Shetland Islands Council

# Private Access Guidance
## Single Houses and Small Housing Developments

**Guidance on Design Standards, Road Safety Considerations and Road Drainage Requirements for Private Accesses serving Single Houses and Small Housing Developments.**

November 2015

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# 1 INTRODUCTION

1.1 The aim of this document is to offer guidance to individuals and developers who propose to take a private access off the public road to serve a single house or a small housing development.

1.2 The Shetland Islands Council wishes to promote consistent standards for the construction of all junctions and accesses onto the public road network.

The Main Objectives are:-

- **Safety**
  - The Creation and Maintenance of Good Junction and Access Visibility Splays.
  - The Provision of Road Widening at Junctions and Accesses where Appropriate.
  - The Safe and Convenient Spacing from Existing Junctions and Accesses.
  - To Minimise the Number of Individual Accesses onto the Road Network.

- **Drainage**
  - The Provision and Maintenance of Adequate Roadside Drainage.
  - The Correct Disposal and Treatment of Site Surface Water Run Off.
  - That the Flood Risk to Property is Minimised.

- **Construction**
  - Consistent and Appropriate Design.
  - Acceptable Construction Standards and Details.
  - Compliance with Legislation.

1.3 We recommend that you employ the services of a Professional Architect or Engineer at an early stage to assist you with your project.

1.4 Where there is a possibility that a development may be extended at a later date then the access may require upgrading. Advice should be sought from the Council Roads Service at an early stage to ensure that adequate provision is made within the site layout.

1.5 This document does not deal with the standards required for adoptable roads. In an Urban or Developed Setting it is likely that any development of two or more houses would be best served by an adopted road. In a Rural Setting serious consideration should be given to the future maintenance obligations for any access serving two or more houses.

1.6 Should there be any likelihood that the Council will be asked to adopt an access then it must be built to specific standards under Roads Construction

Consent. For guidance on roads suitable for adoption please refer to Section 6 Adoptable Roads.

1.7 A checklist for private accesses is included in Appendix 1 to this document. Applicants are encouraged to complete this checklist and enclose a copy as part of their planning submission. Using this checklist will help highlight, at an early stage, any potential problems with access to the proposed development. This will help both the applicant and Council officers identify where further information or consultation may be required.

1.8 For planning issues please refer to the Shetland Local Development Plan and its Supplementary Guidance Documents. These are available on the Council web site at www.shetland.gov.uk

***You are advised to contact the Council Planning and Roads Services at an early stage of any development consideration.***

# 2 SITE ACCESS LOCATION ASSESSMENT

2.1 When considering the location of the access point for your development you should consider the following:-

- ❖ Is the proposed access in the best location, do I have any options?
- ❖ Can I share an access with a neighbour?
- ❖ Is the proposed access close to a road junction or other property access?
- ❖ Is the proposed access close to a blind bend or crest in the road?
- ❖ Can I construct a safe access visible to other road users?
- ❖ Have I control over all the land required for any necessary improvements?
- ❖ Do I need to set back or lower any boundary walls or fences?
- ❖ Do neighbouring properties obstruct visibility?
- ❖ Is the site large enough for the provision of car parking and turning?
- ❖ Do I need to extend the existing footpath network to connect my development?
- ❖ Is the site liable to flooding or does it have drainage problems?
- ❖ How will existing drainage be incorporated into the new site layout?
- ❖ Are there underground services in the footpath or verge?
- ❖ Are there overhead services which could be hazardous?
- ❖ Do I require permission to excavate in the road, footpath or verge?

2.2 The above list is by no means exhaustive. While guidance is given in the following sections of this publication on both required and recommended standards, and how they may be achieved, there is little substitute for obtaining appropriate professional advice at an early stage.

2.3 Developments in or adjacent to existing residential areas should be assessed for access by walking and cycling. Even single house developments may require links to footpaths and to other facilities such as bus services, schools and shops, or play areas. Prospective developers are therefore encouraged to seek early consultation with the Council to discuss these issues.

# 3 JUNCTION AND ACCESS LOCATION

## 3.1 Junction and Access Location

3.1.1 In the interests of road safety it is Council policy to minimise the number of individual junctions and accesses onto the road network and to ensure that minimum standards for safety are achieved.

3.1.2 Any new junction or access should not normally be situated within 60 metres of another junction or access on the same side of the road, or within 25 metres of another junction or access on the opposite side of the road. These distances are appropriate for most minor rural roads. On higher speed roads a greater separation distance between accesses and junctions may be required to prevent any negative impact on traffic safety. In an urban or developed setting these distances may be relaxed depending on local conditions. We generally encourage the use of shared accesses wherever possible.

3.1.3 It is highly recommended that the Council Roads Service is consulted at an early stage for any proposed access onto a Class A or B road as the potential for these is likely to be limited.

3.1.4 Any new junction or access onto a road must be fully constructed prior to work commencing on the development. This will assist in the safe delivery of plant and building materials to the site, and allow contractors vehicles to manoeuvre on and off the public road.

3.1.5 The junction or access must have a final layer of bituminous surfacing or double coat of hot tar surface dressing extending up the access for a distance of at least 6 metres from the public road edge. This bituminous surface protects the structural integrity of the edge of the public road, and is also required to prevent gravel from the access being dragged onto the public road.

3.1.6 On high speed or urban roads this surface layer must be 100mm of dense bitumen macadam within the verge area. On minor or low speed roads this bituminous surface layer may be reduced to 60mm of dense bitumen macadam. A double coat of hot tar surface dressing may be applicable in certain circumstances. Reinforced concrete or concrete block paving may also be acceptable alternatives.

