



# Cambridgeshire Highways Development Management General Principles for Development

December 2022

Section	Page		Page
<b>1. Introduction</b>	<b>3</b>		
1.1 Background	3		
1.2 The Planning Application Process	3		
1.3 Pre-Application Advice	4		
<b>2. Design Principles</b>	<b>6</b>		
2.1 Designing for All	7		
2.2 Access & Junction Visibility Assessment	7		
2.3 Major Junction & Highway Link Design	8		
2.4 Road Safety Audit	8		
2.5 Adoption Principles	8		
2.6 Highway Drainage	9		
2.7 Generic Adoptable Street Standards	9		
2.8 Pedestrian, Cycle & Equestrian Infrastructure	10		
2.9 Junction Radius Kerbs	11		
2.10 Junction Spacing (Residential Streets)	11		
2.11 Turning Areas	11		
2.12 Shared Private Drives & Private Accesses	12		
2.13 Sitting of Gates	12		
2.14 Tactile Paving	12		
2.15 Access Gradient	12		
2.16 Mixed Agricultural / Residential Accesses	12		
2.17 Traffic Regulation Orders & Public Consultation	13		
		2.18 Ditches & Watercourses	13
		2.19 Construction Traffic Management Plans	13
		2.20 Highway Structures	13
		2.21 Implementation of Highway Works following Planning Permission	13
		2.22 Adoption Sequencing	14
		2.23 Private Verges & Street Trees	14
		<b>3. Extent of the Public Highway &amp; Rights of Way</b>	<b>15</b>
		3.1 Highway Boundary	16
		3.2 Public Rights of Way	16
		<b>4. Examples: Cross-Sections</b>	<b>17</b>
		<b>5. Examples: Typical Layouts</b>	<b>20</b>
		Appendix A: Key Design Criteria	37
		Appendix B: Side Slopes, Ditches & Watercourse	39
		Appendix C: Useful Links	41

## 1.1 Background

i. These guidelines have been produced by Cambridgeshire County Council (CCC) as Local Highway Authority (LHA), to set out requirements to applicants, developers, their agents and local authority officers in relation to new highway, access and adoptable infrastructure across Cambridgeshire.

ii. The document should be read in conjunction with guidance issued by the Transport Assessment Team (TA) in relation to major developments or development requiring supporting information in the form of either a Transport Statement (TS), or Transport Assessment (TA). Further information in respect of the thresholds and requirements for such technical assessment can be viewed at the following link:

<https://www.cambridgeshire.gov.uk/business/planning-and-development/developingnew-Communities>

iii. Whilst setting out the principles and requirements of the LHA in respect of new or altered development access proposals, this document is neither prescriptive nor exhaustive. The document is fluid, and will evolve in conjunction with best practice and local & national policy. Each proposal will be considered on its own merits in relation to the nature of the use, the history of the site, the street environment from which access is gained and any other material considerations.

## 1.2 The Planning Application Process

i. To secure consent for a development, the developer must gain planning approval from the Local Planning Authority (LPA) - the relevant District/ City Council, as set out later in this document.

ii. The LPA case officer can recommend to refuse planning permission if the development, and indeed its transport impacts are considered to be contrary to the Local Plan, National Planning Policy Framework (NPPF), or otherwise contrary to good strategic planning.

iii. The County Council is the Local Highway Authority, and a statutory consultee as part of the planning application process. The LHA includes the Transport Assessment (TA) and Highway Development Management (HDM) teams, the roles of which are outlined in the table below:

iv. The LHA will review the proposal within the planning application consultation period, consulting internal departments (highway maintenance, infrastructure teams, public transport, cycling, strategy etc.) and make a recommendation to the LPA case officer dealing with the application. It is for the LPA to consider such comments, and make a balanced planning decision based upon the information available.

v. **CCC recommends that access is not treated as a Reserved Matter** but is determined as part of any Outline or Full planning application stage. This enables the development implications to be properly assessed, and also ensures that access can be secured to the site that is safe and meets all the necessary standards. In addition, such an approach provides the developer with a greater degree of certainty of delivery moving forward to the Reserved Matter and implementation stage.

vi. If the planning submission has deficits, the LHA may request additional information, or amendments to the proposal. In certain circumstances the LHA may place a holding objection, until such a time as the Authority is satisfied that the proposal will not compromise highway safety to an unacceptable degree.

vii. Note: The County Council officer comments will be provided on an impartial basis, based upon the technical and engineering merits of the proposal, with due regard to the requirements of the NPPF – to ensure that:

- Para 110 (b) - safe and suitable access to the site can be achieved for all users; and
- Para 110 (d) - any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

- Para 111 - Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

viii. It should be noted that the County Council's officer comments and requirements may change within the planning process and this will be confirmed in response to any planning application, or other consultation.

ix. Once the LHA is satisfied with the proposal, a consultation letter will be issued to the planning case officer setting out the recommendation ('objection' / 'no objection') and a summary of any mitigation that should be secured, either by Condition / Section 106.

x. The LHA will normally not be party to a Section 106 Agreement which obligates CCC to deliver highway mitigation on behalf of the developer in exchange for a fixed sum. Mitigation is to be delivered directly by the developer.

xi. In the preparation of planning submissions scheme layouts and engineering submissions, a competent designer should be familiar with the principles and practices contained within the following documents and advice notes:

- DfT & IHT Manual for Streets 1 & 2 (MfS);
- CCC Housing Estate Road Construction Specification (HERCS);

viii. It should be noted that the County Council's officer comments and requirements may change within the planning process and this will be confirmed in response to any planning application, or other consultation.

ix. Once the LHA is satisfied with the proposal, a consultation letter will be issued to the planning case officer setting out the recommendation ('objection' / 'no objection') and a summary of any mitigation that should be secured, either by Condition / Section 106.

x. The LHA will normally not be party to a Section 106 Agreement which obligates CCC to deliver highway mitigation on behalf of the developer in exchange for a fixed sum. Mitigation is to be delivered directly by the developer.

xi. In the preparation of planning submissions scheme layouts and engineering submissions, a competent designer should be familiar with the principles and practices contained within the following documents and advice notes:

- DfT & IHT Manual for Streets 1 & 2 (MfS);
- CCC Housing Estate Road Construction Specification (HERCS);
- Department for Transport - Traffic Advisory Leaflets and advisory notes;
- Department for Transport - Design Manual for Roads and Bridges;
- Traffic Signs Regulations and General Directions / Traffic Signs Manual;
- Relevant legislation (Highways Act 1980 / Road Traffic Act 1988).

### 1.3 Pre-Application Advice

i. Prospective applicants may obtain pre-application transport advice from the TA and HDM Teams. The County Council operates a system of pre-application charging for such advice. Details can be found at the link below:

<https://www.cambridgeshire.gov.uk/business/planning-anddevelopment/developing-new-communities/>

ii. All pre-application advice is provided on a 'without prejudice' basis, based on current information. If new information is released or becomes apparent through the application or consultation process, the County Council's officer comments and requirements may change and this will be confirmed in response to any subsequent planning application, or other consultation.

## Team Roles

Transport Assessment Team (TA)	Highways Development Management (HDM)
Review TA, TS and Travel Plans, assessing the transport impact of the proposed development in terms of effect on the capacity of the surrounding highway network and providing transport planning advice	Review development planning applications. Negotiate and agree highway improvement proposals as part of Section 278 of the Highways Act 1980 (inclusive of site access junction design and visibility splays)
Review and agree baseline traffic survey data submitted	Review Construction Traffic Management Plan (CTMP) documents submitted
Review and agree Trip Generation figures, Trip Distribution and Assignment methodology, and baseline and future Traffic Flow diagrams	Review and agree development related Traffic Regulation Orders
Review and agree Transport Modelling data and outputs	Review and agree parking restrictions and enforcements on the highway
Negotiate and secure transport mitigation by planning condition i.e. Travel Plan documents	Negotiate and agree new road proposals for adoption as part of Section 38 of the Highways Act 1980
Negotiate and agree highway mitigation proposals as part of Section 278 of the Highways Act 1980	Provide advice concerning; Reserved Matters, detailed highway design
Negotiate and secure S106 funding for mitigation measures secured as part of the proposals	Review and agree servicing and delivery details in addition to swept path analysis



Cambridgeshire  
County Council

## 2. Design Principles



## 2.1 Designing for All

i. Design must follow a hierarchy whereby active travel is prioritised and encouraged, accepting that balance is needed so that new residential roads function for all modes and day-to-day needs (e.g., refuse collection).

1. Pedestrians
2. Cyclists
3. Public Transport
4. Private Motor Vehicle

ii. When designing new or modified highway infrastructure, the following principles must be adhered to for users in order of the above hierarchy:

- Safe
- Direct
- Comfortable
- Coherent
- Attractive
- Adaptable

iii. Infrastructure must be inclusive in nature and accessible, and should generally align with Department for Transport's Inclusive Mobility Guidance.

<https://www.gov.uk/government/publications/inclusive-mobility-making-transport-accessible-for-passengers-and-pedestrians>

## 2.2 Access & Junction Visibility Assessment

i. Vehicle to vehicle inter-visibility splay 'Y' distances will be sought in accordance with the existing speed limit of the respective street.

ii. Visibility splay 'Y' distances (and potentially 'X' distances) may be reduced in conjunction with the submission of empirical speed survey data. Interpolation of speed survey results is acceptable in accordance with MfS 1 & 2 assessment principles.

iii. Speed surveys shall comply with the Design Manual for Roads and Bridges (DMRB) document CA185 – 'Vehicle Speed Measurement'.

iv. MfS visibility principles will be applied to residential streets where empirical data demonstrates 85<sup>th</sup> percentile vehicle speeds of up to 37mph (and where less than 10% HGV's are evidenced).

v. DMRB visibility principles will be applied to streets where 85<sup>th</sup> percentile vehicle speed is 37mph and above.

vi. A minor road 'X' distance of 2.4m is generally applied; a 4.5m minor road 'X' distance may be required on a case by case basis, at major junctions and on the primary route network.

vii. A minor road 'X' distance of 2.0m is not generally acceptable.

viii. Visibility splays should be measured to nearside carriageway edge; an offset from the channel may be considered on an evidence-based site-specific basis, but not on the nearside carriageway where visibility is less than 25m (in the interests of cycle safety).

ix. Vehicle to pedestrian inter-visibility splays of 2.0m x 2.0m will be sought on all new private drive and shared private access at the back of the footway or highway verge as may be appropriate.

x. Visibility splays are not generally sought on single dwelling accesses in built-up areas subject to a speed limit of 30mph, with due regard to local street conditions.

xi. Where part of the highway carriageway falls outside the vehicle to vehicle inter-visibility splay on the nearside due to the horizontal alignment of the road, tangential splays to the carriageway edge shall be provided.

xii. 2.4m x 25m visibility splays will be sought from an access point to the rear of any cycleway.

See Figures 3, 4 & 5 for further guidance.

