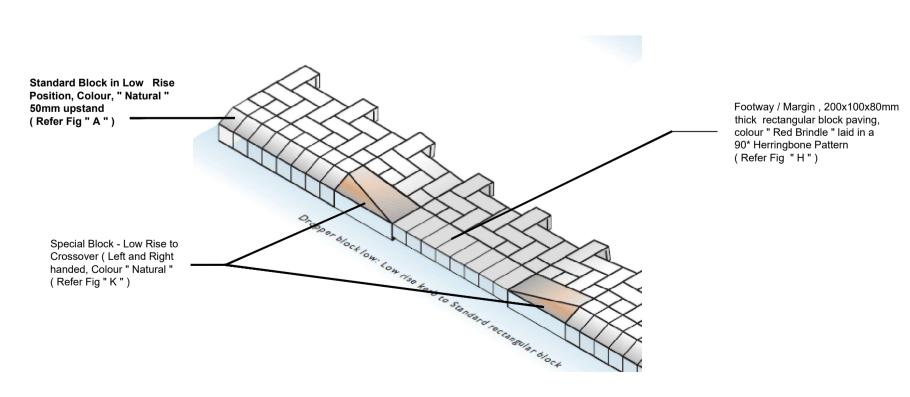
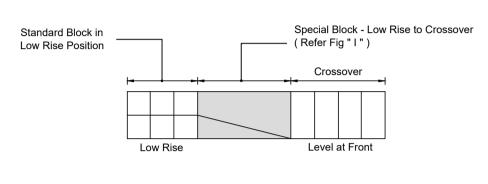


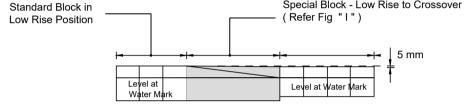
Typical Arrangement Low Rise Position incorporating Internal & External Corner Blocks



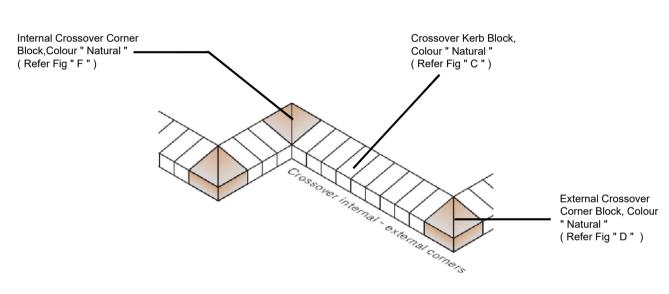
Typical Block Paved arrangement Pedestrian Crossing Facility (Standard Low Rise to Crossover)



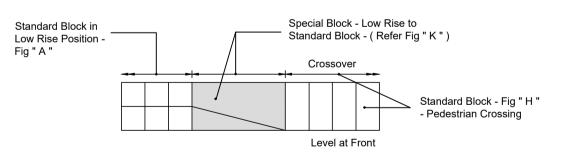
Plan View - Typical Arrangement Low Rise to Crossover kerb Special Block - Low Rise to Crossover



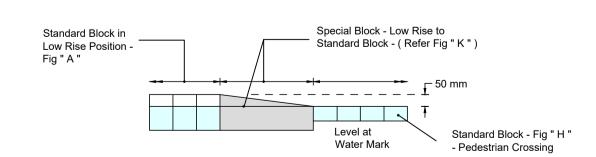
Front Elevation - Typical Arrangement **Low Rise to Crossover**



Typical Vehicular Crossover Arrangement incorporating Internal & External Corner Blocks



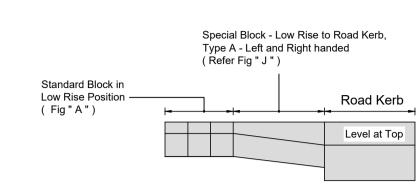
Plan View - Typical Arrangement Low Rise to Standard Block (Pedestrian Crossing Facility)



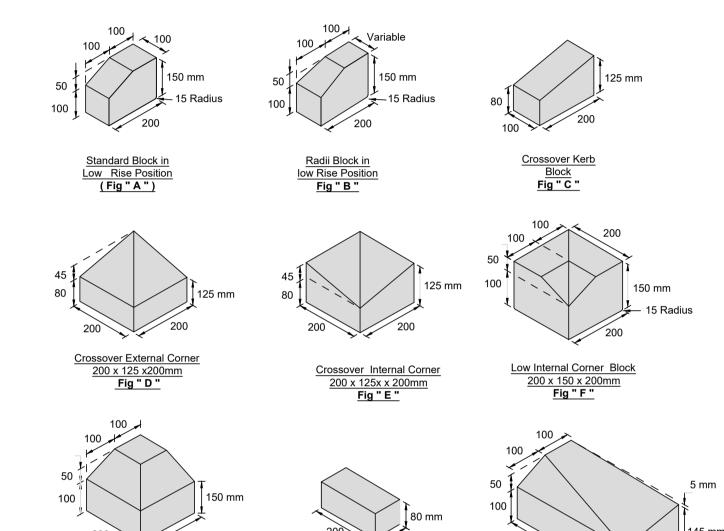
Front Elevation - Typical Arrangement Low Rise to Standard Block (Pedestrian Crossing Facility)

Special Block - Low Rise to Road Kerb, Type A - Left and Right handed (Refer Fig " J ") Standard Block in Low Rise Position — Road Kerb (Fig " A ") Level at Top Level at Front

Plan View - Typical Arrangement Low Rise to Road Kerb - Type "A"



Front Elevation - Typical Arrangement Low Rise to Road Kerb - Type "A"