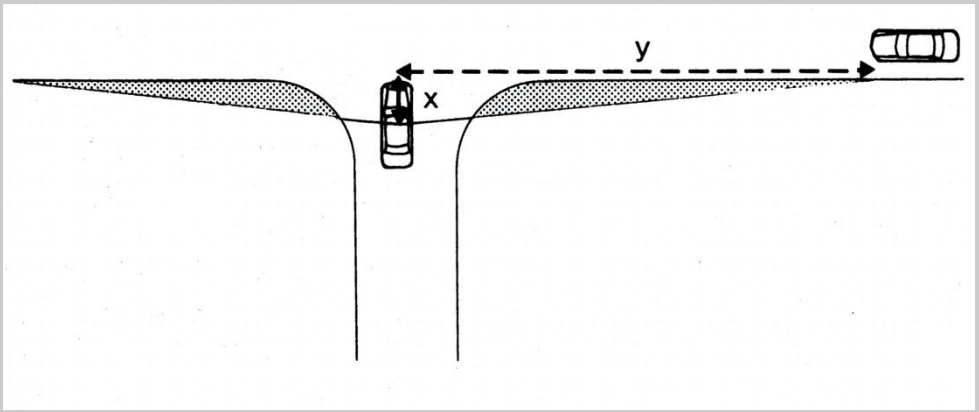
3.1.7 Whether the site is located above or below the road the slope and shape of the access needs to conform to certain design parameters. This is to ensure that it is safe and convenient for all potential users. Detailed guidance on suitable parameters is given further on in this document.

## 3.2 Visibility Splays

3.2.1 A Visibility Splay is an essential safety feature of your junction or access onto the road network.

3.2.2 The purpose of a Visibility Splay is to allow anyone using your access to see approaching traffic before entering the road. A Visibility Splay also allows traffic on the road to see any vehicles, cyclists, or pedestrians leaving the development.

### What is a Visibility Splay?




*In the sketch above, imagine you are leaving the property about to join the public road, you look to the right and left across the verge and land adjacent to the road to see if there is any approaching traffic. The areas shown by the darker shaded areas are called the Visibility Splays.*

3.2.3 An unobstructed visibility splay allows you to SEE and be SEEN. Therefore, the longer the length of visibility splay, the more time another road user has to see you, and for you or your family, friends or visitors to see them - and for everyone to react to a potential incident or risk.

3.2.4 There are two key dimensions to a Visibility Splay. These are shown as X and Y in the sketch above.

3.2.5 Firstly, the X dimension, which for a single house or small residential development is 2.5 metres long. This is measured back from the edge of the carriageway to approximate the driver's sitting position. The viewing point is set at a 'driver's eye height', which is taken as being 1.05 metres above the road surface level.

3.2.6 Secondly, the Y dimension, which is the distance along the near road edge over which you require to see the whole road. This is measured from the centre line of the junction or access along the edge of the road towards the approaching traffic. The target point is also set at a 'driver's eye height'; 1.05 metres above the road surface level.

3.2.7 The minimum required Y dimension varies depending on the speed of approaching traffic. The faster the speed of approaching vehicles, the longer the distance required to see and be seen, and therefore the greater the Y dimension. Y dimension values for various approaching speeds are given in Tables A and B below.

| **Table A** | | | | | | |
|---|---|---|---|---|---|---|
| Speed (mph) | 75 | 62 | 53 | 44 | 37.5 | 30 |
| Y (m) | 295 | 215 | 160 | 120 | 90 | 60 |
| *The speed band used is equal to or greater than the 85% speed of free flowing traffic* | | | | | | |

| **Table B** | | | | | |
|---|---|---|---|---|---|
| Speed Limit (mph) | 70 | 60 | 50 | 40 | 30 |
| Y (m) | 295 | 215 | 160 | 120 | 90 |

3.2.8 The two dimensions X and Y are used to calculate the visibility splay for any individual access.

3.2.9 The visibility splay must be fully established before building work commences on site as your builders and tradesmen are entitled to as safe an access as any other future user.

## 3.3 Determining the Required Visibility Splays

3.3.1 The traffic speeds to be used in the calculation of the Y distance are normally the same as the speed limit that applies to the public road onto which your junction or access will connect.

3.3.2 On some roads, particularly single track or local roads, traffic speeds may be significantly lower than the permissible limit.

3.3.3 The developer should make their own initial assessment of traffic speeds in order to assure themselves that a suitable site access location has been selected. This estimated speed, if lower than the applicable speed limit, should be highlighted in the checklist accompanying your planning application.

3.3.4 The Council Roads Service will make an assessment of the speed of traffic approaching the site by conducting a practical 'drive-by' past the site location.

3.3.5 In the event of a disagreement between the developer and the Council Roads Service over the speed of approaching traffic, which results in a 'Recommendation to Refuse an Application', then an automated flow and speed survey will be carried out by the Council Roads Service to confirm the speed. This may result in a delay in providing finalised comments on an application.

## 3.4 Visibility Splays in Residential Roads

3.4.1 Following the latest guidance in Designing Streets, published as a Policy Statement by the Scottish Government, the Visibility Splay requirements for Residential Roads (Streets) may be relaxed from the distances given previously in Table B.

3.4.2 A Residential Road or Street is one that is substantially fronted by residential properties with little or no through traffic. There will normally be at least one footway or walk-able verge provided and the road must be subject to a 20mph or 30mph speed limit.

3.4.3 Table C below details the relevant Y dimensions for the Visibility Splay depending on the speed limit in force.

| **Table C** | | | | |
|---|---|---|---|---|
| Speed Limit (mph) | 20 | 20* | 30 | 30* |
| Y (m) | 25 | 33 | 43 | 59 |
| ** where the road provides through access to a number of other residential roads* | | | | |

## 3.5 Forward Visibility Splay

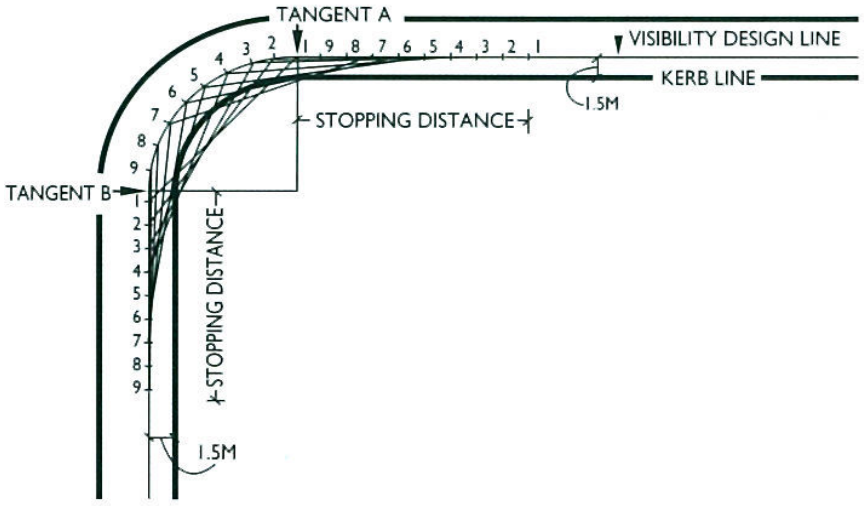
3.5.1 Forward visibility for drivers using either an access or the public road is essential for safety – providing an adequate viewing distance of any obstruction on the road ahead. This allows a vehicle to stop in time.