### 2.3 Major Junction & Highway Link Design

i. Shall accord with the principles of the Department for Transport - Design Manual for Roads and Bridges suite of documents in relation to major junctions i.e. ghost island RTF, roundabouts, signalised junctions etc, or strategic links between such junctions.

ii. Guidance on signal design within Cambridgeshire can be obtained from:

[tmbusinesssupport@cambridgeshire.gov.uk](mailto:tmbusinesssupport@cambridgeshire.gov.uk)

### 2.4 Road Safety Audit

i. Stage 1 Road Safety Audits are required at planning stage for all new major junction designs, new controlled pedestrian / cycle crossings, and proposals which result in changes to the vertical or horizontal alignment of the existing highway. RSAs may be required in new housing estate roads, dependent on complexity of the site layout.

ii. Stage 2, 3 (& 4 as required) RSA will be secured as part of any agreement to undertake works within the public highway; the audits will be undertaken at detailed design stage and at appropriate milestones through the implementation process.

iii. Guidance of the Road Safety Audit process can be requested from the Engineer or viewed at the following link:

<https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/roads-and-pathways/road-safety>

### 2.5 Adoption Principles

i. Not all new estate roads are adoptable, or indeed are appropriate for adoption. Early consultation with the LHA is advised. However, in the broader public interest and in accordance with National Government Guidance, the LHA will recommend the application of Conditions on any planning permission requiring that details of the future maintenance of streets are to be submitted for approval by the LPA.

ii. Construction requirement for adoptable estate roads and alterations to existing streets are provided in the Housing Estate Road Construction Specification (HERCS), located via the following link:

<https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/roadsand-pathways/highways-development>

iii. The LHA will generally apply the principles of street design contained within Manual for Streets 1 and 2; the key principles for street adoption in Cambridgeshire and exceptions are outlined below:

iv. The LHA will not adopt estate roads serving new commercial premises / industrial estates (by Committee resolution) unless they perform a wider public function e.g., a link between two existing public highways / a bus route.

v. The LHA will not adopt streets deemed to have insufficient public utility, or broader public areas beyond those deemed necessary for the safe passage of the travelling public.

vi. The LHA will not adopt street furniture or bus shelters, details of which must be specifically agreed at planning stage with the respective District, Parish or Town Council, together with any necessary commuted sums as the maintaining body may require. However, the LHA must agree the placement of bus stops and shelters within the highway (*see Figures 8, 9 & 10*).

vii. The long-term maintenance of new public infrastructure beyond the adoptable highway parameters must be considered at an early stage by the developer in accordance with the provisions of the National Design Guide.

viii. Grass verges or landscaping will not be accepted within the adoptable highway with the exception of grassed visibility splays, where the preference is for a paved visibility margin.

xii. The LHA will adopt strategic street trees provided that adequate area is provided for the tree to thrive, without recourse to complex sub-surface interventions, and respecting the sub-surface highway engineering (kerb beam/ haunch/ sub-base etc).

xiii. All adoptable estate roads must be designed in camber, unless expressly agreed with the Engineer.

xiv. Commuted sums will be required for non-standard materials, engineering interventions or non-essential street features in accordance with the adopted County Council Commuted Sum Policy.



xv. The County Council will not accept the installation of private non-passive apparatus within the adoptable highway, without the prior written consent of the Engineer. Utilities drawings will be required to be submitted with all engineering submissions.

xvi. Pre-commencement and post implementation surveys of the existing approach road network may be required, with reparations undertaken at the developer's expense in relation to any deterioration/damage which may be apparent through the period of construction. Site specific issues should be discussed and agreed with the Engineer.

xvii. EV charging points on new developments: the developer should carefully consider the siting of EV charging from the outset of the development. Such charging points as may be required to meet OZEV requirements are to be provided on plot or in designated areas, clear of the adoptable public highway. As noted in xv. above, the County Council does not permit private non-passive apparatus within the adoptable highway.

xviii. Where a carriageway is raised above the surrounding ground level on a bank equal to or greater than 1.35m in height, the limit of adoption shall include the earthworks. Where the height is under 1.35m, adoption will not include the earthworks. Side slopes steeper than 1:3 must be agreed with the Engineer.

## 2.6 Highway Drainage

i. The LHA does not adopt SuDS features with the exception of soakaways. Adoptable highway surface water systems may not discharge directly to any private SuDS system. Accordingly, the intervening piped system must be adopted by the local drainage authority (or other statutory undertaker under the New Appointment Variation process) to enable the adoption of the streets to be undertaken.

ii. Private surface water may not be discharged to the adoptable highway. Where sites are designed such that hard surfaces fall towards the highway, permeable paving will not be regarded as a sufficient medium for surface water management, and further intervention will be required e.g., ACO drain.

iii. Adoptable shared surface streets may not be utilised as a conduit for surface water as a flood exceedance route on sites liable to flooding.

iv. Infiltration devices shall not be laid within 5m on the nearside carriageway or footway edge, whichever is closest; irrespective of their placement within private land. Where chalk ground conditions exist, the minimum offset shall increase to 10m.

v. No sewerage / drainage apparatus will be permitted in the highway unless adopted by a Public Utility. As such, prior to the signing of the S38 Agreement, a signed S104 Agreement with the respective sewerage authority must be in place.

## 2.7 Generic Adoptable Street Standards

i. Distributor Road/ Bus Routes: 6.1 – 7.3m carriageway width with AutoTrack and any necessary widening on bends/ at junctions.

ii. Major Access Road: 5.5m carriageway width, which may serve 100 – 300 units.

iii. Access Road: 5.0m carriageway width which may serve up to 100 dwellings (Note: 4.8m carriageway is not acceptable for adoptable streets).

iv. Shared surface streets: 6.0m width block paved carriageway with 0.5m paved maintenance strips and no surface delineation; adoptable shared surface streets may serve a maximum of 12 dwellings culs-de-sac. This limitation reflects the LHA's experience of the function and safety of shared space streets, and is considered to accord with government advice, applying shared space principles to "residential streets with very low levels of traffic, such as appropriately designed mews and cul-de-sacs". This approach will be reviewed in the context future national guidance.

v. Shared surface streets: a ramp and footway transition is always required at the junction of a shared surface street with a conventional street (see HERCS).

vi. 2 x points of access, one comprising an emergency link will be sought for over 100 dwellings; over 200 dwellings, two full points of access should be provided. In circumstances where 2 x points of access cannot be achieved, the views of the emergency services should be sought.

vii. Unless otherwise agreed with the Engineer, all adoptable streets shall have a design speed of 20mph and shall incorporate measures to regulate vehicle speeds accordingly to the benefit of both future residents and all users of the highway.

viii. Developers will be required to design, promote, and implement via formal Traffic Regulation Order a 20mph speed restriction across the development prior to the adoption of the streets as public highway (in conjunction with the County Council Policy and Regulation Team). 20mph zones rather than limits should be pursued where possible.

ix. Speed cameras or permanent speed indicator devices are not an acceptable means of controlling vehicle speeds on new highway schemes. There should be traffic calming features throughout the 20mph zone, such that no part of a road is more than 50m from a traffic calming feature, i.e. each feature no more than 80m apart (does not apply to a cul-de-sac less than 80m long), the nature of the traffic calming feature is to be determined by the designer; or a horizontal bend (vehicles having to change direction by at least 70 degrees within a distance of 32m), with complimentary road markings/ repeater signs as appropriate.

x. Streets without 20mph restrictions, or streets with a higher function (i.e. local bypasses/ major distributor roads) will be expected to provide a high standard segregated non-motorised user facilities, with due regard to the overall function and nature of the street.

xi. Turning head and link road AutoTrack is required for City/ District Council refuse freighter. The developer should contact the relevant refuse department within the District/ City Councils to ascertain the size of the design vehicle.

xii. A turning head is required within 20m of the end of any estate road, or in advance of the commencement of a shared surface street within a development.

xiii. A maximum extension of any turning head spur is 20m measured from the approach road centreline.

xiv. Street Lighting will be required in accordance with the County Council specifications. Whilst the detailed design is to be determined post planning submission, the designer should consider column locations, particularly in respect of proposals for street trees.

xv. Street Lighting Design: the developers may use the County Council term contractor Balfour Beatty Living Places for development designs etc, however, such an engagement will be a private commercial decision, and the expressed approval of the County Council Street Lighting Team will still be required.

xvi. Sign, bollards and other devices should be located a minimum of 450mm from edge of carriageway; electrical installations minimum 600mm, subject to technical design and assessment.

## 2.8 Pedestrian, Cycle & Equestrian Infrastructure

i. Footways should be 2.0m wide; a reduction to a minimum of 1.5m will be considered at width constraints over a limited length (site specific); reduction in footway width may be agreed on a site-by-site basis.

ii. Generally, new cycleway provision shall accord with the requirements of LTN 1/20 – ‘Cycle Infrastructure Design’.

iii. Major new development dedicated bidirectional cycleways: shall be 3.0m wide - red surfacing should normally be installed on dedicated cycleways; site specific requirements shall be agreed with the Engineer.

iv. Shared use footways/ cycleways: minimum 2.5m wide (black surfacing) adjacent to existing highways but 3.0, or greater, wherever possible or on new estate roads.

v. Cycleways and footways adjacent high-speed roads shall be separated from the carriageway by a paved and delineated safety margin.

vi. Consideration should be given to provision for equestrians, with due regard to the scale, nature and location of the development. This may include works to Bridleways and Byways which must be discussed with CCC’s Public Rights of Way Team (Section 3.2).

## 2.9 Junction Radius Kerbs

i. Junction radius kerbs shall be related to the land use proposed / the largest vehicle likely to access the site on a regular basis, the nature of the highway from which access is gained and the width of the access within the site. Generically, the following shall apply:

- 6.0m radius kerbs shall be provided within built up areas (residential / commercial / office with primary domestic vehicle use).
- 6.0m/ 8.0m within built up areas off major roads (A / B classified), with due regard to the nature of the development.
- 10m in rural areas or roads with speed limits of 40mph and above.
- 15m industrial / commercial – considering the need for ingress / egress corner tapers (DMRB – document CD123).

ii. Consideration shall be given to pedestrian / cycle priority where any new access crosses existing or proposed pedestrian or cycle infrastructure (*see Figure 15*).

iii. AutoTrack of access and junction arrangements may be required.

iv. Radius kerbs are not generally to be provided at shared private drive junctions with the carriageway.

## 2.10 Junction Spacing (Residential Streets)

i. The requirements of DMRB document CD123 are applied in relation to major junction infrastructure, and the advice of the Engineer should be sought in this respect.

ii. In the case of residential streets, the appropriate stagger between junctions on the same side of the road will equal the Stopping Sight Distance (MfS) commensurate with the road's design speed. In most residential streets, this will equate to 25m.

iii. Where junctions are on opposing sides of a residential street, the same spacing rule applies although reductions up to half of the SSD can be agreed with the Engineer on a site-by-site basis, subject to provision of acceptable visibility splays and vehicle tracking.

iv. Side roads joining Classified Roads, Distributor Roads or Bus Roads should have no direct accesses within 20m of the junction with the major road.

v. Crossroads are to be avoided on the existing public highway but may be considered on a bespoke adoptable street design with measures to manage approach speeds and the potential for vehicle manoeuvring conflict (*see Figure 16*).