Precast Concrete Block Low External Corner Block Low Rise to Vehicular Crossover Left and Right Hand Fig " I " Dropper Block Low Rise to Standard Left and Right Hand Fig " K "

Low Rise to Road Kerb Type A - Left and Right Hand
Fig " J "

Surfacing

- 4. The minimum carriageway thickness shall be 530mm. However greater construction depth may be required(capping Layers)depending on individual CBR values. (Refer table within drawing).
- 5. CBR values are to be obtained at road formation levels.
- 6. All Bituminous surfacing works shall be machined layed unless other agreed in writing with the Local Highway Authority.
- 7. No wearing course shall contain and Limestone or Slag aggregate.
- 8. The specifications for Type 1 unbound granular material shall conform to BS EN 13285 : 2003 and Clause 803 of the Specification for Highway Works amended November 2007.
- 9. The transportation, laying and compacting and trafficing of Type 1 unbound granular material shall comply with the requirements of BS EN 13285 : 2003 and Clause 802 of the Specification for Highway Works, amended November 2004.
- 10. All bituminous material specifications for Asphalt Concrete shall conform to BS EN 13108 1 : 2006 and
- Clause 909 of the Specification for Highway Works amended November 2008. 11. All bituminous material specifications for Stone Mastic Asphalt (SMA)shall conform to BS EN 13108 - 5
- : 2006 and Series 900 of the Specification for Highway Works amended August 2008.
- 12. The Testing for bituminous mixtures, material specifications shall conform to BS EN 13108 20: 2006. 13. The specifications for Transporting, laying & compacting and type testing protocols for asphalt for roads
- and other paved areas shall conform to BS EN 4987 : 2007
- 14. Where gradients are steeper than 1 in 12, grit stone aggregate must be used.
- 15. Where it is envisaged that the Binder or Base Course materials within both the carriageway and footways areas are to be trafficked for more than 4 weeks before the application of the Surface Course, then a grit stone aggregate shall be used within the Binder content of 5.7 +/- 0.6% (Slag aggregate will not
- 16. In situations where the Binder or Base Course materials are not covered immediately with the Surface or Binder Course respectively the Binder and Base Courses shall be sprayed with a hot sealing tack coat of bituminous splay in accordance with Clause 920 of the Specification for Highway Works amended November 2007 prior to laying of the Surface or Binder courses.

Kerbing and Edging

- 17. All precast concrete kerbing, channels, edgings and quadrants shall comply with BS EN 1340 : 2003 and their dimensions unless otherwise stated.
- 18. All precast concrete kerbing, channels, edgings and quadrants shall be layed in accordance with BS 7533 Part 6: 1999 unless otherwise instructed by the Highway Authority's representative.
- 19. All insitu concrete for foundations & Haunch shall be grade C6 / 8 or ST1 concrete in accordance with
- BS EN 206 1 & BS 8500 2 : 2006.
- 20. The foundation thickness shall be increased as necessary to rest on the carriageway sub-base.
- 21. Concrete edge beams shall have a minimum depth of 150mm & sufficient width to accommodate the unit & the concrete haunch.
- 22. Where precast concrete kerbs are to be laid on existing concrete edge beam, a hardened concrete foundation / haunch or existing carriageway base. Units shall be bedded down in accordance with BS 522 -6: 1999 in a layer of 12 - 40 mm thick of 1: 3 cement and sand mortar (by Volume) and backed with C6 / 8 or ST1 concrete haunch.

Concrete Block Paving

23. All precast concrete block paving and associated kerb setts (where specified)shall be " Hanson Formpave " or similar approved, conforming to BS EN 1338 : 2003 which shall be laid in accordance with the manufacturers recommendations.

24.All precast concrete block paving shall be 200mm long x 100 wide x 80mm thick, colour " Grey " within carriageway, " Charcoal " within footway and " Red Brindle " located between carriageway rumble strip

25. All standard precast concrete kerb setts (where specified)shall be laid in a " low Rise " position (50mm upstand)and Natural in colour grey), unless otherwise instructed by the Local Highway Authority.

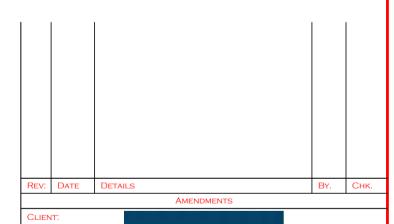
26.All block paving sand to be used as bedding course shall comply with BS 7533 Part 3 : 1997, Table D1 and D2 which shall be hard, sound and resistant to degregation and maintain an even moisture content (not wet) which will give maximum compaction during the laying process. Soft or calcarious sand shall not

27. All sand for jointing shall comply with BS 7533 Part 3: 1997, Table D3.

28.All block paving shall be plate vibrated with a plate area 0.35 - 0.5m2 , force range 75 - 100 KN/m2 and a frequency range of 75 - 100 Hz.

29. Any area of paving which settles <u>must</u> be related to the satisfaction of the Highway Authority.

30. Where early trafficking leads to migration of the jointing sand, areas to be re-sanded to refill the open







62A ALBANY ROAD CARDIFF CF24 3RR T : +44(0)29 2030 2521 : enquiries@phg-consulting.co.ul W: www.phg-consulting.co.uk @ PHG_consulting
www.linkedin.com/company/
phg-consulting-engineers

ENGINEERS

PHG CONSULTING LTD

Dinas Powys **Cross Common Road**

Highway Construction Details Sheet 5 of 5

N.T.S @ A1 SD Tender 1700 105-05 Oct 2017