3.5.2 The minimum required forward visibility is calculated from vehicle speeds, similar to junction visibility splay distances. Tables A, B and C give appropriate distances (the Y value) for various vehicle speed and road circumstances.

3.5.3 To calculate the forward visibility the driver's eye height is taken as 1.05 metres above the road surface but the target height for stopping is set at 0.26 metres, except in residential roads (streets) where the target height is 0.6 metres – the height of a small child.

3.5.4 When calculating forward visibility around a bend the splay may encroach into the verge and adjacent ground on the inside of the bend. This area must be kept clear of obstructions to visibility.

3.5.5 To calculate the clear area of ground required around a bend for forward visibility a line representing the driver's position is drawn 1.5 metres in from the nearside road edge or kerbline. The appropriate forward visibility distance is marked every 10 metres along the driver's path and the end points connected by a chord line. The area within these lines forms the visibility splay area to be kept clear.




## 3.6 Maintaining Visibility Splays

3.6.1 When submitting your planning application you must demonstrate that you have, and can maintain, control over any visibility splay areas required for the safe operation of your junction or access. For your own safety, and that of others using your junction or access, you have a responsibility for the maintenance of clear sightlines over the visibility splay area. If this visibility splay area intrudes into your neighbour's land you will need to discuss this

with your neighbour and the Council Planning Service who will advise you on any legal agreements that may be needed.

3.6.2 There are circumstances when a developer will wish to locate an access on or near to a bend in the road. The outside of a bend is generally the safest option. However, for some sites there may be no alternative but to locate the access on the inside of a bend. The developer should therefore be aware of the area of the site that will be affected by the visibility splay requirements, and which must be kept free of obstructions such as buildings, trees and tall shrubs.

3.6.3 Some bends may be so tight that the required visibility splay will fall 'back over the shoulder' of a driver. Splays arranged at an angle of more than 135° from the line of approach at the public road edge will not be acceptable. All junctions and access should approach and join the road at a right angle, 90°.

3.6.4 The achievable and required junction or access visibility splays should be dimensioned and shown on your planning application site plan.

3.6.5 Where a site is located on the inside of a bend on an access or public road the developer should be aware of the possible encroachment into the site area of any forward visibility splay area that requires to be kept clear.

## 3.7 Turning and Parking of Vehicles

3.7.1 In a rural area any vehicle entering a site should be able to park and/ or turn around within the curtilage of the site, in order that it leaves the site in a forward gear. Vehicles entering a site should not have to reverse back out onto the public road.

3.7.2 In an Urban Setting direct frontage access to parking spaces may be acceptable where 85% vehicle approach speeds are no more than 30mph. The road should not be a priority route or provide the main access to a public or large commercial facility, nor should it carry more than 3500 vehicles per day. If in doubt please contact the Council Roads Service.

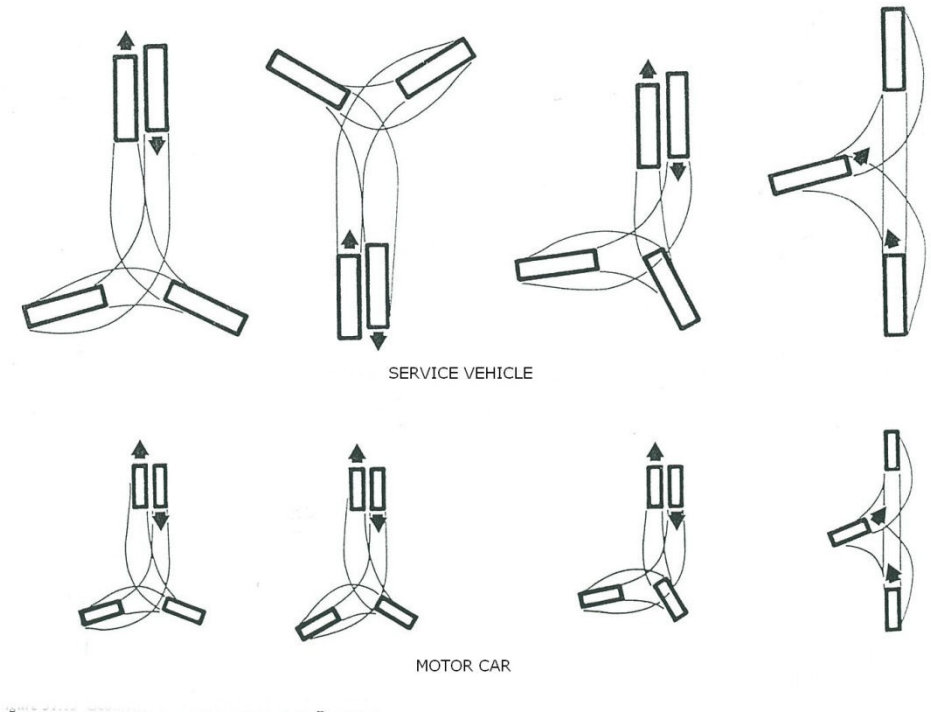
3.7.3 Some minor roads in a Developed Setting may also be considered suitable for direct frontage access to parking spaces depending on the development pattern of the area. You should discuss this with the Council Roads Service at an early stage if this arrangement is being considered as part of your development.

3.7.4 Developers should also consider at an early stage how bulky deliveries such as heating oil are to be delivered. It may be that a turning area sufficient for a delivery vehicle needs to be provided within the development site to enable delivery vehicles to turn round.

3.7.5 An alternative approach would be to consider the provision of a service bay adjacent to the site access and well located for fuel deliveries. The photo below gives an example.

3.7.6 In both cases the location of any fuel tanks will need to be considered in relation the provision of access and turning. Similarly, where houses are not connected to the public sewer, but are served by a 'septic tank', access provision for an emptying/ cleaning vehicle needs to be made. Scottish Water can advise of their specific operational requirements in such circumstances.