## 2.11 Turning Areas

i. Turning areas are not generally sought for single dwelling accesses to 30mph streets. Exceptions may apply on a case-by-case basis i.e. dwellings fronting cycle ways / or near junctions and bends.

ii. Independently workable turning facilities will be sought for multiple dwellings served from shared private drives in all scenarios.

iii. Turning areas are always sought for adoptable estate roads (see Generic Adoptable Street Standards) and private commercial proposals relative to the maximum length vehicle anticipated.

iv. The workability of turning areas must be demonstrated by AutoTrack. The body must not overhang any third-party land, footway or cycle infrastructure. The wheelbase must stay within the carriageway. Some examples of turning areas are shown in Figures 6 & 7. While these have been sized around vehicle tracking, these are common examples only and not an exhaustive list.

## 2.12 Shared Private Drives & Private Accesses

- i. Shared private drives to residential developments should generally serve around 5 dwellings.
- ii. Shared private drive width: 5.0m wide for 8m from the highway boundary (see Figure 3).
- iii. Internal width: minimum 3.7m (Part B5 Building Regulations), 4.1m desirable, subject to layout.
- iv. Shared turning area is required for a fire tender (Part B5 Building Regulations) / or a small delivery vehicle where fire service access is not required.
- v. Shared private drives and private accesses shall be hard surfaced and drained away from the carriageway for the first 5.0m from the carriageway edge, or the highway boundary, whichever is the greater distance.
- vi. Surface water from private roads / driveways areas must not discharge onto the public highway, and appropriate intervention must be provided.
- vii. Refuse collection points are required to be provided clear of the highway and driveway.

## 2.13 Sitting of Gates

- i. Domestic accesses: gates should set a minimum of 5m from the carriageway edge, and a minimum of 5m from the back of any cycleway or footways where significant pedestrian / cycle flows are evident.
- ii. Commercial development: the gate set-back distance from the highway should reflect the length of the largest vehicle expected to visit the site.
- iii. Private accesses serving multiple dwellings shall be un gated to maintain unfettered access to shared turning and servicing provision for residents and visitors.
- iv. Gates shall be arranged such that they do not open over the public highway, or obstruct any vehicle entering the site or using on-site turning facilities.

## 2.14 Tactile Paving

- i. Tactile paving is required on new Distributor / Bus roads or any other road with a design speed of 30mph or greater; or on lower speed roads if large vehicle traffic volumes are anticipated.
- ii. Tactile paving at site accesses to the County road network is generally required except where there is no existing tactile paving in the surrounding areas.
- iii. All cycle and shared use infrastructure requires appropriate tactile paving.

## 2.15 Access Gradient

- i. Private driveways for single dwellings may be no steeper than 1:12 to avoid vehicle grounds (see below). Shared private drives cannot exceed 1:20.



- ii. Driveways/ shared private drives: 1:40 towards the carriageway edge and a maximum of 1:20 internally away from the back edge of the proposed adopted public highway for a minimum length of 5m.
- iii. New road junctions: Between 1:20 and 1:150 from the carriageway edge from the back edge of the proposed adopted public highway. Gradients of between 1:20 and 1:40 shall have a minimum length of 5m and a maximum length of 20m into the development.

## 2.16 Mixed Agricultural / Residential Accesses

- i. Access width minimum of 6m for a length of 20m from the existing carriageway edge, hard surfaced and drained for the first 10m length.
- ii. Junction radius kerbs of 10m shall be provided.

## 2.17 Traffic Regulation Orders & Public Consultation

i. Street features and changes to existing infrastructure, not limited to but including traffic calming features / changes of alignment, speed limit reduction, new controlled crossing, changes to parking restrictions upon which any development scheme implementation is reliant should be subject to appropriate public consultation prior to determination of the respective planning application.

ii. Alternatively, the LPA may determine to grant permission subject to a negative Grampian condition preventing commencement of development until the appropriate statutory processes have been undertaken.

iii. Where the necessary consultation processes lie outside of the provision of the Town and Country Planning Act, the success of such processes cannot be guaranteed, and the successful implementation of the development may be at risk. Accordingly, early commencement of the associated processes is strongly recommended to ensure that any related development is deliverable.

iv. Further information should be sought from the Engineer and CCC Policy and Regulation Team: [Policy.andregulation@cambridgeshire.gov.uk](mailto:Policy.andregulation@cambridgeshire.gov.uk)

## 2.18 Ditches & Watercourses

i. Where an access crosses over or otherwise impacts upon ditches or watercourses, including discharge of surface water, consent is required from the appropriate Flood Risk Management Authority (LLFA, IDB etc.), in addition to any impacted freehold owner. Further information can be obtained from the following link:

<https://www.cambridgeshire.gov.uk/business/planning-and-development/flood-and-water/watercourse-management>

ii. Where an access passes over an ditch in need of culverting, the culvert headwall shall be located at least 2m away from the nearside carriageway or footway edge, whichever is closer.

iii. A three rail timber post fence shall be provided to prevent against fall risks where a footway or cycle track is located within close proximity of a significant ditch or watercourse; subject to agreement.

## 2.19 Construction Traffic Management Plans

i. CTMP including routing agreements / limited hours of operation etc, will be sought as a pre-commencement condition on all major developments and other sites where a conflict may be perceived i.e. where a site is near a school or where local street constraints exist.

ii. Guidance on the preparation of CTMP's is available from the Engineer upon request.

## 2.20 Highway Structures

i. New structures within the highway require the consent of the LHA, the assessment of which will incur additional charges for technical approvals will apply. To discuss any requirements please contact:

[highways@cambridgeshire.gov.uk](mailto:highways@cambridgeshire.gov.uk)

## 2.21 Implementation of Highway Works following Planning Permission

i. The expressed consent of the LHA will be required before any works can be undertaken within the public highway.

ii. Such works may be secured by S184, S278 Agreement (Major Works), Short Form 278 Agreement (Minor works excluding those necessitating Road Safety Audit or land dedication), or S38 Agreement.

iii. It should be noted that the S278 process is not a public consultation, but a mechanism to implement infrastructure approved / secured through the planning application / public consultation process.

iv. Further information is available via the following link:

<https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/roads-and-pathways/highways-development>

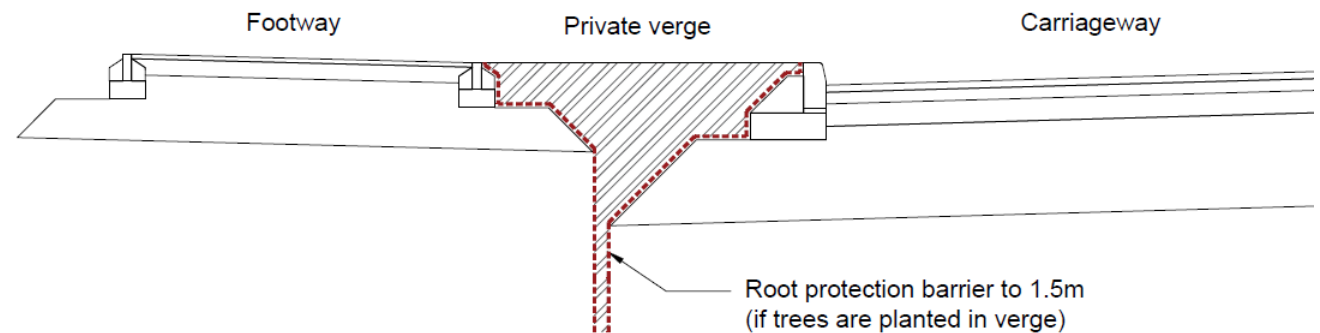
## 2.22 Adoption Sequencing

- i. Adoption of residential streets will not take place until all construction traffic which may impact upon the highway has completed. This is to avoid excessive wear and tear by construction traffic, with the associated implications for public finances.
- ii. In the intervening time until the development is complete, the developer is responsible for the upkeep of streets. It is the developers responsibility to ensure the streets are kept in a condition whereby they can be safely used by residents and visitors.
- iii. Once the construction is complete, the developer will continue to be responsible for the maintenance of the private roads for a period of no less than 12-months.
- iv. Adoption cannot take place until storm and foul sewers are first adopted by an appropriate statutory undertaker.
- v. Should any third party wish to carry out works which impact the private roads such as public utilities, they will need to secure permission from the developer. Should a resident of the development wish to carry out works, such as alter their access, they will also need developer consent, but the developer should be mindful that this may have an impact on the adoptability of the street.
- vi. A street cannot be adopted unless or until it links to the adopted highway network.

## 2.23 Private Verges & Street Trees

- i. Street trees may be adopted by the LHA. However, the preference is for trees in private verges to be adopted by the management company, such that a comprehensive landscape management and maintenance regime is established for the respective site.
- ii. No fruit tree may be planted within 5m of adoptable highway to avoid slip hazards when fruit falls.
- iii. Any highway tree must be sourced within the UK or else suitably quarantined on arrival to avoid the spread of invasive viruses, fungi etc.

- iv. Street trees must be in designed tree pits, to CCC specification, and not in a linear length of verge.
- v. Where soft verge is placed between a footway and carriageway (or cycle track), it will need to in most cases be privately maintained. If this area forms an important part of the landscaping strategy, consideration should be given to sub-grade structures and impacts this may have on vegetation growth (see below) to give the tree the opportunity to thrive and survive.





Cambridgeshire  
County Council

### **3. Extent of the Public Highway & Public Rights of Way**



### 3.1 Highway Boundary

i. Any developer seeking to make improvements within the highway should seek highway extent information from CCC's Asset Information Searches Team and overlay such information on their submission drawings. Further information can be found at the link below:

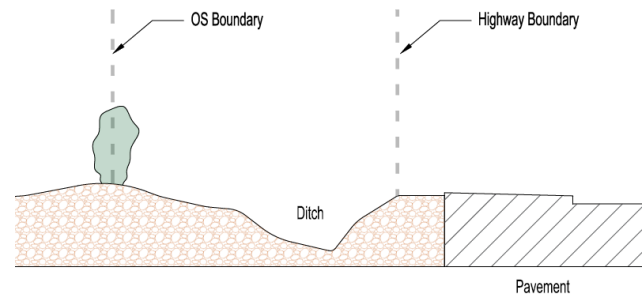
<https://www.cambridgeshire.gov.uk/business/highway-searches>

ii. Developers must procure a copy of the verified highway boundary rather than an extract from the highway boundary database.

iii. Highway search result provided are a depiction of the highway extent that has been investigated using the highway records available to the County Council. This research will be interpreted and displayed against current Ordnance Survey (OS) map data as accurately as possible. It is possible that the OS mapping for the area searched does not show features that typically form part of the highway boundary, such as (but not limited to) ditches, hedges, fences or embankments.

Therefore, please note that owing to the tolerance of accuracy that must be applied to OS maps, the highway boundary 'on the ground' may not be in exactly the same position as the boundary features displayed by OS. If you require a site visit to determine the physical highway extent please contact [searches@cambridgeshire.gov.uk](mailto:searches@cambridgeshire.gov.uk). This service is provided on a cost-recoverable basis in accordance with our Schedule of Charges.

iv. Ditches and drains adjacent to the public highway do not generally form part of the highway infrastructure. In absence of evidence to the contrary, the presumption is that ditches and drains are under the riparian ownership of the adjoining landowner.



