

**SPECIFICATION
ROAD CONSTRUCTION CONSENT
ROADS (SCOTLAND) ACT 1984**

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1 GENERAL SPECIFICATION

1.1 GRADIENT OF ROADS

The maximum longitudinal gradient should be 1 in 12 and the minimum channel gradient should be 1 in 125. A crossfall or camber of 1 in 40 provides adequate drainage.

1.2 PROTECTION OF PERMANENT WORKS

All protection of permanent works are to be undertaken by the Developer and to the satisfaction of the appropriate Council officers.

1.3 PRIVATE AREAS DIRECTLY ABUTTING CARRIAGEWAYS (PRIVATE PARKING STANCES, GARAGE FRONTING STRIPS, HARDSTANDINGS, ETC)

These areas are to be separated from the road by a 10mm minimum upstand and are to be constructed to a finished level at least 10mm higher than the adjacent road and with a notably different surface.

1.4 PROJECTING KERB ANGLES IN PUBLIC ROADS

All sharp projecting angles adjacent to carriageways are to be rounded off by the use of quadrant type kerbing or other approved means.

1.5 TYING IN NEW CARRIAGEWAY AND FOOTWAY SURFACES TO EXISTING SURFACES

Where new surfaces are to tie into existing surfaces, materials are to be cut back to an extent decided by the appropriate Council officers after consultation on site.

Min 300mm cut back on binder step and asphalt step.

Crosstrack joints to be cut back by 300mm.

1.6 SERVICE STRIP OR AREAS RESERVED FOR SERVICES WITHIN THE BOUNDARIES OF ROADS BUT OUTWITH CARRIAGEWAYS OR FOOTWAYS

The areas must be permanently defined on the ground by a method approved by the appropriate Council officers and in view of their purpose, must be kept clear of surface of underground obstruction eg existing trees and manholes. Landscaping or planting, other than grass seeding or turfing, is only to be carried out after consultation with the appropriate Council officers and, on satisfactory completion of all roadworks in the areas will be taken over by the appropriate Council officers as part of the road and will be maintained as part of the road.

The Developer is to ensure that a Clause is inserted in the formal Deeds of Conveyance of the lands on which the strip lies or fronts, making it clear that Midlothian Council and Statutory Undertakers have a right of access to the strip at all times without notice, and restraining the respective owners and their successors from erecting buildings, walls or fences, or planting trees or hedges or altering surface levels or doing anything within the strip which would be likely to damage pipes, ducts, cables or other apparatus laid or to be laid within the strip or which would be likely to make access thereto more difficult. In addition, the service strips must be delineated by means of a continuous flat topped edging laid flush with the garden ground.

1.7 TWO STAGE CONSTRUCTION

Two stage construction shall be adopted, with the initial stage constructed to either roadbase or basecourse level, in order to avoid damage to the wearing course from construction and other site operations. Consideration must be given to the temporary drainage of the initial stage to minimise ponding caused by the projection of gully gratings above the temporary surface, either by adjustment of gully frames or by other approved methods. This applies particularly on large projects, where the construction period may be long and the wearing course not laid before a winter work period. Any settlement which may occur in the base/ bindercourse shall be taken up with regulating course before the laying of the succeeding course(s) and early reinstatement of openings or failed areas must be carried out. Before laying regulating or upper course(s), the base/bindercourse shall be well cleaned and bond coat applied at the rate to BS 594987 clause 5.1 Examples of typical bond coats are C50BP3 and C65BP3, but other alternatives are possible 3 mm sealed grit must be applied on newly laid binder course.

1.8 CONTROL OF NOISE AND VIBRATION

The Developer shall comply with the recommendations for practical measures to reduce noise set out in BS 5228: Part 1 2009 and BS 5228: Part 2 2009.

1.9 HEALTH & SAFETY

The Developer is advised of his responsibility under the Construction (Design and Management) Regulations 2015 (CDM). The Developer should be satisfied that he has appointed a competent CDM Co-ordinator and Principal Contractor.

1.10 CONSTRUCTION TRAFFIC

All sites must adhere to strict environmental regulations so that construction vehicles do not leave the site with contaminants on their tyres and deposit them on to the public roads. Where the offender can be identified, they can be prosecuted by the police or local Roads authorities. Therefore, a system must be installed to contain mud and dirt.