3.7.7 Some typical hammer head turning arrangements are shown in the following sketch.




3.7.8 All residential development should provide suitable parking provision for both the occupants and visitors. Normally, developers would be expected to provide the full parking provision requirement within the curtilage of the site. Vehicle parking spaces should be provided at the rate of:-

- 2 spaces for dwelling units with up to 3 bedrooms.
- 3 spaces for dwelling units with 4 or more bedrooms.

3.7.9 Housing development within the Conservation Areas of Lerwick and Scalloway may be permitted a lower level of parking provision. For a fuller explanation of parking standards please refer to the National Roads Development Guide and local variations for Shetland.

3.7.10 Parking spaces should be well located in relation to the dwelling units they serve and should be easily accessible. For that reason it is not normally acceptable to count any parking spaces stacked behind another space.

3.7.11 Parking spaces shall be a minimum of 2.5 metres wide x 5.0 metres long. Where a parking space abuts any wall, fence, door, gate, slope or pedestrian route a minimum 0.5 metre wide verge or clearance needs to be provided. Wider and longer spaces are recommended to allow for better access and egress and to accommodate larger vehicles.

3.7.12 Shetland can experience severe winter weather. Where the access road to a development site is particularly steep consideration should be given to providing parking areas at the top/ bottom of the incline. A service bay as mentioned earlier could also provide this functionality.

## 3.8 Gated Accesses

3.8.1 Gates across an access should be located at least 6.0 metres from the adjacent public road edge. This is to ensure that vehicles waiting to enter or leave the access do not obstruct the public road while the gates are being opened or closed.

3.8.2 Gates should open away from the public road. If a gate must open towards the public road, due to the incline, then the set-back distance of the gate from the road edge must be increased accordingly.

3.8.3 Gate pillars, walls, fences or hedges must be kept to the rear of the visibility splay area. If this is not practical they must be constructed so that they do not obstruct the sight lines.

3.8.4 Cattle grids, if provided, must be located at least 6.0 metres from the public road boundary. For safe passage the maximum recommended gradient across a cattle grid is 8% (1 in 12.5). Cattle grids should not be located on bends or where vehicle paths are likely to be curved.

3.8.5 In rural areas, where properties may be relatively remote from the public road, access drives shall be 3.0 metres minimum width with 1.0 metre minimum width verges to allow emergency service vehicles access. Gate posts should provide 3.5 metres minimum clearance when the gate is open.

## 3.9 Formation of a Vehicular Access across a Public Footway

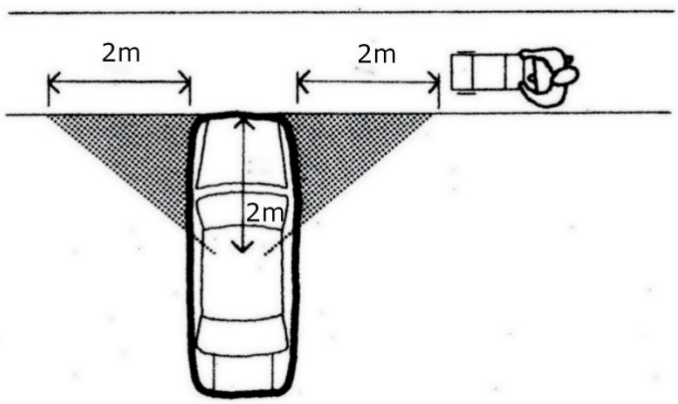
3.9.1 In an existing residential area any development will normally involve taking access across a footway. In this situation the safety of pedestrians is of the highest priority. As pedestrians may be young, elderly, or visually impaired it

is essential that any driver using the access has an unobstructed view of any users of the footway.

3.9.2 Kerbing and footway levels will normally require to be adjusted and a qualified road works contractor must be engaged to carry out this work. The legal procedures necessary to carry out such work are described in Section 7.0 Your Legal Responsibilities.

3.9.3 Visibility splays can normally be achieved by ensuring that any walls, fences or hedges within the area of the visibility splay are no higher than 0.9 metres. This should allow the driver of a vehicle leaving the property to see clearly over the top of the wall, fence or hedge and observe an approaching vehicle.

3.9.4 In addition to the Road Visibility Splay, when a vehicular access or driveway crosses a footway, then a 2.0 metre x 2.0 metre (45°) Pedestrian Visibility Splay must be provided at the rear of the footway as shown in the sketch below. This visibility splay is required so that a pedestrian or cyclist on the footway can be seen by any emerging vehicle driver. No obstruction to visibility is permitted within this splay to ensure that small children can be clearly seen.




3.9.5 The following considerations, requirements and restrictions will apply to applications for access to off-street parking spaces:-

- An access from a classified road requires planning permission.
- The gradient of the access shall not exceed 5% (1 in 20) for the first 6.0 metres from the heel of the footway or back of verge.
- The access shall be constructed at right angles to where it meets the public road.
- Any garage served off the access or parking area is to be constructed at least 6.0 metres from the heel of the footway or back of verge, or no more than 2.5 metres from the edge of the carriageway.

- The hard standing shall be of a sufficient length to ensure that any swinging gates may open inwards when a vehicle is parked on the hard standing.
- The first 6.0 metres of the access shall be surfaced with 60mm of dense bitumen macadam or other suitable hard bound material such a concrete block paving.
- The access or hard standing shall be designed and constructed in such a manner as to prevent the shedding of water or debris onto the public road or footway.
- The maximum length of footway that may be dropped, or boundary opening formed, in order to create an access is 5.0 metres. This restriction is used to minimise the loss of on-street parking space caused by the creation of the access. Where no on-street parking will be lost a wider access may be considered. The Council as Roads Authority may stipulate the location within your frontage of any new access in order to maximise the available space for on-street parking.
- The minimum width of any opening for vehicular use shall be 2.4 metres.
- Off-street parking spaces should be able to properly accommodate a typical vehicle, while not obstructing pedestrian access to the property or overhanging the footway or verge. Designated off-street parking spaces must be at least 2.5 x 5.0 metres in size, be accessible, and have a clearance to any wall, fence, drop or pedestrian route of at least 0.5 metres.

