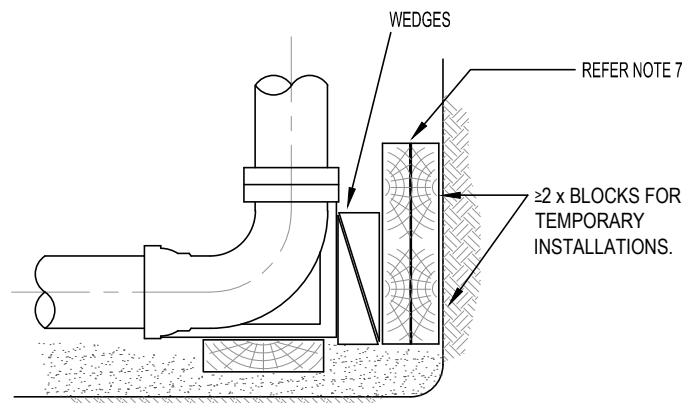
**FIGURE 206-B: END CAP TIMBER / RECYCLED PLASTIC RESTRAINT**



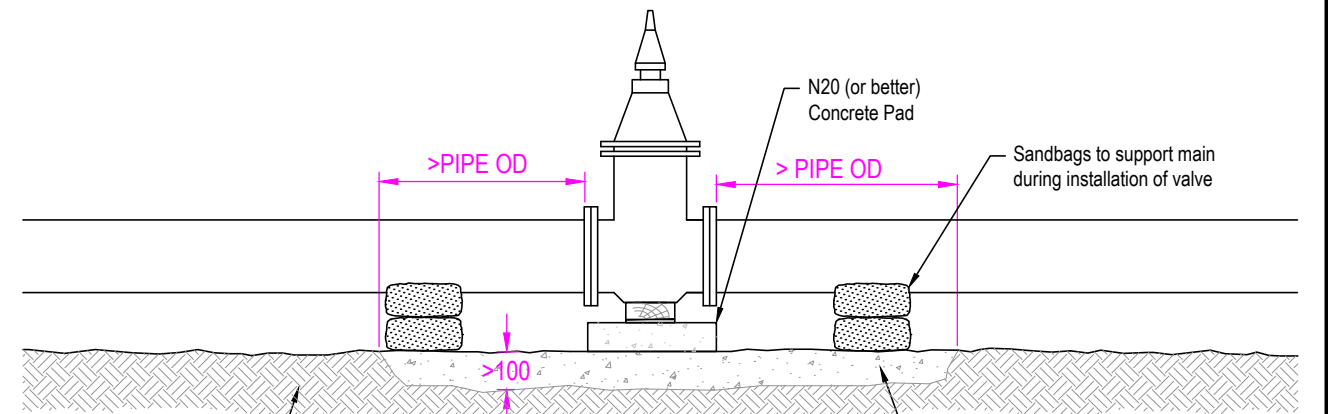
**FIGURE 206-G: SUPPORT FOR VALVES ( $\leq DN300$ )**