### 3.2 Public Rights of Way

i. Cambridgeshire has over 3,000km of Public Rights of Way (PROW) consisting of footpaths, bridleways, restricted byways and byways open to all traffic. PROWs are part of the highway network and a material planning consideration and may form an integral part of a development's access or movement network. The PROW network can be viewed online (link below) but the interactive map is not the Definitive Map.

<https://www.cambridgeshire.gov.uk/residents/libraries-leisure-culture/arts-green-spaces-activities/rights-of-way>

ii. Should a developer seek to alter a PROW, they should in the first instance read CCC's *Development and Public Rights of Way – Guidance for Planners and Developers* document or contact the Highways Asset Information Team:

[HighwaysAssetManagement@cambridgeshire.gov.uk](mailto:HighwaysAssetManagement@cambridgeshire.gov.uk)

iii. CCC are unable to enter into an Agreement with a developer to alter or enhance a PROW, say to form part of a development access, unless it has a legally defined width on the Definitive Map and Statement. Should this information be absent, a developer will need to first apply for a Definitive Map Modification Order to establish a width.

<https://www.cambridgeshire.gov.uk/residents/libraries-leisure-culture/arts-green-spaces-activities/definitive-map-and-statement>

iv. Alterations to surfaces of PROW are subject to a specific consultation and decision making process outside of the planning process. This process should be undertaken in advance of the grant of planning permission, to ensure that a given scheme is deliverable in highway terms. Any developer wishing to make alterations to a PROW should contact the Asset Management – Definitive Map Team for further guidance.

v. Similarly, developers wishing to seek to change the surface of PROW are referred to Cambridgeshire's Active Travel Design Guide.



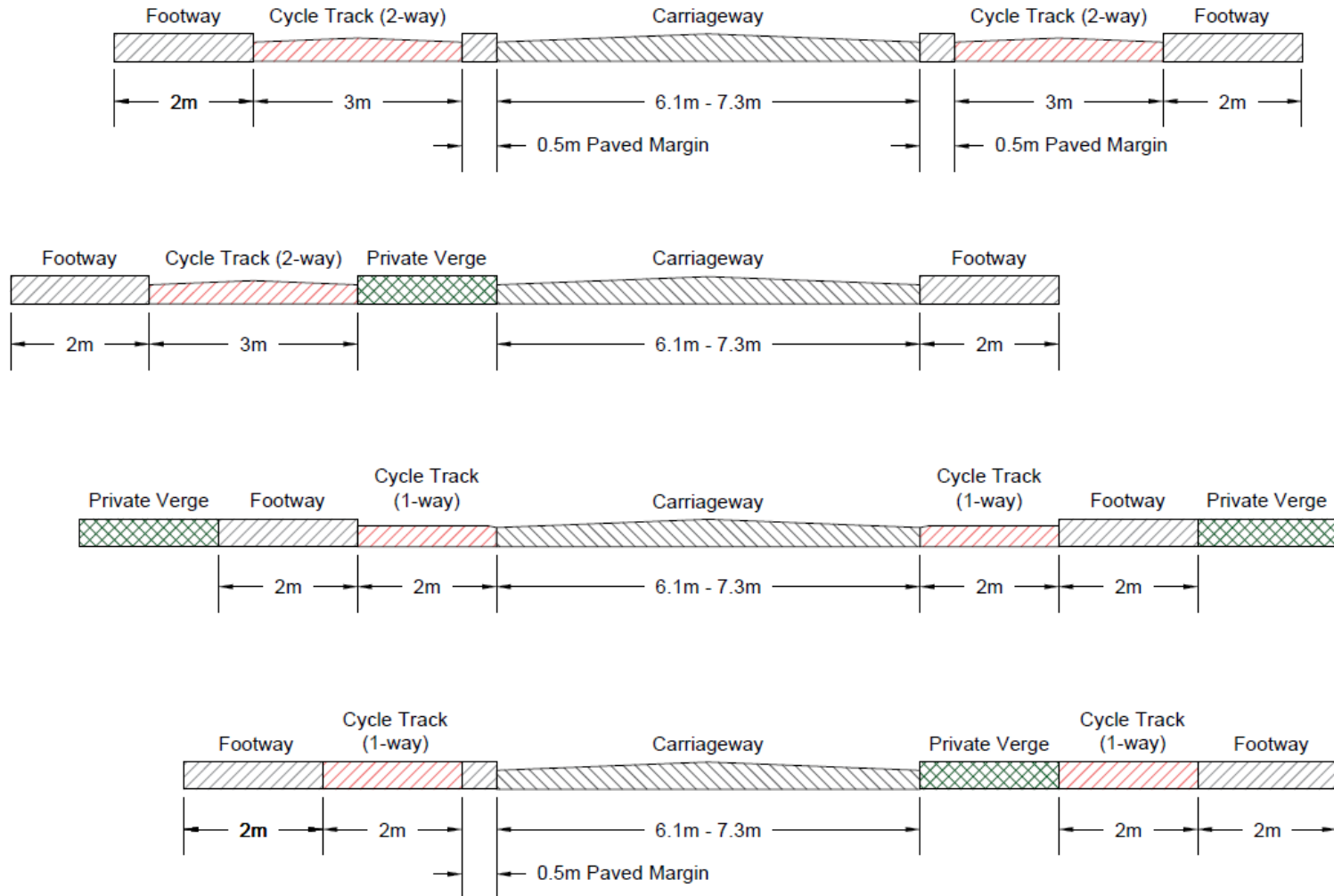


Cambridgeshire  
County Council

## 4. Examples: Cross-Sections



Figure 1 – Distributor / Bus Road Example Cross-Sections

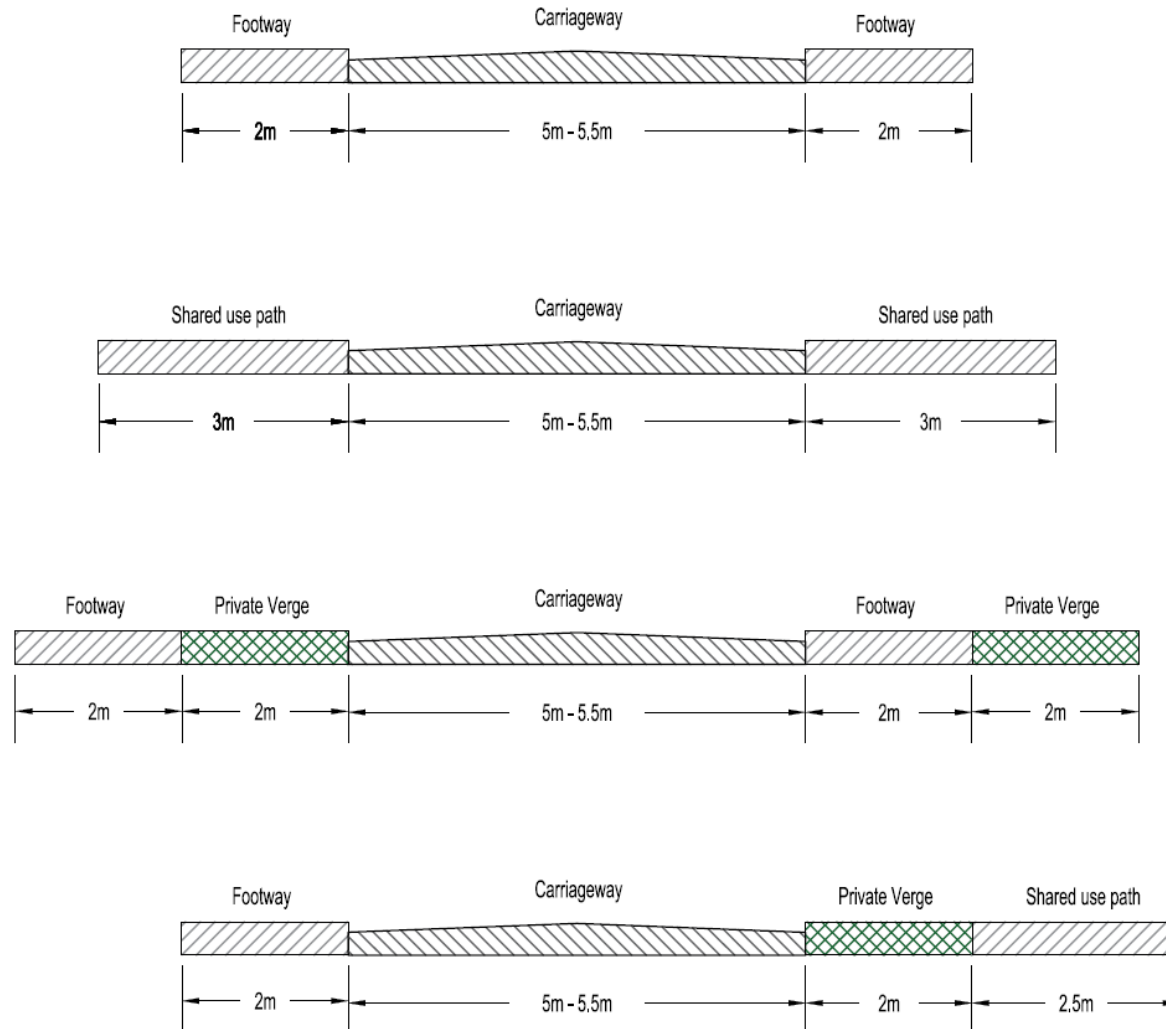


Cross-sections are typical examples only.

Each cross-section must be considered on a site-by-site basis taking into consideration factors such as development scale, forecast traffic volumes, desire lines, road, speed, conflict points etc.

Where a paved margin is provided between carriageway and cycle track, care must be taken to ensure it is not mistaken as a footway. A buffer is required between two-way cycle tracks and the carriageway.

Figure 2 – Estate Road Example Cross-Sections



Cross-sections are typical examples only.

Each cross-section must be considered on a site-by-site basis taking into consideration factors such as development scale, forecast traffic volumes, desire lines, road, speed, conflict points etc.