# 4 ACCESS AND DRIVEWAY DESIGN

## 4.1 Note on Design Parameters

4.1.1 The access design parameters given in this section are intended to provide guidance on an appropriate level of safety and convenience for typical users of the access in normal weather conditions. However, it should be noted that some vehicles with long wheel bases, low ground clearances or large front/rear overhangs may have difficulties where designs are towards the upper end the limits given.

***It is the responsibility of the designer to ensure that what is being proposing is safe and convenient for use.***

4.1.2 A driveway is considered to be any access that is less than 50 meters long from the edge of the public road to the centre of its turning area/ hammer head. Design parameters for driveways can be a little more relaxed in respect of vertical curve lengths due to the inherently lower speeds of vehicles using them.

## 4.2 Access Width and Junction Widening

4.2.1 To allow convenient access by most vehicles the Council recommends that an access track is 3.3 metres wide, with 1.5 metre clear verges.

4.2.2 While these widths are desirable there are circumstances where space is more limited. In those cases the minimum practical access track width is 3.0 metres with 1.0 metre clear verges. Localised narrowing down to 2.4 metres may be acceptable, but should be checked with the Building Standards Service.

4.2.3 It may be advisable to apply curve widening of up to 1.0m to any bends in the access, especially if service or delivery vehicles are expected to enter the site.

4.2.4 Where an access serves only one property then no widening of its junction area beyond the nominal access width (3.0 – 3.3 metres) is required.

4.2.5 Where the access or junction is to serve more than one property it should be widened to a minimum of 5.0 metres width for at least the first 6.0 metres. A greater width may be required depending on the width of the road being joined.

4.2.6 If the number of properties to be served through the junction is more than 4, or if service vehicles are expected to use the access, then the junction widening may require to be extended beyond the default 6.0 metre distance from the edge of the public road. In such circumstances you are advised to discuss the development site and your plans with the Council at an early stage.

## 4.3 Gradients

4.3.1 One of the most important considerations in the design of any access is its gradient – that is how steep it is. The steeper the slope the more difficult it will be to use, especially in poor weather conditions, and the greater any maintenance burden is likely to be due to wear by wheel slip and erosion by surface water flow.

4.3.2 As a general guide; above a 10% (1 in 10) gradient it is better to have a longer access than a steeper gradient.

4.3.3 As the gradient of the access increases so too does the impact of any bends or turns in the access. Table D below gives guidance on appropriate minimum bend radii for increasing gradients. Applicants, developers and designers should note that the maximum practical gradient for safety and convenience is 18% (1 in 5.5). This is a particularly severe slope for regular use.

| **Table D** | | | |
|---|---|---|---|
| *Alignment* | *Desirable* | *Limit* | |
| Straight or curve R>50m | 12% | 18% | |
| Curve R=30m | 10% | 14% | ↑ |
| Curve R=20m | 8% | 12% | interpolate |
| Curve R=12m | 5% | 10% | ↓ |
| Curve R=10m | 5% | 8% | |
| Curve R=6m | <5% | 5% | |

*Designers should note that for intermediate gradients between those tabulated above the recommended minimum curve radius is calculated by interpolation. For example, on a 13% gradient it is recommended that a minimum curve radius of 25.0*

*metres is used. Similarly, a 45.0 metre radius curve may be considered appropriate for use on gradients up to 17%.*

4.3.4 At any junction onto a public road the maximum gradient is 5% (1 in 20) for the first 6.0 metres on the side turn, and the main route gradient for taking access to a new build development is limited to 10% (1 in 10) across the frontage of the private access junction. It is recommended that these values are also used within any development site.

## 4.4 Horizontal Alignment

4.4.1 If an access is constructed with tight radius curves it will be less convenient to use and more prone to maintenance due to wheel scrub. Where tight radius bends or curves are coupled with steeper gradients the effect is amplified.

4.4.2 In more extreme circumstances, as highlighted by the parameters given in Table D above, the combination of a tight radius and steep slope can lead to safety issues with vehicles potentially sliding across the bend in wet and winter weather conditions.

4.4.3 The following parameters may be considered as practical limits to the horizontal alignment of an access:-

- A desirable minimum of 12.0 metres on any inner radius.
- A limit of 6.0 metre centreline radius
- The minimum inside radius at a junction, or where the access enters a turning area (not a hammer head arrangement), is 2.0 metres.

Designers may wish to note that gradients should be limited (as per Table D) over the whole length of the curve when tight radii are used.

## 4.5 Vertical Alignment

4.5.1 Along with consideration of the gradient(s) of an access; how it ties into both the road that it comes off, and the parking and turning area that it connects to, should be calculated.

4.5.2 Where an access changes gradient it should be done smoothly, rather than as a ‘kink’. This design feature is called a vertical curve and it is used to smooth out the vertical alignment between changes in gradient.

4.5.3 Should a change in gradient be too sharp then vehicles can ground. At higher speeds (20mph +) too sharp a change can unsettle a vehicle creating traction and safety issues.

4.5.4 On longer accesses (>50m) vehicle speeds over 20mph are common and so the sharpness of the vertical curve (the K value) should be limited, as should minimum lengths to prevent grounding. On shorter accesses (driveways) only the recommended minimum overall lengths of the vertical curves are noted. The recommended limits are:-

- Crest curve minimum K=2, min. curve length = 4m
- Sag curve minimum K=3, min. curve length = 6m

4.5.5 Where the overall access length is less than 50 metres from the edge of the road to the centre of any turning area or hammerhead, and the access enters the road at a right angle (90°), then it can be considered as a driveway.

4.5.6 Designers should note that driveways still require a 6.0 metre long platform with a maximum 5% (1 in 20) gradient at the road edge. Any turning areas should also have a maximum gradient of 5% (1 in 20).

4.5.7 The following table gives a simple reference guide to the height change achievable for different lengths of normal accesses with a 6.0 metre long 5% (1 in 20) gradient platform at the road edge, and a turning area with an initial gradient of 5% (1 in 20).