Road sweeping to the existing road network in the vicinity of the works must be carried out as required. [Roads (Scotland) Act 1984 Section 95]

Sites with 50 houses or more should provide a wheel wash system at the site exit to intercept sediment and silt.

1.11 INCLEMENT WEATHER.

Bituminous material should not be laid until the surface temperature is rising from 0 degrees, the air temp will need to be +3 degrees and rising to allow for any frost or ice to leave the ground.

If there is still ice frozen to the road on site, this will need time to thaw out, the road will need to be swept clean and bond coat applied, if the surface is still frozen the bond coat will not react correctly and split.

Compaction must be completed before the asphalt cools below recommended rolling /compaction temperatures.

2 GENERAL SPECIFICATION TABLE

Residential Roads and Mixer Courts shall be constructed to the following carriageway construction depths:

ROAD TYPE	CBR	CAPPING LAYER	SUB BASE	BASE	BASE COURSE	SURFACE COURSE
1.LOCAL DISTRIBUTOR Up to 1000 dwellings or industrial Development over 5,000m ² commercial property	> 5	-	250mm	170mm	60mm	40mm
	2-5	350mm	150mm	170mm	60mm	40mm
	< 2	600mm	150mm	170mm	60mm	40mm
2.GENERAL ACCESS ROAD 50 – 200 dwellings	> 5	-	250mm	150mm	60mm	40mm
	2-5	350mm	150mm	150mm	60mm	40mm
	< 2	600mm	150mm	150mm	60mm	40mm
3.INDUSTRIAL ACCESS ROAD 2,000 – 5,000m ² commercial property	> 5	-	250mm	150mm	60mm	40mm
	2-5	350mm	150mm	150mm	60mm	40mm
	< 2	600mm	150mm	150mm	60mm	40mm
4.GENERAL ACCESS ROAD UP TO 50 DWELLINGS	> 5	-	275mm	100mm	60mm	40mm
	2-5	350mm	150mm	100mm	60mm	40mm
	< 2	600mm	150mm	100mm	60mm	40mm
5.MINOR ACCESS LINK UP TO 50 DWELLING		as above	as above	as above	as above	as above
6.SHORT CUL-DE-SAC UP TO 20 DWELLINGS		as above	as above	as above	as above	as above
7.MINOR INDUSTRIAL ACCESS ROAD/UP TO 2,000m ² COMMERCIAL PROPERTY	> 5	-	250mm	100mm	60mm	40mm
	2-5	350mm	150mm	100mm	60mm	40mm
	< 2	600mm	150mm	100mm	60mm	40mm

NOTE:

Where block paving is a permitted alternative in Road Types 5, 6 and 7, 80mm blocks with 30mm sharp sand bedding (compacted thickness) will be equivalenced with base course and surface course.

Where site test and/or inspections show the initial depths of construction chosen to be inadequate, the Developer will be required to amend the Specification accordingly and take such measures as may be necessary to rectify works already completed.

CBR test results must be supplied to the appropriate Council officers prior to commencing road construction.

3 CARRIAGEWAY CONSTRUCTION

3.1 ROAD CONSTRUCTION FLEXIBLE

As detailed on Drawing No BHDS-RD-07

3.2 BITUMINOUS COURSES

Any bituminous material shall receive the prior approval of the appropriate Council officers.

3.3 MATERIALS USED FOR UPFILL AND BELOW SUBGRADE

The appropriate Council officers reserve the right to reject any material from any source whatsoever. Materials should comply with table 1 of the Specification of Highway Works Series 600 (Latest Revision).

Recycled 6F2 Material must not be used in the construction of prospectively adopted Roads.

3.4 COMPACTION OF UPFILL AND MATERIAL BELOW SUBGRADE

Unless otherwise directed all such material will be compacted in compliance with Clause 612 and Table 6/4 of the Specification for Highway Works, volume 1, series 600.

3.5 ROAD CONSTRUCTION: BLOCK PAVING & KERBS

Carriageway of 80mm thick precast concrete paving blocks. Approximate size 200mm x 100mm, on a 30mm bed of compacted clean sharp sand on 100mm thick dense bitumen macadam roadbase on a 250mm thick sub-base of Type 1 granular material. (The sub-base depth dependent on CBR values)

Blocks will be laid to a herringbone pattern laid in accordance with BS 7533-3.