Dedicated cycle infrastructure will be required for estate roads serving significant number of dwellings, and with large forecast traffic volumes (pedestrians, cyclists, motor vehicles)

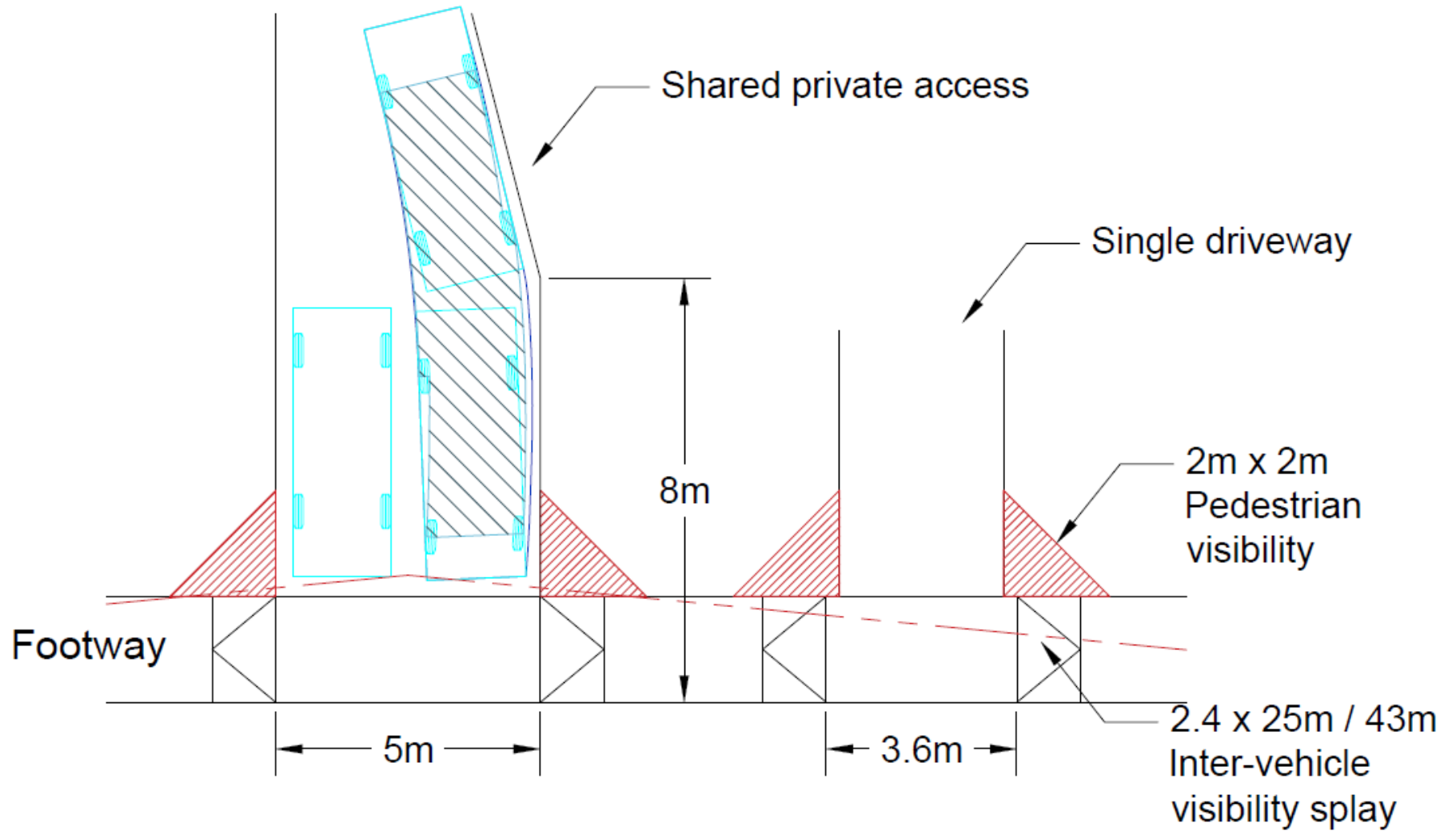


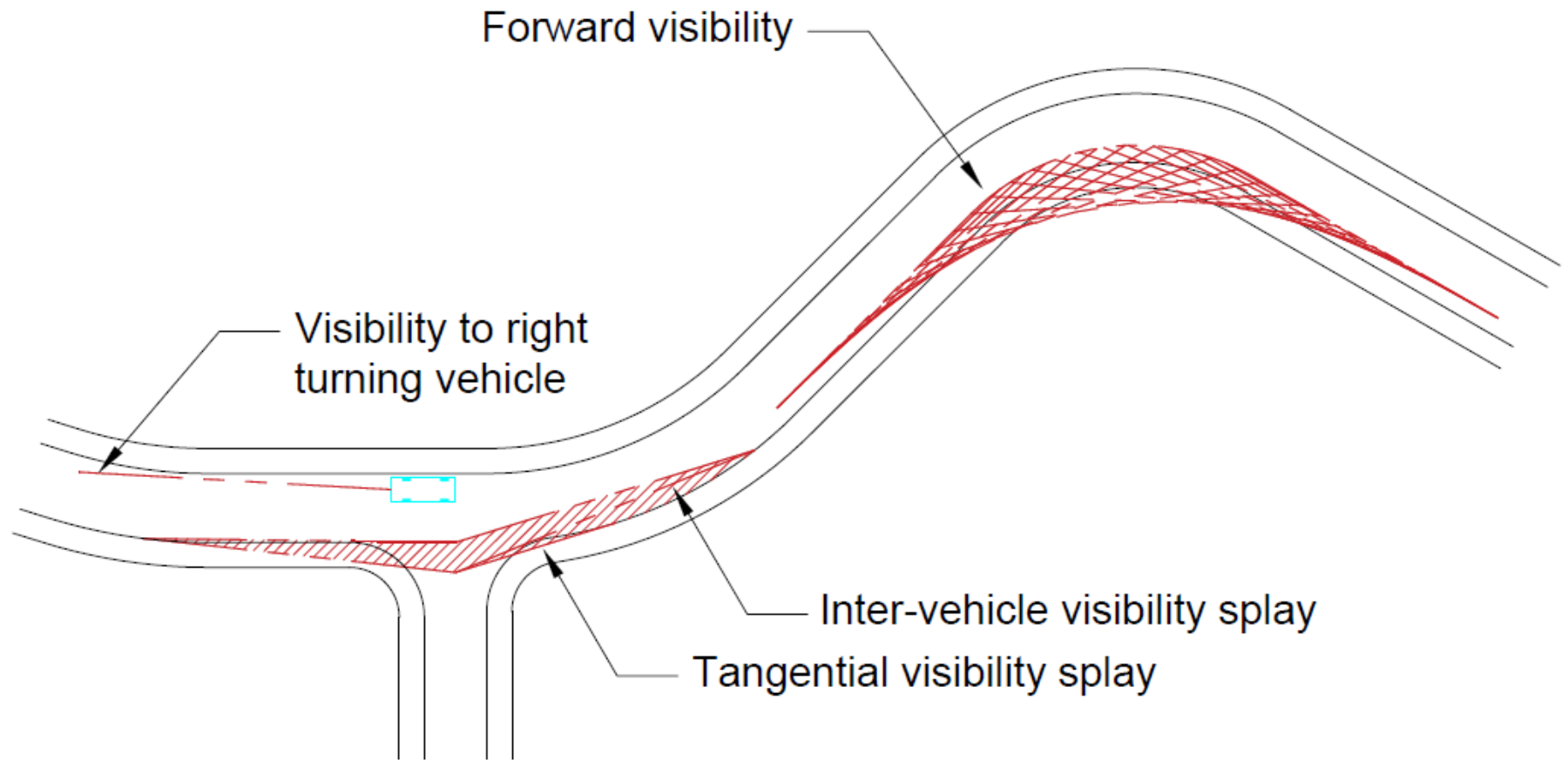
Cambridgeshire  
County Council

## 5. Examples: Typical Layouts



Disclaimer: The following layouts are diagrammatic representations and are not a substitute for site-specific design by a competent highway designer. While the layouts represent typical forms of junction, crossing, road layout etc., which are acceptable to the LHA, they cannot be considered acceptable without context of their setting, envisaged use and local constraints.