**Quick Table of Maximum Height Difference and Minimum Lengths**

| Height Difference Achieved | Minimum Length of Access | Maximum Gradient | Minimum Radius |
|---|---|---|---|
| *From road to parking/ turning area* | *From road to parking/ turning area* | *At instantaneous point on route* | *Minimum centreline curve radius to be used if the access route is not straight* |
| m | m | % | m |
| 0.850 | 16.0* | 6.0 | 7.2 |
| 0.900 | 16.0* | 7.0 | 8.4 |
| 1.275 | 21.0* | 8.0 | 9.6 |
| 1.700 | 26.0* | 9.0 | 10.9 |
| 2.175 | 31.0* | 10.0 | 12.0 |
| 2.700 | 36.0* | 11.0 | 16.0 |
| 3.275 | 41.0* | 12.0 | 20.0 |
| 3.900 | 46.0* | 13.0** | 25.0 |
| 4.575 | 51.0 | 14.0** | 30.0 |
| 5.300 | 56.0 | 15.0** | 35.0 |
| 6.075 | 61.0 | 16.0** | 40.0 |
| 6.900 | 66.0 | 17.0** | 45.0 |
| 7.775 | 71.0 | 18.0** | 50.0 + |

** these access could be designed as driveways allowing a greater height difference/ steeper slope*
*** these are fairly steep gradients and may cause problems especially in poor weather*

## 4.6 Parking & Turning Areas

4.6.1 Within any site it is important that adequate provision is made for both parking and turning of vehicles as required.

4.6.2 The layout of any site should, at the outset, consider not only the layout, location and orientation of the house but also consider the location of the main access door and how the parking for the property will relate to it and any access steps and ramps required.

4.6.3 Where a turning area is required within the site this should be arranged to provide the easiest manoeuvres into and out of the parking spaces provided for the property and not just 'shoe horned' into what space is left.

4.6.4 In order that parking spaces and turning areas are safe and convenient to use they should be as flat as possible. Steeply sloping parking areas can cause problems with opening car doors and steep slopes across turning areas a make manoeuvring more difficult, especially in winter weather conditions.

4.6.5 The following criteria are recommended for parking and turning areas for domestic properties:-

- 2.5% maximum desirable gradient in both directions for general parking spaces.
- 1.5% maximum gradient in both directions for accessible (disabled) parking spaces.
- 5.0% maximum gradient in both directions for general parking spaces and turning areas.
- 1.0% minimum advisable gradient for surface water drainage run-off.

4.6.6 A standard turning space is an area at least 7.6 x 7.6 metres square. Alternatively there are a number of standard turning head designs that could be employed. A 1.5 metre clear verge or margin should be provided around any turning space or area adjacent to any wall, fence or other permanent object.

4.6.7 Parking spaces should be at least 2.5 metres wide by 5.0 metres long. The provision of wider spaces (2.9 metres) and longer (5.5 metres) is advised by the Council as they are more useable by modern cars and providing much better accessibility for access and egress. All parking spaces are required to have a clearance to any wall, fence, drop or pedestrian route of at least 0.5 metres.

# 5 DRAINAGE, STORM WATER AND FLOODING

## 5.1 Site Drainage Assessment

5.1.1 As part of your Planning Submission you must provide a description of how the site will be drained and where the water will go when it leaves the site.

5.1.2 This Site Drainage Assessment should also identify where the system could fail, and in the event of a failure, how the risk of flooding property (buildings, roads or non-agricultural ground) will be prevented. This may be by providing additional drainage features, or landscaping works designed to steer any floodwater flows away from the property at risk.

5.1.3 For more information on Site Drainage Assessments, drainage, storm water and flooding you should refer to the Shetland Local Development Plan and its Supplementary Guidance Documents. These are available on the Council web site at www.shetland.gov.uk.

5.1.4 In most cases it is highly advised that you engage a professional with suitable technical qualifications and experience to carry out the drainage assessment.

## 5.2 Road Drainage

5.2.1 Roadside drainage is primarily provided to protect the structure of the adjacent road.

5.2.2 To allow this drainage provision to carry out its primary function, without risk of compromise, you are not permitted to discharge site or development

drainage into it unless suitable calculations have been produced to show that the system has sufficient spare capacity to deal with any increase in flow rates caused by the development. Where a culvert is identified as being undersize then the developer may be required to replace and upgrade it.

5.2.3 Where an access crosses a roadside ditch a pipe with headwalls will need to be provided. The minimum size of this pipe will normally be 300mm diameter. This size may be increased depending on local flow conditions. Smaller pipes will not normally be accepted due to their increased susceptibility to blocking.

5.2.4 Depending on local conditions the ditch to be crossed may need to be deepened and re-graded to accommodate the required pipe diameter. Where the existing ditch is shallow and/ or close to the existing road it may need to be re-located to ensure that a suitable roadside verge width is maintained. Prospective developers need to ensure that they have access to adequate land to carry out any required alterations to the roadside ditch.

## 5.3 Attenuation

5.3.1 Water will drain from your roofs, accesses and hard standings quicker than it did from the undeveloped natural grass site. Therefore, a SUDs attenuation device should be used to even out the flows, back to the natural level.

5.3.2 The drainage on your site/ within your development should be designed to carry at least 10 year return period rainfall events and have enough attenuation volume for the extra peak run-off flows that will come from the

new areas of hard surfaces – roofs, decks, patios, footways, access roads and turning areas.

## 5.4 Check for Extreme Rainfall Events

5.4.1 During extreme rainfall events the volume of water running off the ground and hard surfaces may be more than the ditches, drains, culverts and SUDs features are able to carry. Water from farmers' fields can flow onto the road, culverts become choked, and roadside ditches overtop with the result that there can be significant water flows along the public road or over normally dry fields.

5.4.2 A failure or overflow of any physical drainage feature such as a burn, ditch or piped system should be assumed when considering the potential impact of an extreme rainfall event.

5.4.3 One of the primary considerations of your Site Drainage Assessment is to identify whether there would be any damage caused by such excess flows, and try to design your site to reduce the chance of any problems to your property, surrounding properties and any access roads.

## 5.5 Cut-off Drainage

5.5.1 Many house sites or developments have a ditch on their uphill side to stop water running onto the site. These cut-off ditches are often directed into the road drainage system.

5.5.2 While these ditches do not normally have a significant effect on drainage volumes and flow rates they can alter the drainage pattern of the area.

5.5.3 Where cut-off drainage is to be provided to protect a house or development site the Drainage Assessment should identify any impact on the drainage pattern of the area. Where additional areas will be drained to existing watercourses, ditches, cross-drains or culverts suitable calculations will be required to show that there is adequate spare capacity. The cost of upgrading any existing drainage infrastructure to meet new a new or additional demand may have to be met by the developer.