3.6 MATERIALS USED FOR UPFILL AND BELOW SUB GRADE

As per flexible construction

3.7 COMPACTION OF UPFILL AND MATERIAL BELOW SUB GRADE

As per flexible construction

4 GENERAL REQUIREMENTS FOR LAYING OF CONCRETE BLOCK SURFACES

4.1 APPROVAL OF MATERIALS AND CONSTRUCTION DETAILS

Precast concrete block paving shall be chamfered and shall comply with BS6717: Part 1.

The type, colour and pattern of concrete blocks and junction, channel and edge details, and materials must all be approved by the appropriate Council officers before construction is started.

4.2 PREPARATION OF BASE

The kerb foundations and, where necessary, the channel foundations to be placed, the kerbs set and the carriageway base or bitumen macadam respectively brought up and compacted or regulated to the required profiles in accordance with the DOT Specification for Highway Works.

4.3 SAND BED

A bedding layer of clear sharp sand, uniform in nature and approximately 50mm thick, to be spread over the prepared surface of the base and brought to a smooth and even surface without uneven precompaction, by means of screed boards.

The thickness of this initial screed may have to be adjusted as found necessary to give the correct thickness (30mm) of compacted sand bed after the blocks have been laid and compacted into place at the intended level.

4.4 LAYING BLOCKS

Laying of blocks must be started against a firm starting edge, eg a kerb line or line of channel blocks being very carefully positioned to establish the pattern, which is then to be extended by the block layer working upon the surface of blocks already laid. Blocks must be placed firmly against those already laid; each block being held slightly above the bedding layer so as not to disturb the sand until the block is in its correct place. Blockings must be laid so that they fit closely together without appreciable joints, if joints begin to open, the blocks may be knocked together with a hide mallet.

4.5 INFILL OF EDGES

Except where purpose made edge blocks are used to start the pattern, no attempt should be made to infill at the starting edge or sides until about 8 or 10 rows of block have been laid, cut or split blocks should then be used to finish the edges. Small edge gaps (up to 40mm wide) may be filled with 4:1 sand/cement mortar). The prepared formation of the footway to be sprayed with an approved type on all-in non-toxic weedkiller.

4.6 VIBRATING BLOCKS TO FINISHED LEVELS

When 15 to 20 square metres of surface has been laid the blocks are to be vibrated to their final level with a plate vibrator having a plate area of .2 to .3 square metre and centrifugal force of about 1 tonne. Two or three passes will normally be required, and the vibrator must be kept about 1 metre clear of any unrestrained edge of the laid surface.

4.7 FILLING JOINTS

After initial vibration sand is to be brushed over the surface of the blocks and vibrated into the joints by a further two or three passes of the vibrator. After all joints are filled the surplus sand is to be brushed away.

4.8 FILLING GAPS AT GULLIES AND MANHOLES COVERS ETC

Wherever possible these are to be dealt with in the same way as the edge infill, by using blocks cut, split or chipped to the required shape. A surround of rectangular blocks may be used with advantage in some cases.

In situ concrete surround will not normally be acceptable.

All kerbing must comply with BS EN1340: 2003.

5 KERBING GENERAL REQUIREMENTS

5.1 LAYING KERBS

Kerbs are to be laid on a bed of 3:1 sand/cement mortar between 10mm and 40mm thick in accordance with BS 7533-6. It is not permissible to bed the kerbs on the wet concrete log. All kerbs to be butt jointed. Kerb found and haunch to be ST4 mix concrete. Kerb found dimensions 400 x 150mm.

5.2 KERB UPSTANDS

STANDARD	100mm
SHARED SURFACE	50mm
DROP KERB	6mm

6 FOOTWAYS

6.1 FOOTWAYS & FOOTPATH CONSTRUCTION

Footway to be of 30mm thick Hot Rolled Asphalt Wearing Course to BS EN 13108 and BS 594987 with 6mm nominal size white chippings from an approved source rolled in at the rate of 750 sq m /tonne, on 50mm thick bitumen macadam 20mm nominal size Base Course to BS EN 13108 and BS 594987 on 150mm thick base of Type 1 Granular Material. Subbase 220mm of quarried 6F2. No frost susceptible material shall be used down to 450mm.

The prepared formation of the footway to be sprayed with an approved type of all-in non-toxic weed killer.