**FIGURE 206-C: TEE TIMBER / RECYCLED PLASTIC RESTRAINT**



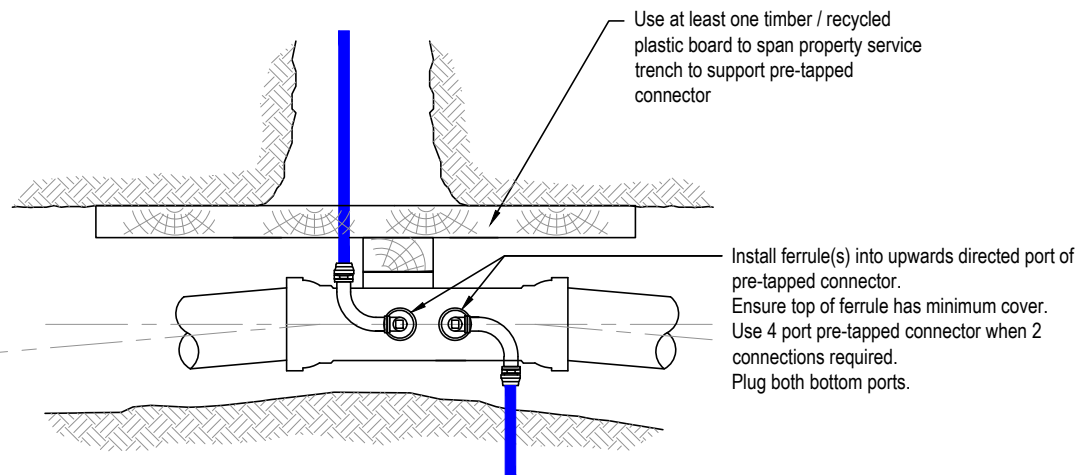
**FIGURE 206-D: WASHOUT TIMBER / RECYCLED PLASTIC RESTRAINT**



Undisturbed ground of AHBP > 50 kPa. Increase depth of concrete as required until reaching undisturbed ground.

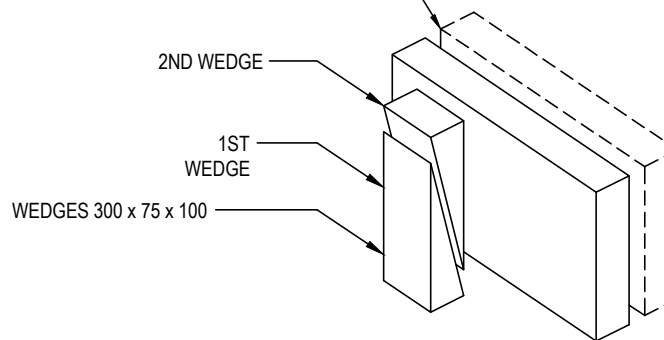
**FIGURE 206-H: SUPPORT FOR VALVES ( $\geq DN375$ )**

N20 Concrete (or better) pad required for valves  $\geq DN375$ . Slab width = slab length, or full extent of trench width. Not required where trench floor is rock.



**FIGURE 206-E: PLAN VIEW. PRE-TAPPED CONNECTOR WITH DEFLECTED MAINS AND TIMBER / RECYCLED PLASTIC RESTRAINT**

Hardwood block(s)- 600 x 300 x 50, or  
Recycled plastic block(s)- 600 x 300 x 40  
Use up to 3 blocks to block up to a clean face of undisturbed natural ground of AHBP > 50 kPa.



**FIGURE 206-F: TIMBER / RECYCLED PLASTIC BLOCK AND WEDGE DETAIL**

**GENERAL NOTES:**

1. Timber / recycled plastic blocks shall not be used to support valves  $\geq DN375$  valves (concrete is required).
2. Place timber / recycled plastic blocks against a clean face of undisturbed natural soil with AHBP > 50 kPa.
3. Soil classifications used in this drawings are explained in MRWA-W-200.
4. Installation of wedges:
  - place the first wedge with its thin end up and against the fitting
  - place the second wedge between the block and the first wedge and drive home until all slack is taken up
4. For details of products used in this drawing, refer to the water agency products catalogue.
5. Hardwood shall be a rating 1 timber as defined by AS5604 timber- natural durability ratings and the Australian government report titled "the in-ground natural durability of Australian timbers".
6. Polyethylene sleeving shall be applied between the fittings and the first wedge where the fittings are not FBE coated.
7. If gap is wider than can be taken up with a single block, multiple blocks may be used.
8. In line thrust restraints of valves must be as per MRWA-W-205 A & B. Timber / recycled plastic restraints are not acceptable for in line thrust restraints.
9. Timber / recycled plastic restraints shall have a minimum of 0.5m of undisturbed ground between the bearing area and any other excavation or service (ie: > 0.5m horizontal offset).

DESIGNED:	K. DAWSON	DATE:	05/04/2011
DRAWN:	D. TOLENTINO	DATE:	05/04/2011
CHECKED:	NAME	DATE	APPROVED: NAME
3	CWW R.JAGGER	23/03/12	CWW R.CARRUTHERS
2	SEWL C.PAXMAN	23/03/12	SEWL G.REYNOLDS
1	YVW S.TAN	23/03/12	YVW A.COSHAM
REV	DESCRIPTION	DATE	APPROVED

MELBOURNE RETAIL WATER AGENCIES



MRWA WATER SUPPLY STANDARDS

NOT TO SCALE

TIMBER / RECYCLED PLASTIC THRUST RESTRAINT & VALVE SUPPORT DETAILS

MRWA-W-206

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