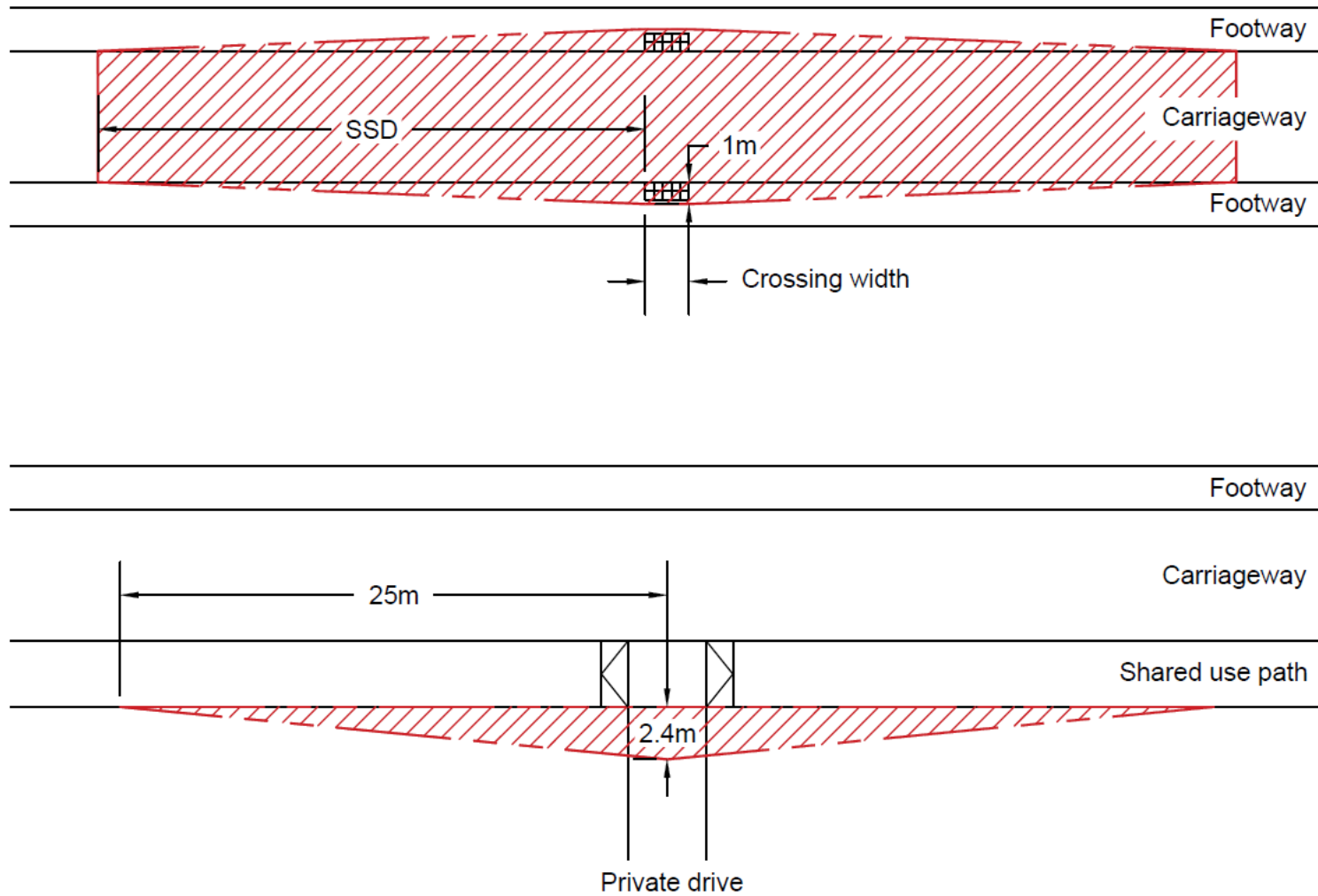
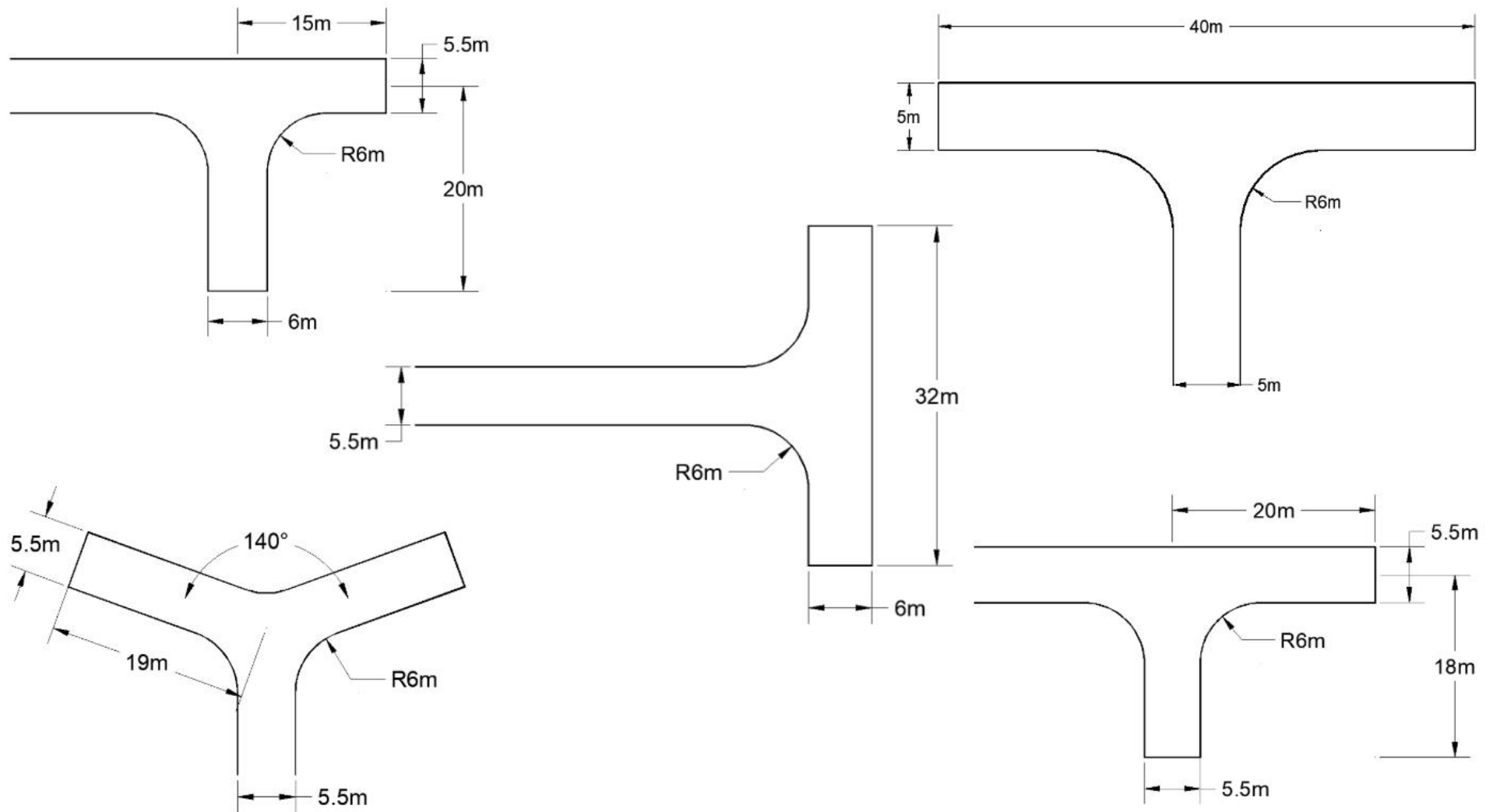
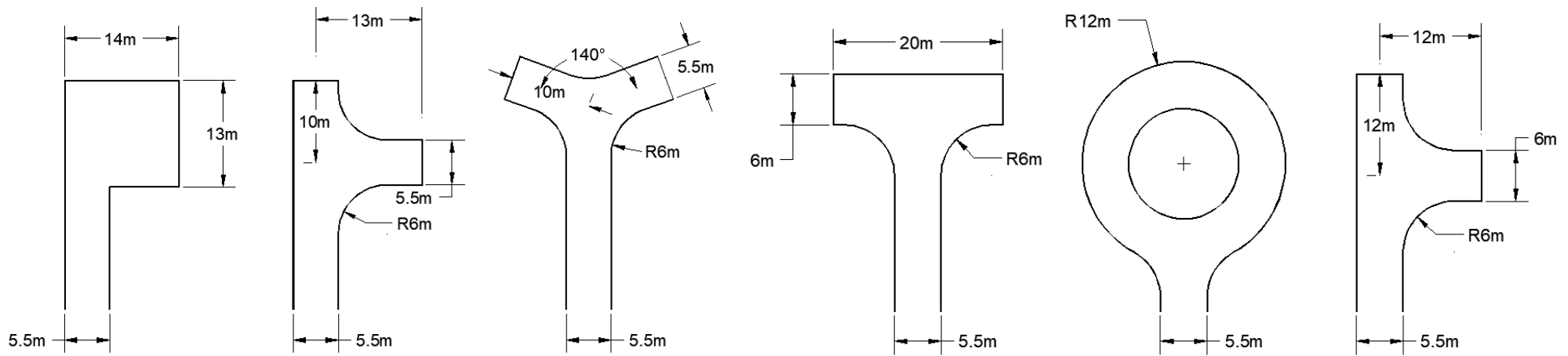
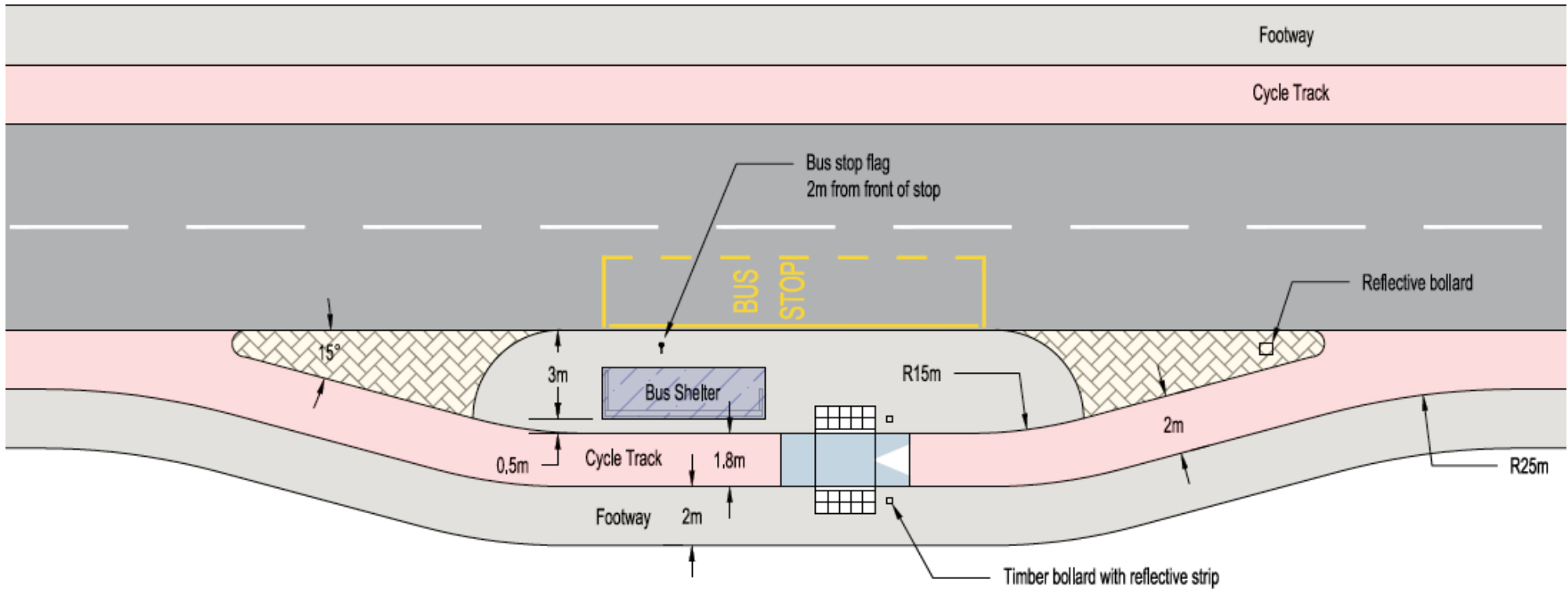