6.2 EDGING TO FOOTWAY ETC

Where footways, etc do not abut walls or building they are to have 50mm x 150mm hydraulically pressed flat top edging (set flush) to BS EN 1340:2003 on a 200mm x 100mm concrete foundation and haunched on both sides. The kerb log and haunch are both to be ST4 mix concrete and monolithic construction.

When footways abut soft landscape areas they are to have 75mm x 225mm hydraulically pressed round top edging to BS EN 1340:2003 on a 225mm x 100mm concrete foundation haunched on both sides. Kerb log and haunch as above.

7 DRAINAGE

7.1 GULLIES (Carriageway)

Comprising gully pot, tail, grating and frame as follows:

7.2 CONCRETE GULLY POTS

450mm diameter by 900mm deep, trapped unreinforced precast concrete pots to BS 5911-6: 2004 bedded and surrounded with 150mm ST4 mix concrete set flush with top of pot, minimum concrete cover to top of outlet 75mm.

With rodding eye and stopper, outlet 150mm diameter set at a minimum slope of 1 in 10

7.3 PLASTIC GULLY POTS

450mm diameter by 900mm deep, externally trapped plastic gully pots, weighing at least 5kg, the trap either moulded with the gully or permanently attached after moulding, bedded and surrounded with 150mm of ST4 mix concrete cover to top of outlet 75mm.

7.4 FIRECLAY GULLY POTS

450mm diameter by 915mm deep, trapped fireclay gully pots to BS 65: 1991, bedded and surrounded with 150mm of ST4 mix concrete set flush with top of pot, minimum concrete cover to top of outlet 75mm.

With rodding eye and stopper, outlet 150mm diameter set at 95o to vertical.

7.5 GULLY TAILS

Gully tails to be 150mm dia pipe surrounded with ST4 mix concrete to connection with main drain.

7.6 GRATINGS AND FRAMES

Gratings and Frames to comply with BS EN 124: 1994 Minimum Class D400 cover and frame. Gully gratings are to be hinged with a captive system to prevent unauthorised removal.

Grating and frame to be seated on 1 or 2 course Engineering brick to BS 3921:1985 bedded with 3:1 sand/cement mortar.

All mortar shall be a proprietary quick setting on epoxy resin mortar and approved by the appropriate Council officers

The grating to be set 15mm below the nominal level of the road surface and sloping with the carriageway crossfall.

7.7 DRAINAGE AND FOOTWAYS AND PEDESTRIAN AREAS

All separate public footpaths, etc are to be drained by means of gullies connected to the surface water drainage system, except where it can be shown that natural drainage will be adequate.

7.8 MINIMUM DIAMETER FOR DRAINS

150mm diameter for carriageway gullies.

100mm diameter for footpath gullies

7.9 DRAINS

To be uPVC Class B pipes to BS 4660: 2000/BSEN 1401-1:1998 (or dense fireclay extra strength pipes to BS 65:1991) with flexible joints. No flexible plastic pipes.

Wherever the cover from the nominal carriageway to the top of pipe is less than 1.2 m then the drain will be encased with 150mm thickness of ST4 mix concrete.

(Drawing Nos 5001, 5002, 5003/1, 5003/2)

7.10 DRAINAGE CHAMBER COVERS AND FRAMES FOR USE ON PUBLIC OR PRESPECTIVELY PUBLIC ROAD

These must be heavy duty non rocking type as specified by the appropriate Council officers, Scottish Water and set to the satisfaction of the appropriate Council officers. Minimum Class D400 to BSEN124: 1994.

7.11 DRAINAGE CHAMBERS

Construction to be as detailed in the document Sewers for Scotland 2nd edition 2007.

7.12 DISCHARGE OF WATER FROM ROADS

All surface water from the Roads described above must drain to the public or prospectively public sewers shown on the drawings.

7.13 DEVELOPER TO BE RESPONSIBLE FOR THE PROVISION OF A COMPLETE AND SATISFACTORY DRAINAGE SYSTEM FOR THE ROADS

Under the terms of the Sewerage (Scotland) Act 1968 the Drainage Authority (Scottish Water) has no duty to drain roads. Provision for road drainage will normally be made by or approved by the Drainage Authority (Scottish Water), but the developer must ensure that in any contingency, roads constructed under Construction Consent are provided with a complete and satisfactory drainage system, and the appropriate Council officers may require the Developer to alter the line, level, position and direction of any road, and carry out any other necessary works, to enable this condition to be met.