## 5.6 Future Maintenance of Drainage

5.6.1 The planned site drainage might do all that's needed when it's new, but you also have to consider how the drainage system will perform over time. A vital aspect of any sustainable design is that it can be easily maintained over a long period.

5.6.2 While your site may be drained solely by ditches, drains and soak ways within the site itself there may also be drainage features out with your site curtilage. Where your site drainage relies on features out with your site curtilage you need to ensure that you have a suitable maintenance access agreement in place with the landowner.

# 6 ADOPTABLE ROADS

6.1 While all developments are required to be served by a safe and convenient means of access there is no legal requirement for a development to be served by an adopted public road. The means of access within a scheme can be kept private; with the ongoing maintenance responsibility remaining with the individual householders and frontagers.

6.2 While non-adopted road schemes need only provide as much infrastructure as is needed for safe and convenient access to each property for both vehicles and pedestrians, they must still meet the wider requirements of the Council and Scottish Governments policies on development and place making. Information on these can be found in the Shetland Local Development Plan and its Supplementary Guidance Documents. These are available on the Council web site at www.shetland.gov.uk

6.3 Should there be any expectation or plan for an accesses within a new development to be adopted by the Council at any point in the future then the scheme must be built under Roads Construction Consent to a suitable standard.

6.4 For information on appropriate standards for adoptable roads please refer to the National Roads Development Guide.

# 7 YOUR LEGAL RESPONSIBILITIES

## 7.1 Consents

7.1.1 Obtaining Planning Permission for your new development is only one step in the legislative process and a number of additional or further permissions are normally required under different and separate legislation.

7.1.2 Any works operations carried out in or adjacent to a public road, including the verge or footway, requires specific consent to be obtained from the Roads Authority (Council Roads Service) and may only be undertaken by suitably qualified persons. The legal framework for these permits is the New Roads & Street Works Act 1991 and/ or the Roads (Scotland) Act 1984. The various consents (permits) are outlined in the sections below.

### Services Connections

Invariably you will require to make service connections to various utilities for your new development. Unless these connections and associated excavations are contained entirely within your site a permit will be required under S109 of the New Roads & Street Works Act 1991.

### Road Opening Permits

You require a road opening permit under S56 of the Roads (Scotland) Act 1984 if you make any excavations in the road, verge, or footpath to form a new access, install a drain or construct an outfall.

### Occupation of the Road

The requirements of this section are more likely to apply in an urban area, as in rural areas you will be expected to keep the public road clear of all obstructions.

The Roads (Scotland) Act 1984 requires that permits are obtained for any activity that occupies part of any road, footway, footpath or verge. Typical activities are:-

- To deposit a skip on the road (S85).
- To deposit building materials on the road, footway, or verge (S58).
- To erect scaffolding (S58).
- To enable a crane or mobile platform to work on the road (S58).

7.1.3 Where the road, verge, or footpath contains apparatus from suppliers such as telecom, water, and electricity (called statutory undertakers) these services must be protected.

7.1.4 The statutory undertakers require (by legislation) to be notified of any proposed excavation works via the Scottish Road Works Register.

7.1.5 As the Council is responsible for inputting details of proposed works to the Scottish Road Works Register you, or your contractor, must provide the necessary utilities plant information at the same time as you apply for a works permit.

7.1.6 Therefore, prior to submitting any permit application to the Council Roads Service, a developer must establish the location of apparatus (plant) belonging to public utility companies in the vicinity of their planned works operations. To do this you must contact the utility companies with a Plant Information Request. Contact details for the various utilities with plant in Shetland are listed in Appendix 2 along with the contact number for the "Dial-before-you-dig" service.

7.1.7 Statutory undertakers require a minimum of 10 days notice of the intended works start date. Therefore, you should request a permit from the Council Roads Service at least 14 working days in advance of your proposed start date so that the Council Roads Service can input the information to the Scottish Roadwork Register. In certain circumstances up to 3 months advance notice is required before any works can commence.

7.1.8 The Electricity and Telecoms companies usually employ their own contractors for the actual service cable installation works and will complete the required notices for this work directly. However, you (or your contractor) are normally responsible for obtaining the appropriate consents from the Council Roads

Service for any preparatory works such as trenches and openings for ducts for these services connections.

7.1.9 For Water and Sewerage connections all the works are normally carried out by your contractor and so you, or your contractor, will be responsible for obtaining the appropriate consents from the Council Roads Service and Scottish Water.

7.1.10 Work in or adjacent to the public road must be carried out by certificated contractors, whose employees have the necessary HAUC (Highway and Utilities Committee) certificates. The Council Roads Service provides a list of Approved Contractors holding the necessary qualifications on our website.

7.1.11 It is normally advisable for you to arrange for your contractor to apply for any required permits on your behalf from the Roads Authority (Council Roads Service) and pay the appropriate fees. However, there may be circumstances, depending on how you choose to manage the work, where you have taken on to do so. A separate document dealing specifically with Road Works Notices and Permits is available on the Council website at www.shetland.gov.uk and direct from the Council Roads Service. You are therefore recommended to refer to this document in addition to the summary guidance given in this section.

7.1.12 For Permits to undertake all of the above work, and for further advice, please contact the Council Roads Service.

## 7.2 Signing & Safety

7.2.1 Once you have obtained information from the Statutory Undertakers on the location of their apparatus, and have the appropriate permit(s) from the Roads Authority, your contractor will be able to proceed with the excavation of the road, footway or verge.

7.2.2 As the client, or client's agent, you have an obligation to ensure that the works are carried out in a safe manner, are correctly signed and appropriately guarded to ensure the safety of the workers on the site and members of the public passing the works.