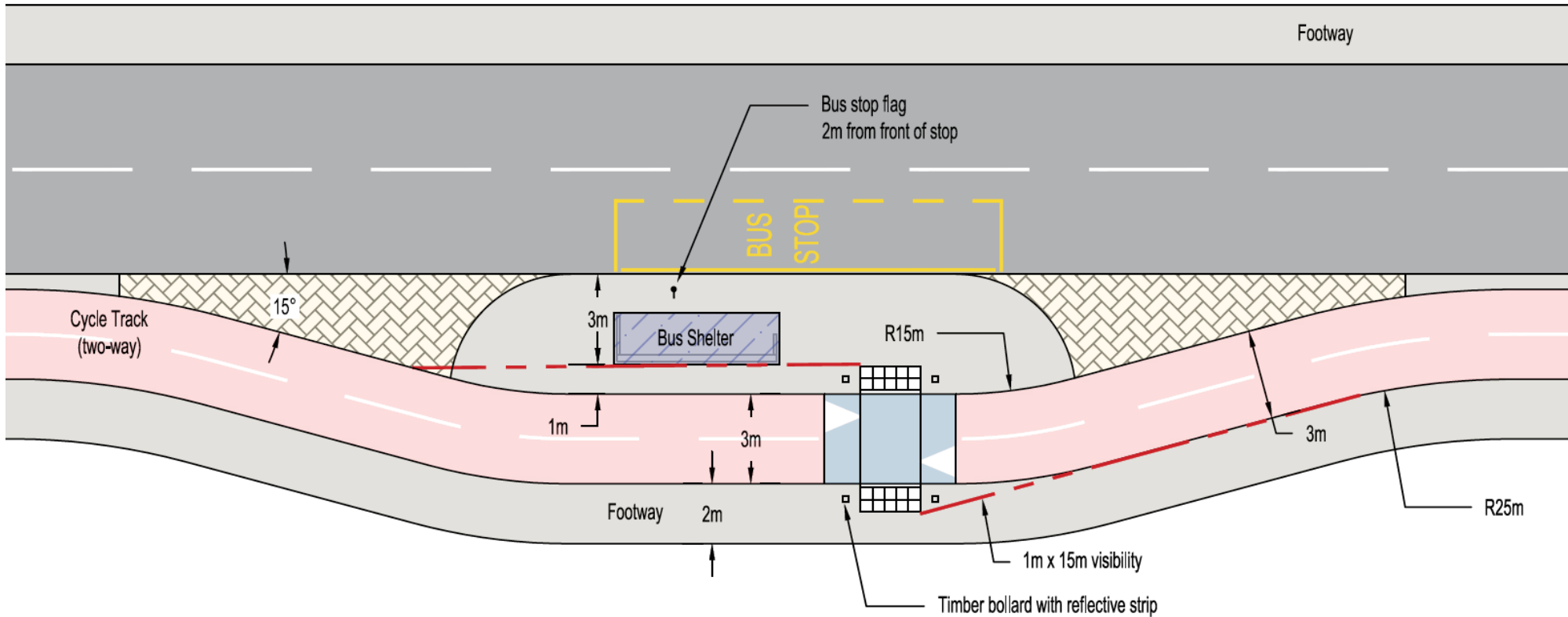


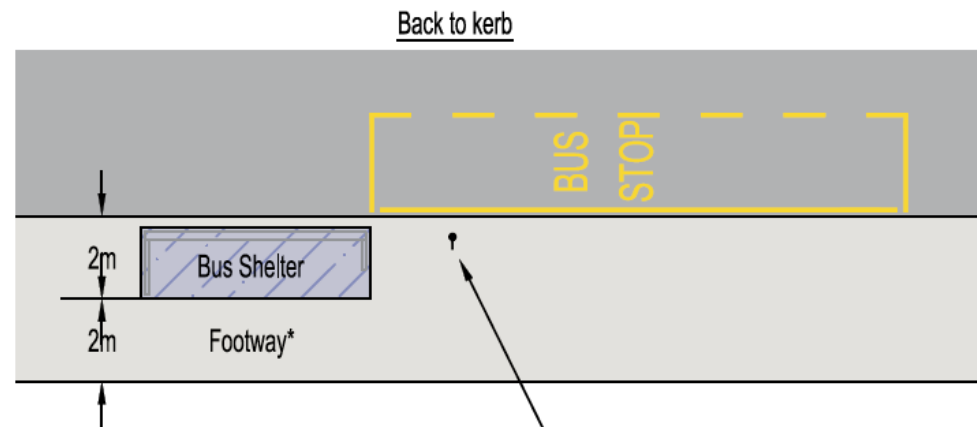
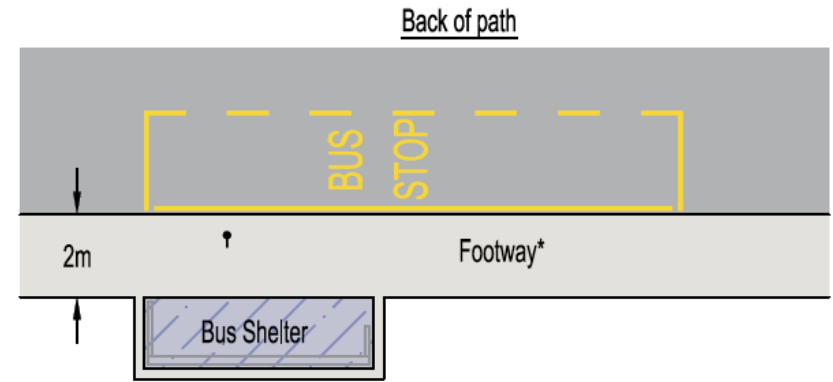
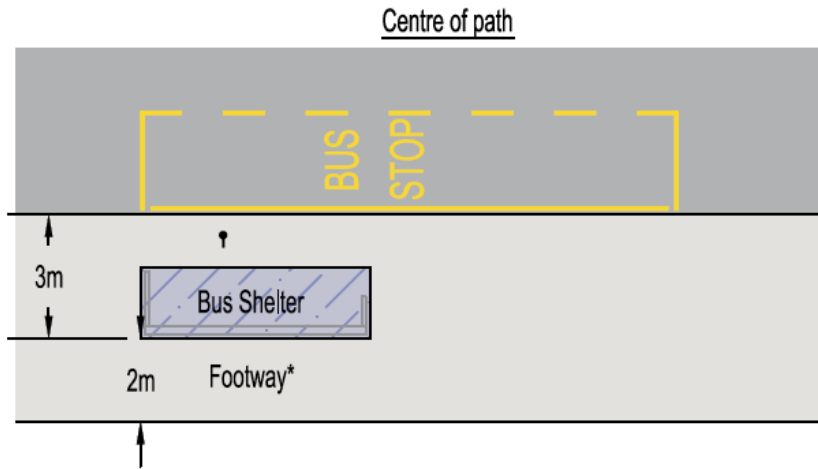
Figure 6 – Example Turning Areas Suitable for Refuse Vehicles (up to 11.2m)