Where a drainage system discharges to a water course the Developer will be held to have had the necessary authority for this from the Scottish Environmental Protection Agency.

The appropriate Council officers will not recommend taking over as Public any road constructed without a complete and satisfactory drainage system.

7.14 SUSTAINABLE URBAN DRAINAGE SYSTEMS (SUDS)

Designed in accordance with CIRIA Sustainable Drainage System Manual for Scotland and Northern Ireland (C697).

Design to be approved by SEPA (Scottish Environmental Protection Agency) and Scottish Water.

8 ROAD AND FOOTPATH LIGHTING

8.1 LIGHTING

Road Lighting shall be provided and installed as detailed in the Council's "Road Lighting Specification" and as designed on the approved layout returned with this Consent.

No departure from the requirement detailed in the approved layout and specification shall be made without the agreement of the Commercial Services' Lighting Manager.

The electrical installation shall comply with BS7617: 2008 IEE wiring regulations seventeenth edition.

All road lighting underground cables to be drawn continuous 110mm diameter plastic corrugated twin wall and smooth bore purple duct to BS EN 50086-2-4.

Street lighting marker tape to be installed along the length of the duct and above the line of the cable. The duct will have a draw cord.

All ducting work to be witnessed by the Road Lighting Manager.

8.2 IMPORTANT NOTES

It is of paramount importance that prior to the occupation of the dwelling houses the street lighting installation be tested and approved by the Road Lighting Manager.

Existing columns which have been upgraded and replaced by the street lighting design will be removed by the developer immediately after the new column(s) are commissioned. Failure to comply with the above will result in the Council's contractor removing them and costs for doing so being recoverable.

The Road Lighting Manager must witness the test on the street lighting installation prior to commissioning.

Where existing road lighting plant requires to be repositioned then an order requesting this work to be carried out shall be sent to the Corporate Resources Lighting Manager at the appropriate time.

8.3 TRAFFIC SIGNS, BOLLARDS AND CARRIAGEWAY MARKINGS

In accordance with the approved drawings and shall conform to the requirements of the current Department of Transport Specification for Highway Works. Road Markings and Traffic Signs as per Drawing No BHDS-RD-05 B

Carriageway markings and signs all in accordance with The Traffic Signs Regulations and General Directions 2002.

Bollards to be Glasdon Limited. Victory type with rebound style or socketed Red/White reflective bands.

Street name plates: - To be provided and erected by the developer.

Positions of the name plates to be agreed with the Council prior to erection.

8.4 BUS STOP PROVISION

The new bus stop shall include for shelters, hard standings, DDA compliant kerbing and Bus stop road markings. (Shelter type to be Commutaports Limited "Ben Nevis" and to comply with Midlothian Council's Travel Team requirements). (N/A)

8.5 TRAFFIC SIGNALS

Traffic Signal Heads and push buttons to be LED type.

Crossing hardware to include for audible and tactile cone facilities.

Traffic signal equipment to be ELV type.

Approach to lights: Surfacing to be 68 PSV. (NA)

9 OTHER GENERAL REQUIREMENTS

9.1 SPECIFICATION FOR ROADWORKS

All in accordance with the Highways Agency Specification for Highway Works Volume 1 issued March 1998. (Latest Revision).

9.2 PROVISION OF SATISFACTORY FORMATION FOR CARRIAGEWAYS ETC

The developer is to be responsible for providing a satisfactory formation for all carriageways, etc. appropriate Council officers may require the sub grade be excavated down to a specified level and up filled with suitable material.

If the soft or otherwise unsatisfactory areas are extensive the appropriate Council officers may require removal of all unsuitable material over the affected area, or may require the affected carriageways, etc. to be altered in line, level, or construction.

9.3 UNDERGROUND OBSTRUCTIONS, STRUCTURES, OR VOIDS ETC UNDERLYING OR ADJACENT TO ROADS (EG BOULDERS, OUTCROPS, VOIDS, UNCONSOLIDATED GROUND, WORKINGS, TUNNELS, WALLS, FOUNDATIONS, CELLARS, CHAMBERS, SHAFTS, WELLS, CONDUITS, TANKS, PIPES, APPARATUS) ETC

Any such obstructions etc found to exist during the course of the work are to be dealt with by the developer to the satisfaction of the appropriate Council officers if in his opinion the obstructions, etc would otherwise have any adverse effect on roads or works required for the drainage of roads.

