

APPENDIX E

PRECAUTIONARY MEASURES

(Also refer to SANS 1936-3:2012)

NHBRC GENERAL REQUIREMENTS FOR HOUSING DEVELOPMENT ON DOLOMITIC LAND

The minimum requirements and mandatory precautionary measures, which are required in areas designated as being D2 and D3, are as follows:

General

1. The site and surrounding area shall be shaped to permit the ready drainage of surface water and to prevent ponding.

Drainage ports should be incorporated in boundary walls to permit the passage of surface water runoff).

2. Natural ponds and water courses located within 10 m of any structure shall be rendered impervious.
3. Sanitation systems shall not incorporate soak aways.
4. Backwash and other water from swimming pools, shall be discharged into either the stormwater or drainage systems as required by the local authority.

Township Services

5. Underground services shall be designed and constructed so as to minimise maintenance requirements and any potential leakage points in wet services and shall, as far as possible, be designed to avoid possible disturbance of the underground environment.
6. The relevant provision of SABS 1200 DB, L, LB, LC, LD and LE shall be observed in the installation of all underground services.
7. The backfilling to services trenches and other excavations shall, except in rock, should not be more permeable than the surrounding material.
8. The stormwater drainage and sewerage system shall incorporate measures to ensure water tightness of conduits and other compartments. Whenever possible, stormwater should be channelled in lined, surface canals.

Concrete non-pressure pipes should be of the spigot and socket type with rubber ring seals. Joints in box culverts, channels etc. should be sealed.

9. Stormwater drainage conduits shall be constructed at gradients which will not permit the deposition of silt, or sand, of the type present in the catchment area.
10. Water mains shall be laid only in road reserves.
11. Water piping materials shall be one or more of the following :
Pipes of 75mm and larger diameter:
* High impact a PVC pipes with vitualic joints.

- * Steel pipes with internal and external corrosion protection and other flexible (as defined in SABS 0102 part 1) water pipes with flexible, self-anchoring connections.

Pipes having a diameter of less than 75mm:

- * HDPE type IV piping.
- * Polypropylene piping.

The piping used in mains and communication pipes should be flexible, joints should be minimal in number and be of the flexible, self-anchoring type, i.e. not reliant on thrust blocks or friction for their anchorage.

12. Provision for future connections shall be made in order to minimise the cutting into pipes to provide such connections.
13. Road surfaces shall be located sufficiently low as to permit the drainage or even onto them where possible.
14. Roadways which have a gradient of less than 1:80 shall be surfaced/sealed.
15. The minimum nominal diameter of water borne sewer mains shall not be less than 150mm.

Plumbing

16. Water pipe entries into the building shall be above ground level.
17. All sewer and water pipes and fittings shall be provided with flexible, watertight joints.
18. No plumbing and drainage pipes shall be placed under floor slabs, as far as is practicable.
19. The fall of the trenches shall be away from the buildings.
20. The selection of piping materials shall take cognisance of corrosion (both external and internal).
21. Water pipes shall have a minimum cover of 500mm.
22. Wherever practical, service trenches shall not be excavated along the length of housing units within the first 3.0m beyond the perimeter of such units.

Site precautions

23. Down pipes, if provided, shall discharge into concrete lined drainage channels or onto an apron slab, which discharge the water at least 1,0 m away from buildings.
24. Where guttering is not provided, a 1,0 m wide apron slab shall be provided.
25. The ground immediately against the buildings shall be shaped to fall in excess of 75 mm over the first 1,0 m beyond the perimeter of the building, from where it shall drain freely away from housing units. Apron slabs, where provided shall have the same fall.