

### Variations to National Roads Development Guide (NRDG)

While the ERC Good Practice Guide for Residential Development Roads (GPG) clarifies and expands on many items found within Designing Streets and the National Roads Development Guide, the following items have been identified as departures from or are unspecified within the aforementioned documents (items highlighted in orange are deemed significant variations).

Item	Description	Scots NRDG Standard	NRDG Ref	ERC GPG Standard	GPG Ref
1	Core Principles	Not applicable		ERC Core Principles when assessing the design of new roads infrastructure are Road Safety, Functionality, Serviceability, Construction & Maintenance.	Introduction P16
2	Virtual Audit Process	Not applicable		Encourage developers/ designers to self audit their proposal by virtually "walking around" their development and identifying potential risks by ask themselves pertinent questions such as would they be happy and feel safe living in this environment et-al?	Introduction P18
3	Junction spacing (new development roads to existing main roads)	Reference to Designing Streets/ DMRB	1.2	Minimum 100m (same side on a main road) Minimum 50m(on opposite sides of a main road) Absolute minimum 25m (first junction within a new development to the main road)	S1.2.2 P26
4	Minimum number of accesses to the development from existing road network	Unspecified		Two access are preferred but one will be accepted if there are significant site constraints	S1.2.3 P28
5	Junction visibility splays (new development to existing road network)	Reference to Designing Streets/ DMRB	2.2.6a	Varies depending on speed limit on main road and flow from development road but generally 2.5m x 90m for a side road flow of 40v.p.h onto a main road with speed limit of 30mph	S1.2.4 P284
6	Forward sight stopping distance on existing road network at new development junctions	Reference to Designing Streets/ DMRB	1.2	Varies depending on speed limit on main road but generally 90m on a main road with speed limit of 30mph	S1.2.5 P30

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7	Culs-de-sac design	Where culs-de-sac are used in a layout they should terminate in turning circle. Where lack of space precludes the creation of a turning circle, turning (hammer) heads may be substituted	3.1.3	As NRDG but a hammer-head turning facility will only be considered if it has a suitable refuge area for pedestrians i.e. surrounding footway.  Hammer head turning areas will not be permitted in shared surface area.	S2.1.5 P39 S2.3.4 P49  S3.2.-3 P58
8	Number of dwellings associated with a shared driveway	Generally 5 or fewer dwellings will be served by a private access	2.1.4	Desirably two dwellings but an absolute maximum of three dwellings if safe and functional	S2.2.-1 P39
9	Number of properties that must be served from a road (private or public)	6 or more individual dwellings	2.1.4	Three or more house units or a housing courtyard serving 20 or more flatted units	S2.2.-1 P39
10	Width of footpaths in private courtyards serving properties	Unspecified		To be functional and to be considered for potential adoption such footpaths should be an absolute minimum width of 2m (2.5m desirable where overhang from parked cars is possible)	S2.2.1 P41
11	Footway transition onto shared surface carriageway	Unspecified		The transition from footways onto a shared surface must be situated in a safe and sensible location.  It is preferred that such features are not located directly at junctions.	S2.2.8 P43
12	Carriageway Widths	Widths varies	3.1.3	Generally the road width on a residential road shall be 5.5m (6m on a bus route) with local narrowings to 3.5m (where appropriate)	S3.1.1 P53
13	Road narrowings at junctions	Unspecified		No road narrowings will generally be permitted at or within 10m of a road junction	S3.1.2 P53
14	Road narrowings at driveways	Unspecified		No road narrowings will generally be permitted opposite driveways	S3.1.3 P53

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15	Forward sight stopping distance on new residential roads	Reference to Designing Street	3.1.1	Generally 25m but relaxed to 20m on shared surface carriageways	S3.2.1 P56
16	Maximum gradients	Shared surface road maximum gradient of 8%	3.1.3	Maximum vertical gradient for internal development roads shall be 8% for a standard carriageway construction and 7% for a shared surface carriageway construction.	S3.3.1 P60
17	Maximum gradient at junctions	Gradient of road at junction with another residential road over the x-distance should not exceed 4%.	3.1.3	The gradient of the minor road on approach to a major road should not exceed 5% over the last 5m where it is rising towards the major residential road and should not exceed 4% where it falls towards the major road.	S3.3.1 P60
18	Minimum gradients	Channel gradients should not be flatter than 0.8%	3.1.3	Minimum vertical gradient for internal development roads shall be 1% for a standard carriageway construction and 1.25% for a shared surface carriageway construction.	S3.3.2 P6
19	Junction spacing (new internal development roads)	Reference to Designing Streets	2.2.6a	Junction spacing within an internal roads network should not be less than 25m (kerb to kerb). Spacing between staggered junctions within a bespoke arrangement may be reduced to 10m (kerb to kerb)	S3.4.1 P61 S3.2 P61
20	Junction styles	Reference to Designing Streets	3.1.1	Staggered or T junctions are generally preferred over 'Crossroad' junctions layout	2S3.4.2 P61
21	Standard Junction radii	Unspecified		Varies between 4.5 and 9m depending on junction hierarchy but generally either 4.5m or 6m	S3.4.3 P61