9.4 GRASSED OR LANDSCAPED AREAS WITHIN THE BOUNDARIES OF ROADS

These areas are to be subject to control by the appropriate Council officers, but will not be maintainable by the Roads Authority, unless clearly described as part of the public road.

Landscaping and planting of these areas only to be carried out after consultation with the appropriate Council officers.

9.5 GRASSED OR LANDSCAPED AREAS OUTWITH THE BOUNDARIES OF ROADS, BUT FORMING EMBANKMENTS OR CUTTINGS RETAINING

These areas will not be maintainable by the Roads Authority, but the appropriate Council officers reserve the right to enter such areas at any time for the purpose of maintaining earthworks required for the safety or stability of Roads.

A 1m wide substantially level berm is to be provided next to all carriageways where no footway is to be constructed.

9.6 SIDE SLOPES OF EMBANKMENTS AND CUTTINGS

To be no steeper than 1 vertical in 2 horizontal.

9.7 PROVISION FOR SERVICES

The Developer is held to have consulted with all relevant Statutory Undertakers and

- a) agreed the layout and widths of carriageways, footways and footpaths etc;
- b) failing reaching agreement with them has reported the reason for disagreement to the Midlothian Council Commercial Services so that the problems can be resolved.

9.8 WORKS REQUIRED TO ACHIEVE ADEQUATE VISIBILITY AT ROAD JUNCTIONS, BENDS, ETC OR PREVENT OBSTRUCTION OF CARRIAGEWAYS AND FOOTWAY

The Developer is to carry out all such works to the satisfaction of the appropriate Council officers, including any necessary removal, realignment or lowering of hedges, walls, fences, etc and removal of trees, overhanging branches or other forms of physical or visual obstruction.

9.9 DEVELOPER TO BE RESPONSIBLE FOR THE ELIMINATION OF PONDING ON CARRIAGEWAYS, FOOTWAYS OR FOOTPATHS ETC COVERED BY OR AFFECTED BY THE CONSTRUCTION CONSENT

The Developer is to ensure that surface water is effectively shed from all areas covered by or affected by the Construction Consent and is to carry out all the necessary remedial works, eg the cutting out and resurfacing of relevant areas, alteration of surface levels and if necessary, the provision of additional gullies and tails.

9.10 WEEP HOLES

Weep Holes are not permitted to discharge onto Public or Prospectively Public areas, and alternative measures must be adopted where this would be the case.

9.11 BOUNDARIES

The Developer is to ensure that all existing walls, retaining walls, fences or other boundaries fronting new or reconstructed roads are put in good condition as necessary and if necessary, strengthened or altered to enable the new roadworks to be constructed safely and soundly and without detriment to the boundaries.

9.12 BOUNDARIES FRONTING EXISTING ROADS

Existing walls, retaining walls, fences or other boundaries of lands owned by the Developer fronting existing roads are to be put in good condition as necessary and if necessary, strengthened or altered to ensure the safety and stability of the roads.

9.13 ACCOMMODATION WORKS

The Developer is to be responsible for all Accommodation Works to existing properties made necessary by the roadworks, in particular any alterations to existing footway crossings, driveways, paths, entrances, doors and gates and is to carry out all Accommodation Works at his own expense.

9.14 EXISTING SERVICES

The Developer is to be responsible at his own expense for accommodating existing services affected by the roadworks, whether within or out with Public or Prospectively Public Roads, including any protection, alteration or diversion of such services made by the roadworks.

9.15 CONSTRUCTION DETAILS

All works to be carried out in accordance with the Midlothian Council Specification for Standards for Development Roads and the Department of Transport Specification for Highway Works.

9.16 GROUNDWATER DRAINAGE

The depth and extend of ground water drainage shall be finally determined on site to the satisfaction of the appropriate Council officers. In particular it shall be of sufficient depths to intercept the interface between overlying granular soils and underlying cohesive soils.

9.17 EARTHWORKS

Excavated material from the site shall not be acceptable as embankment filling and shall be removed. Embankments shall be constructed of imported rock fill to the satisfaction of the appropriate Council officers. Sloping surfaces under embankments shall be benched to the satisfaction of the appropriate Council officers. The width of verge both in cut and infill shall be not less than 2 metres. Verges and side slopes shall be soiled and grass seeded.