7.2.3 Your attention is drawn to the Code of Practice "Safety at Street Works and Road Works" issued by the Scottish Government. This publication is available on line at www.dft.gov.uk

***Failure to comply with the Code of Practice may lead to criminal prosecution in addition to any civil proceedings.***

**APPENDIX No 1**

# Private Access Checklist PAC

**To be included with your Planning Application**

*This form should be completed by the applicant or their agent to help ensure that all of the information normally required in a well considered application for a single house or small housing developments (generally four houses or less) has been considered and included where relevant.*

| | *For office use only* |
|---|---|
| **Application Reference:** | |

| **DETAILS OF THE SITE** | | |
|---|---|---|
| | | ***Guidance Clause*** |
| **Has there been a previous application for this site?** | **YES / NO** | |
| **If YES please give application reference number:** | | |
| **Do you propose to construct a new private access point onto the public road?** | **YES / NO** | **3.1.1** |
| **Do you propose altering an existing private access point?** | **YES / NO** | **3.1.1** |
| **Do you propose sharing an existing private access point?** | **YES / NO** | **3.1.1** |
| **National grid reference for public road access point:** | **E**<br>**N** | |
| **How many properties will the access serve?** | | **1.1, 1.4, 1.5, 1.6** |

| VISIBILITY | | |
|---|---|---|
| | | *Guidance Clause* |
| **Is the private access point onto a Class A or B road?** | **YES / NO** | **3.1.3, 3.9.6** |
| **What speed limit applies to the public road at the access point?** | **mph** | |
| **What is the assessed traffic speed near the access?** | **mph** | **3.3.1, 3.3.3** |
| **How close is the access point to the nearest access or junction on the same side of the road?** | **metres** | **3.1.2** |
| **How close is the access point to the nearest access or junction on the opposite side of the road?** | **metres** | **3.1.2** |
| **What visibility distance can <u>currently</u> be achieved from the proposed/ existing access point LOOKING LEFT?** | **metres** | **3.2.5 & 3.2.6** |
| **What visibility distance can <u>currently</u> be achieved from the proposed/ existing access point LOOKING RIGHT?** | **metres** | **3.2.5 & 3.2.6** |
| **Are the required visibility distances <u>currently</u> met?** | **YES / NO** | **3.2.7, 3.4.3** |
| **Is the area of land for the required visibility splays in the developer's ownership/ control or within the road boundary?** | **YES / NO** | **3.6.1** |
| **Does the access cross a footway or footpath?** | **YES / NO** | **3.9.1** |
| **If YES is the required pedestrian visibility splay provided?** | **YES / NO** | **3.9.4** |

| PARKING & TURNING | | |
|---|---|---|
| | | *Guidance Clause* |
| **How many bedrooms are within the proposed property?** | | **3.7.8** |
| **How many parking spaces are to be provided within the curtilage of the site (not including garages)?** | | **3.7.10** |
| **Are service vehicles expected to enter the site?** | **YES / NO** | **3.7.4** |
| **Is sufficient turning space provided within the site?** | **YES / NO** | **3.7.7** |
| **Do you propose to have a direct frontage access off the public road for parking?** | **YES / NO** | **3.7.2** |
| **Have you considered specific access for fuel deliveries or septic tank cleaning?** | **YES/ NO/ NA** | **3.7.6** |

| ACCESS GRADIENTS | | *Guidance Clause* |
|---|---|---|
| Is a level platform provided at the road edge approach (maximum grade of 5% for a minimum of 6.0 metres)? | YES / NO | 3.9.5, 4.3.4, 4.5.6 |
| What is the maximum gradient on the access? | % | 4.3.3 |
| What is the length of the access? | metres | 4.1.2 |
| Have adequate vertical curves been used between changes in gradient on the access? | YES / NO / NA | 4.5.4 |
| Is the maximum gradient within any parking and turning areas no more than 5%? | YES / NO | 4.6.5 |

| DRAINAGE | | *Guidance Clause* |
|---|---|---|
| Has a Drainage Assessment for the proposed site been carried out, and has it been submitted as part of your planning application? | YES / NO | 5.1.2 |
| Is the site to be protected by an uphill cut-off ditch? | YES / NO | 5.5.1 |
| If YES does this flow into any roadside drainage or road culvert? | YES / NO | 5.5.3 |
| If you propose to construct or amend a private access point onto the public road does it cross any roadside drainage? | YES / NO / NA | 5.2.3, 5.2.4 |
| Does your site drainage enter into any roadside drainage or road culvert? | YES / NO / NA | 5.2.2 |
| If YES are the flows suitably attenuated? | YES / NO | 5.2.2, 5.3.2 |
| Have you checked the sizes of any roadside drainage pipes or road culverts for capacity? | YES / NO / NA | 5.2.2, 5.5.3 |
| Do any existing pipes or culverts have to be upgraded? | YES / NO / NA | 5.2.2, 5.5.3 |
| Do you have legal access to maintain any drainage infrastructure put in place as part of this development? | YES/ NO / NA | 5.6.2 |

## ROAD PERMITS

| Do you intend on carrying out any of the following operations as part of your development? | | *Guidance Clause* 7.1.2 |
|---|---|---|
| Form an excavation in the verge, footway or road: | YES / NO | |
| Make a water or sewerage connection out with your site boundary: | YES / NO | |
| Excavate for service connections to electricity, telephone, or district heating scheme: | YES / NO | |
| Lay a septic tank or drainage outfall across under the public road or its verge: | YES / NO | |
| Erect scaffolding, store materials or skips, or otherwise occupy part of any road, footway or verge: | YES / NO | |

***If the answer to <u>any</u> of the above is YES then you must apply directly to the Roads Service for appropriate consent.***

## DETAILS OF THE APPLICANT or AGENT

| | |
|---|---|
| **Name:** | |
| **Address:** | |
| **Postcode:** | |
| **E-Mail:** | |

**APPENDIX No 2**

## LIST OF UTILITY COMPANIES

**Scottish and Southern Energy**
Inveralmond House, 200 Dunkeld Road, Perth

**BT Openreach**
PP3WW18, Telecom House, Trinity Street, Hanley, Stoke-on-Trent, ST1 5ND
www.openreach.co.uk

**Cable & Wireless**
PO Box 290, The Hub, 500 Park Avenue, Aztec West, Bloomsbury, Bristol
www.cw.com

**Scottish Water Plant Protection**
Property Searches, Bullion House, Invergowrie, Dundee, DD2 5BB

**Shetland Heat, Energy and Power**
Marina Business Park, Gremista, Lerwick

**Dial-before-you-dig**
dialbeforeyoudig@susiephone.co.uk
08000 231 251

**Shetland Islands Council**

Roads Service
Gremista Depot
Gremista
Lerwick ZE1 0PX

Phone: 01595 744866
Fax: 01595 744869
E-mail: roads@shetland.gov.uk