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22	Junction to driveway spacing	Unspecified		<p>It is recommended that driveways are not located within 10m of a junction.</p> <p>Where the junction is between a residential road and main road/ core road, the minimum distance between driveway and junction on the residential road shall be 15m.</p>	S3.4.4 P64
23	Junction to parking bay spacing	Unspecified		Parking bays should be positioned at least 10m from a junction	S3.4.5 P65
24	Spacing between driveway and courtyard / private access	Unspecified		The minimum spacing between driveways and parking courtyards / private access should be 5m	S3.4-6 P65
25	Raised tables/ vertical traffic control measure designs	Unspecified		<p>The raised section of a junction table should extend at least 6m into each road leg of a junction.</p> <p>Driveways within 5m of a vertical speed control ramp should be avoided.</p>	S3.4.7 P66
26	Junction visibility splays (internal road network)	Reference to Designing Streets	3.1.1	A minimum visibility splay of 2.5m x 25m must be provided and thereafter maintained at perpetuity, at all internal road junctions	S3.5.1 P68
27	Access visibility splays (between driveways/ private accesses and internal road network)	Unspecified		A minimum visibility splay of 2.0m x 20m must be achieved between individual driveways, parking courtyards accesses and shared driveways and the adjacent carriageway	S3.5.2 P69
28	Driveway/ footway/ shared surface inter-visibility	Unspecified		A visibility splay of 2m back from the edge and 5m in either direction from the edge of driveway should be provided.	S3.5.3 P69

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29	Parallel Parking bay sizes	Preferred bay size for cars = 5.5m x 2.9m	3.6.2	Where a parking bay is provided parallel to the carriageway, the length of the bays should be in multiples of 6m in length and 2.5m wide)	S4.1.3 P75
30	Perpendicular Parking design standards	Desirable bay size = 5.0m x 2.5m	3.6.2	Sizes of bays are per NRDG though where located of a 5.5m wide road, the nays should be set back a further 0.5m  Where vehicle overhang of an adjacent footway/ footpath is possible it is recommended that the footway/ footpath is increased in width to 2.5m	S4.1.3 P75
31	Parking Courtyards	Basic dimensions given	3.6.2	Parking bays minimum size 5m length x 2.5m width Aisle width minimum 6m Parking bays preferably at right angles to the entry/ exit aisle No end on parking at rear of entry/ exit aisle 1.2m wide hardstanding to rear and side (where appropriate) of parking bays should be provided end of entry/ exit aisle should be extended by 1.5m beyond last parking space to allow manoeuvrability out of such Kerbing alignment at the corner of end bays should have a 1m radius or 1m chamfer	S4.1.4 P77
32	Residential parking provision	1 bed unit - 1 allocated space 2-3 bed unit - 2 allocated spaces 4 bed unit - 3 allocated spaces Visitor/ unallocated spaces - 0.25 per unit	3.7 Class 9	1 bed unit - 1 allocated + 0.65 unallocated spaces 2/3 bed unit - 2 allocated + 0.25 unallocated spaces 4 bed units - either 2 allocated + 0.5 unallocated spaces or 3 allocated + 0.1 unallocated spaces 5 bed or more units - 3 allocated + 0.1 unallocated	S4.2.1 P81

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33	Bedroom units/ Studies	Unspecified		In addition to designated bedrooms, studies and/ or other similar rooms (i.e. room space above garages) will be counted within the determination of number of bedrooms within a property.	S4.2.3 P81
34	Unallocated Parking supplements	Unspecified		<p>Double garages not perpendicular to the carriageway - additional 0.65 unallocated spaces per unit</p> <p>Tandem triple driveways - additional 0.65 unallocated spaces per unit</p> <p>Tandem double driveways - additional 0.35 unallocated spaces per unit</p> <p>h-shaped pr similar driveways including driveways with a double garage - additional 0.2 unallocated spaces per unit</p>	S4.2.5 P81
35	Garage provision and size	A garage can be counted towards a parking space allocation.	3.6.4f	<p>Integral single space vehicle garages do not count towards being an allocated curtilage space.</p> <p>Integral vehicle garages greater than 7m length x 6m width (double garage) may be considered as a single allocated space.</p>	S4.2.8 P82  S4B-7 S4.2.9 P83
36	Cycle parking provision	To be applied by the Local Authority	3.5.9	For flatted properties - minimum recommendation is two spaces per flat	S4.2.10 P83
37	Shared driveway design	Unspecified		Shared driveway accesses should be a minimum of 5m in width	S4.3.1 P84

Item	Description	Scots NRDG Standard	NRDG Ref	ERC GPG Standard	GPG Ref
38	Driveway Construction	Unspecified		Maximum gradient should not exceed 10% Driveway should be fully surfaced in either block paving or asphalt/ dense bituminous material Surface water from the driveway should not be discharged onto the (prospectively) public road Gates must not set back and not interfere with movements on the adjacent footway/ carriageway.	S4.3.1 P85
39	Driveway Length	Unspecified		Absolute minimum single vehicle length 6.0m (6.4m if access path is required at rear) Absolute minimum double vehicle (tandem) length 11m (11.9m if access path is required to rear)  Driveway length increased by modules of 5.5m for every additional vehicle	S4.3.2 P85
40	Tandem Parking	Tandem parking should be discouraged	3.6.4i	Tandem driveways would be supported in the right circumstances but will not be accepted in areas where there is local road narrowing, within junction nodal points and / or where there significant changes in horizontal alignment.	S4.3.2 P87