9.18 EMBANKMENT AND CUTTING SLOPES

The grassed verges and side slopes of cutting and embankments shall not be maintainable by the Roads Authority, but the appropriate Council officers reserve the right to enter such areas at any time for the purpose of maintaining earthworks required for the safety and stability of the road.

9.19 SOILS TESTING

The appropriate Council officers reserves the right to call for such additional soil sampling, testing and analysis as he may deem to be necessary, including CBR tests on sub-grade to determine sub-base thickness, all at the expense of the developer.

9.20 WINTER MAINTENANCE

The developer will be responsible for the treatment of snow and ice during winter months on prospectively adoptable roads, footways, footpaths and cycleways until road adoption.

Gritting bins should be provided for use by residents at main road junction and gradients in 5% and greater. Gritting bins must be replenished. Gritting bins will be retained by the Council on road adoption.

9.21 DILAPIDATION SURVEY OF PUBLIC ROADS AND FOOTWAYS

The developer will carry out a dilapidation survey of the surrounding public roads and footway prior to commencing on site. The developer to contact the appropriate Council officers to give him the opportunity to carry out a joint survey. The results of the survey should be produced on CD and a copy issued to the appropriate Council officers.

9.22 ROAD SAFETY AUDIT

A Stage 3 Road Safety Audit in accordance with HD19/03 will require to be carried out and immediately on granting of substantial completion of the adoptable roadworks. A copy of the report should be supplied to the appropriate Council officers for attention/comment.

9.23 WORKS IN PROGRESS/INSPECTIONS

Midlothian Council Corporate Resources operations staff shall have access to all works within normal working hours, or outside these times when construction works are in progress, in connection with the construction of roads covered by a Road Construction Consent. The officers will be permitted to take samples and to measure the thickness or quantity of any materials used or take any dimensions or level in order to satisfy themselves that the design requirements and specifications adopted by the Council from time to time are being, or have been, complied with. In addition, the developer must inform the appropriate officers, giving 2 days' notice (excluding weekends) of the following stages of works:

- a) Intention to commence work.
- b) Setting Out of the Roadworks.
- c) Commencement of excavation (inspect sub-soil conditions).
- d) Commencement of laying sub-base.
- e) Commencement of Drainage Works.
- f) Completion of kerbing.
- g) Commencement of laying road-base.
- h) Commencement of laying base-course to carriageway
- i) Commencement of laying wearing course to carriageway.
- j) Commencement of laying sub-base to footpaths/footway.
- k) Commencement of laying base course to footpaths/footway.
- l) Commencement of laying wearing course to footpaths/footway.
- m) Commencement of Street Lighting Works.
- n) Completion of Works prior to start of Period of Maintenance.
- o) Final inspection after Period of Maintenance prior to adoption.

10 STANDARD DRAWINGS

The following standard drawings have been issued by the Midlothian Council and where appropriate, will be required to be referred to and are therefore deemed to be part of and to be read in conjunction with the foregoing text.

10.1 SIGNS

Drawing Number	Drawing Title
1099	Temporary diversion signs

10.2 FENCES, GATES

Drawing Number	Drawing Title
3152	Four rail fencing- 1.3m high with timber posts
3153/A	Four rail fencing- 1.15m high with timber posts
3155	Four rail fencing- 1.1m high with timber posts and woven wire
3251	Cleft chestnut pale fencing- 1.22m high with timber posts
3353	Woven wire fencing- 1.2m high with timber posts and five wires
3404	Strained wire fencing- 1.2m high with timber posts and six wires
3552	Steel tubular frame single field gate- 1.1m high with steel posts
3553	Timber single field gate- 1.1m high with timber posts
3701	Steel pedestrian guard rail- 1.0m high
3701/2	High visibility pedestrian guard rail
4347	Pedestrian handrail

10.3 DRAINAGE

Drawing Number	Drawing Title
5001	Pipe construction in trench bedding types
5002	Pipe construction in trench with concrete surround
5003/1	Pipe construction in trench strength classification
5003/2	Pipe construction in trench strength classification
5148	Service cable trench
5151	French drain construction with type B filter
5152	French drain construction with type A filter
5301	Manholes- Notes for guidance
5302/1	Pipe layout for chambers (manholes, catchpits and soakaways)
5302/2	Pipe layout for chambers (inspection chambers)
5303	Manhole or catchpit ramp
5304	Manhole or catchpit backdrop
5305	Manhole and catchpit ladders
5306	Manhole handrail
5307	Manhole safety chain
5308	Manhole and catchpit seating slab
5311/1	Brick manhole –depth to invert less than 3.6m
5311/2	Precast concrete manhole- depth to invert less than 3.6m
5312/1	Brick manhole- depth to invert greater than 3.0m

Drawing Number	Drawing Title
5312/2	Precast concrete manhole- depth to invert greater than 3.0m
5351	Catchpits- Notes for guidance
5361/1	Brick catchpit- depth to base less than 3.3m
5361/2	Precast concrete catchpit- depth to base less than 3.3m
5362/1	Brick catchpit- depth to base greater than 3.0m
5362/2	Precast concrete catchpit- depth to base greater than 3.0m
5459	Baselit illuminated bollard foundation
5601/3	Typical trapped street gully- 450mm nominal bore
5604/2	Cast iron footpath gully- 300mm nominal bore
5611	Rodding eye (accessible to vehicular loading)
5612	Rodding eye (not accessible to vehicular loadings)
5701	Concrete headwall for pipes up to 500mm diameter
5703	Concrete headwall for pipes over 500mm Dia up to 1000mm Dia
5897	Gully reinstatement

10.4 REINSTATEMENTS

Drawing Number	Drawing Title
7301	Permanent reinstatement of carriageway
7302	Permanent reinstatement of bituminous footway
7303	Permanent reinstatement of concrete footway
7304	Kerb reinstatement details
7401	Overlay details at tie ins

10.5 BITUMNOUS CONSTRUCTIONS

Drawing Number	Drawing Title
9001	Sinusoidal Road Hump

10.6 KERBING, ISLANDS, FOOTWAY

Drawing Number	Drawing Title
11101	Pre-Cast Concrete (PCC) road kerb 125mmx255mm half batter pattern
11101/A	PCC road kerb (on radius) 125mmx255mm half batter pattern
11102	PCC road kerb 125mmx255mm half batter pattern for 2 stage road construction
11103	PCC road kerb 125mmx200mm half batter pattern- detail on structure
11105	PCC road kerb 125mmx150mm half batter pattern
11111	PCC road kerb 125mmx255mm full batter pattern
11111/A	PCC road kerb (on radius) 125mmx255mm full batter pattern
11121	PCC road kerb 125mmx255mm bullnose pattern
11143	PCC Quadrant 455mmx255mm half batter pattern
11144	PCC Quadrant 305mmx255mm
11201	PCC edging 75mmx225mm round top
11202	PCC edging 75mmx150mm flat top
11294	PCC Channel 125mmx255mm

Drawing Number	Drawing Title
11302	Pedestrian Refuge Island 1.177m W, PCC road kerb 125mmx255mm half batter pattern
11303	PRI 1.177m W, PCC road kerb 125mmx150mm half batter pattern
11304	Pedestrian Refuge Island 1.2m wide, Pre-Cast Concrete
11304A	Pre-Cast Concrete D island
11305	PRI 2.098m W, PCC road kerb 125mmx255mm half batter pattern
11306	PRI 2.098m W, PCC road kerb 125mmx150mm half batter pattern
11307	PRI 2.0m wide, Whinstone Road kerb
11310	Vehicular private access- drop kerb type
11312	Vehicular field access- drop kerb type
11313	Footway drop kerb crossings
11314	Industrial Access
11501	Pre-Cast Concrete Flags
11502	Textured Paving Flags
11504	Pre-Cast Concrete Flags- small element 300mmx300mm
11506	Textured Paving Flags at uncontrolled crossings
11701	Pre-Cast Concrete Paving Blocks
11798	Pre-Cast Concrete Steps in footway

10.7 SIGNS, MARKINGS

Drawing Number	Drawing Title
12003	Disabled Parking Places

10.8 WALLS

Drawing Number	Drawing Title
24101	Random rubble uncoursed masonry wall with stone-on-edge cope
24102	Random rubble uncoursed masonry wall with half circle dressed masonry cope
24103	Random rubble uncoursed masonry wall with cope excluded