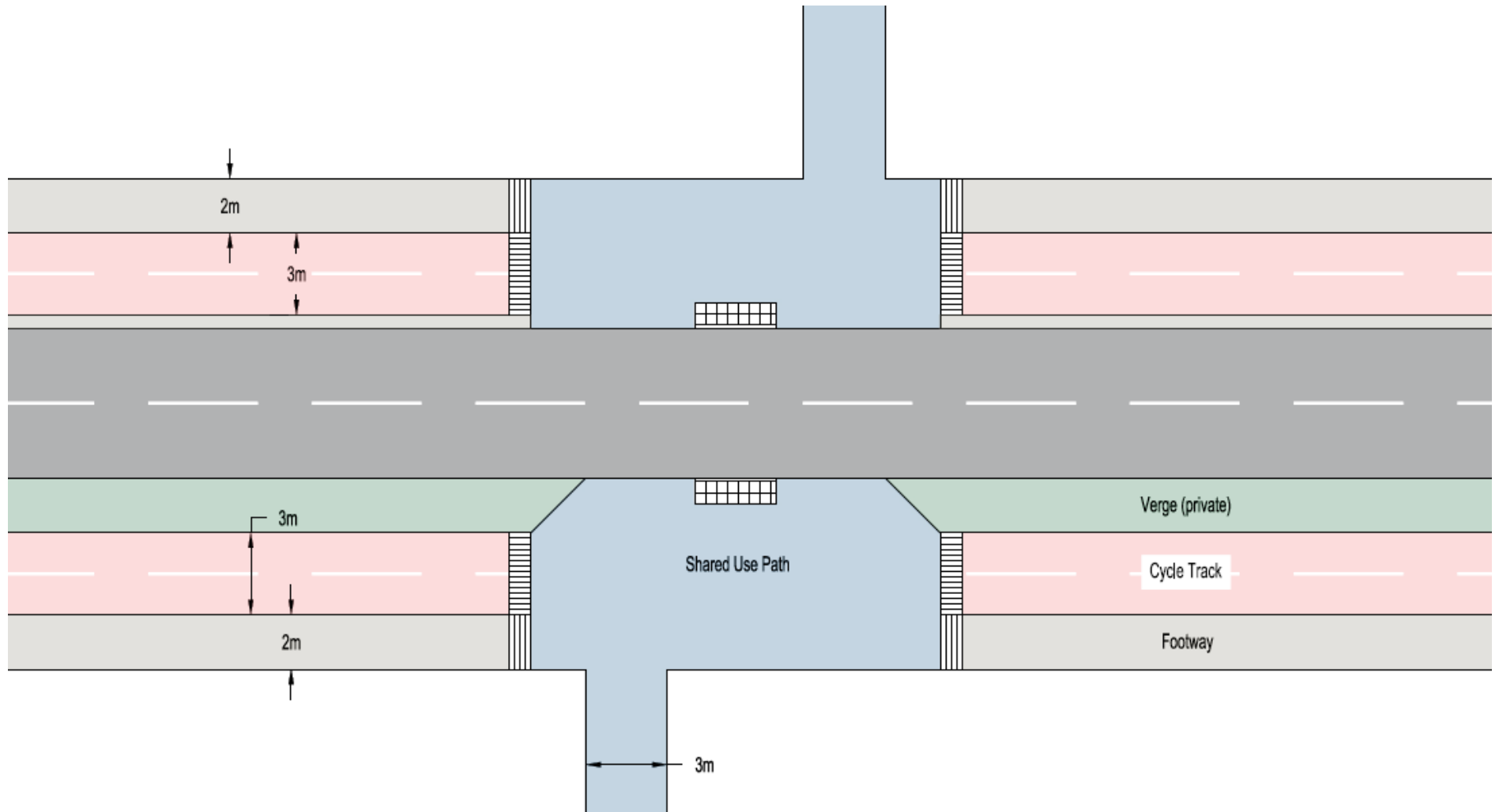


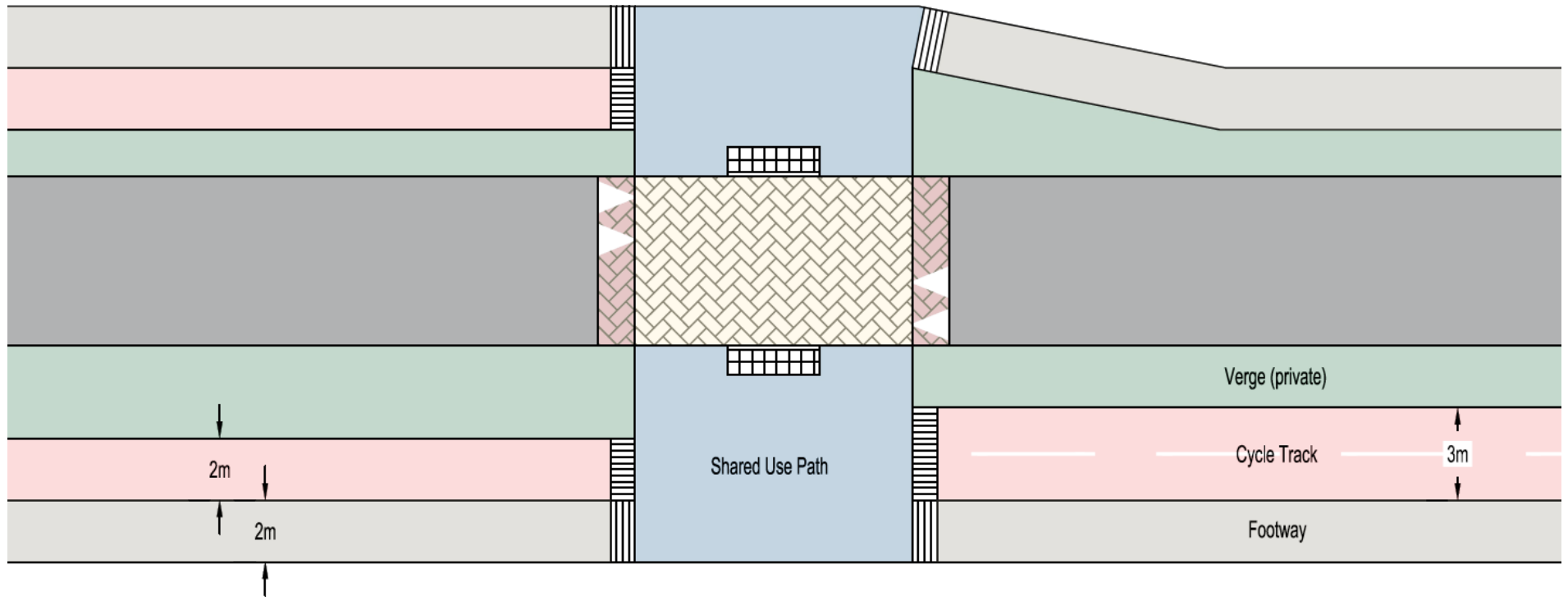


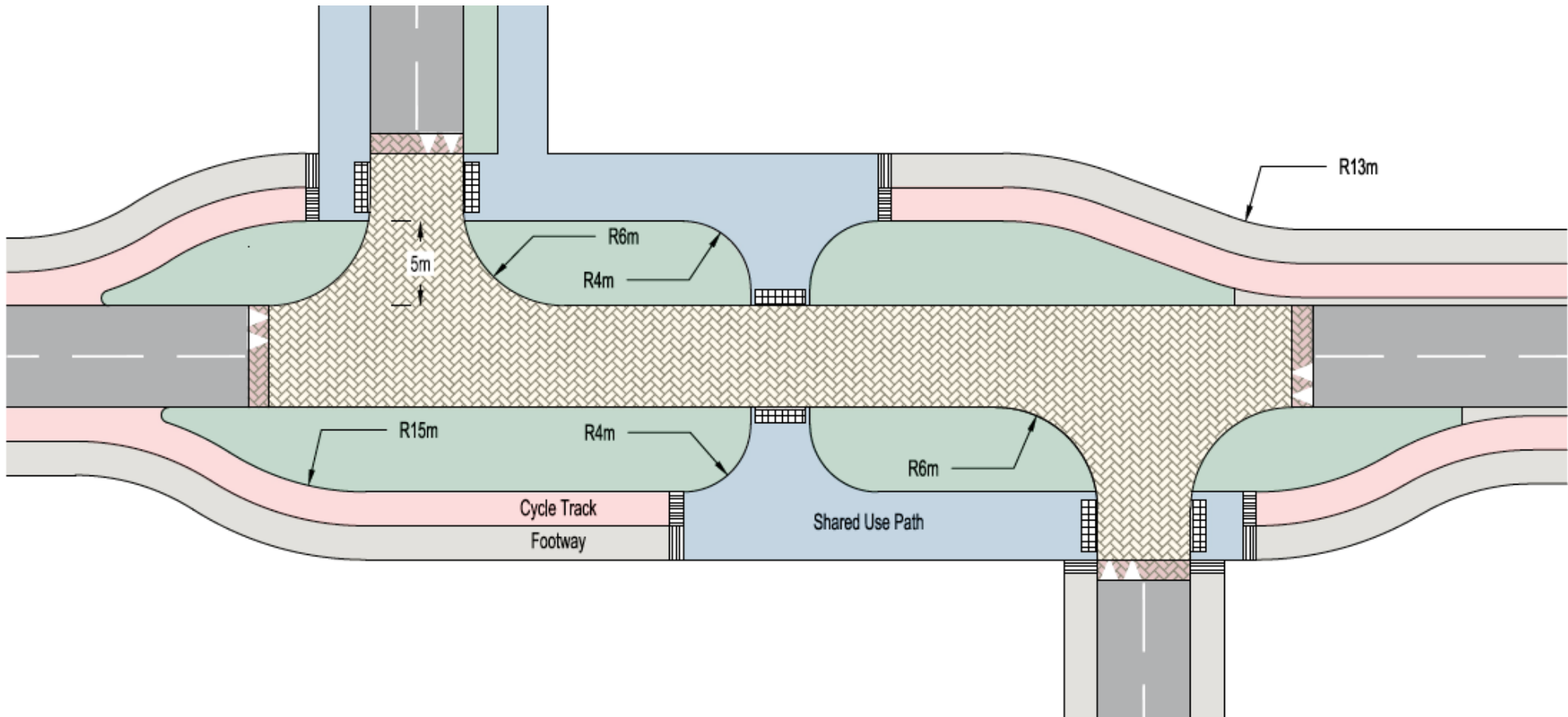


Bus stop flag  
2m from front of stop

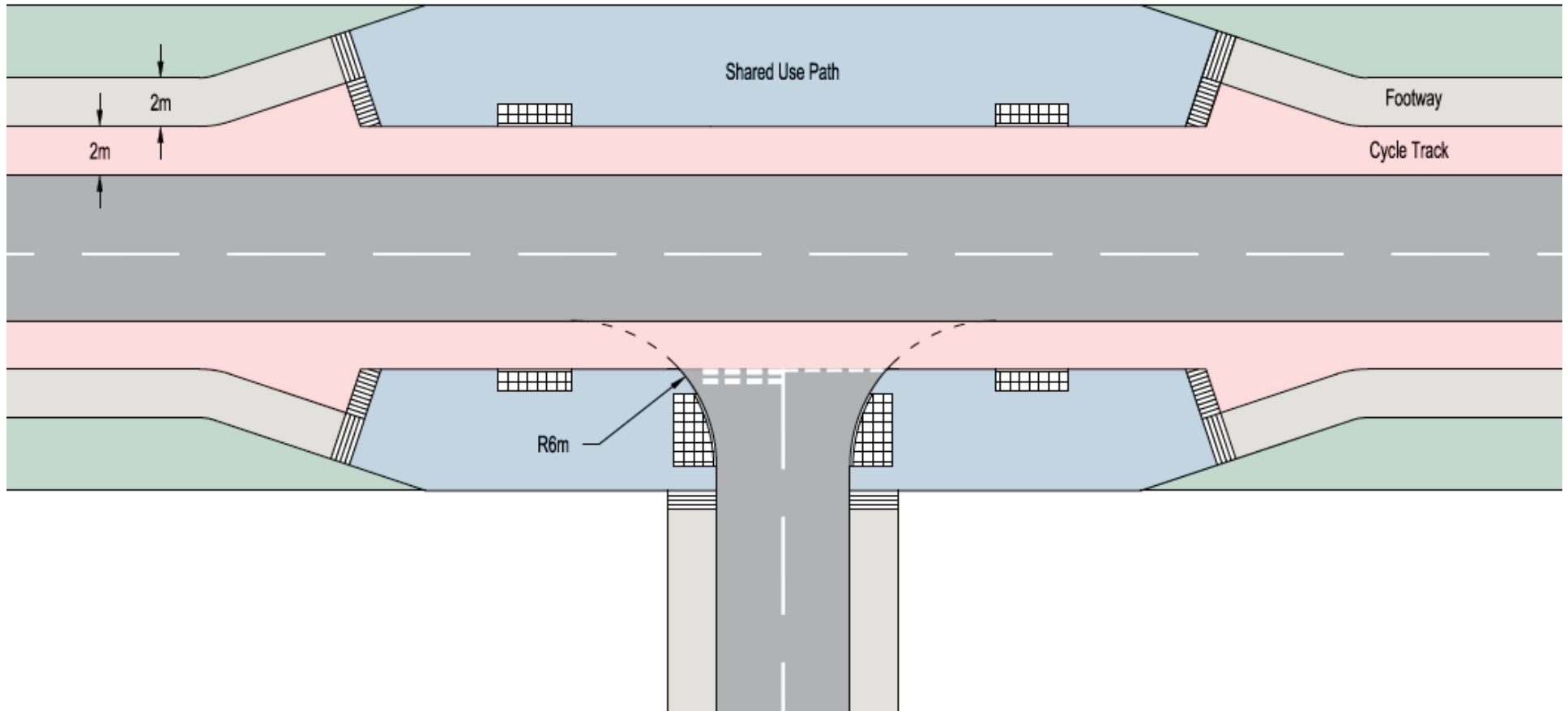
\*2m footway to increase to 3m if shared use path

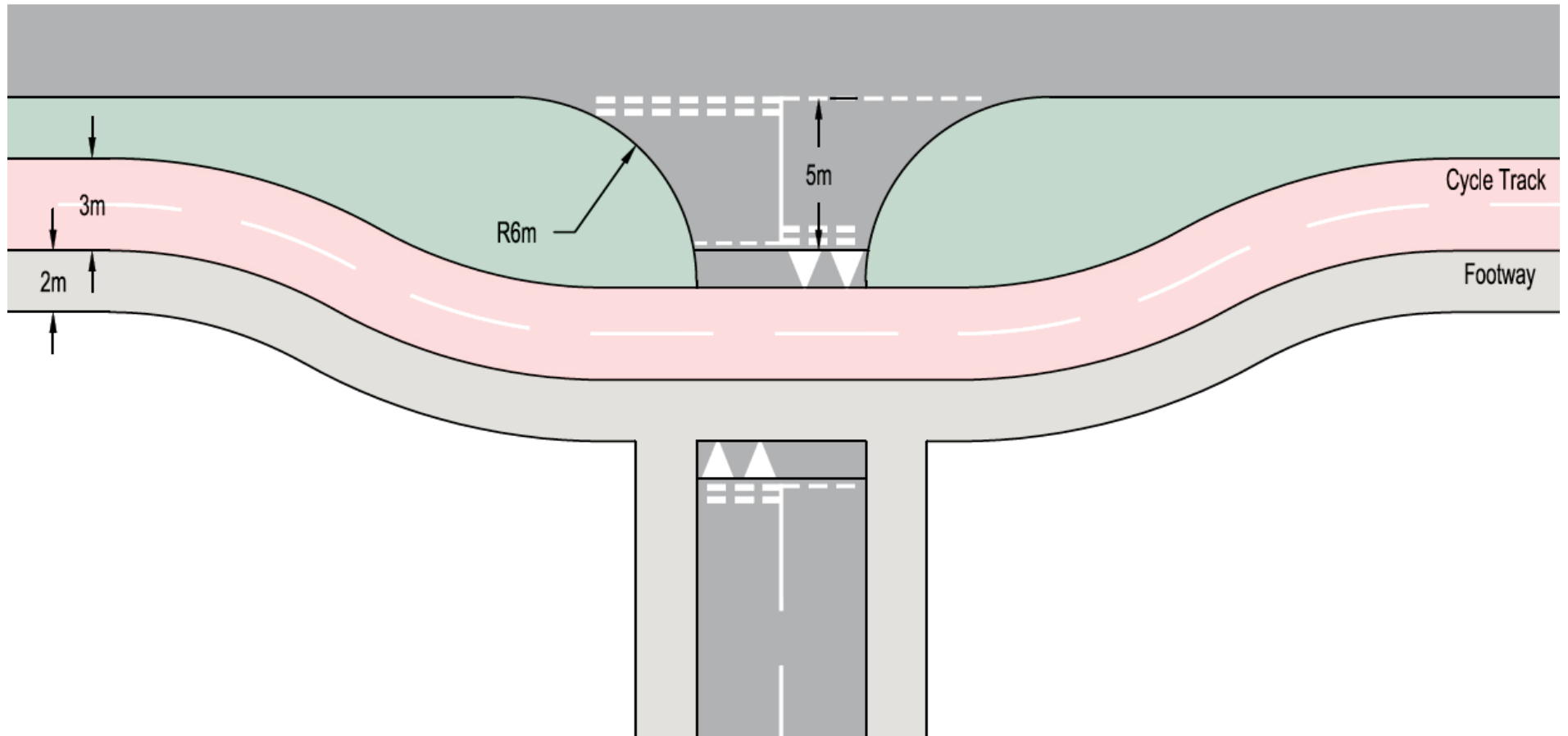


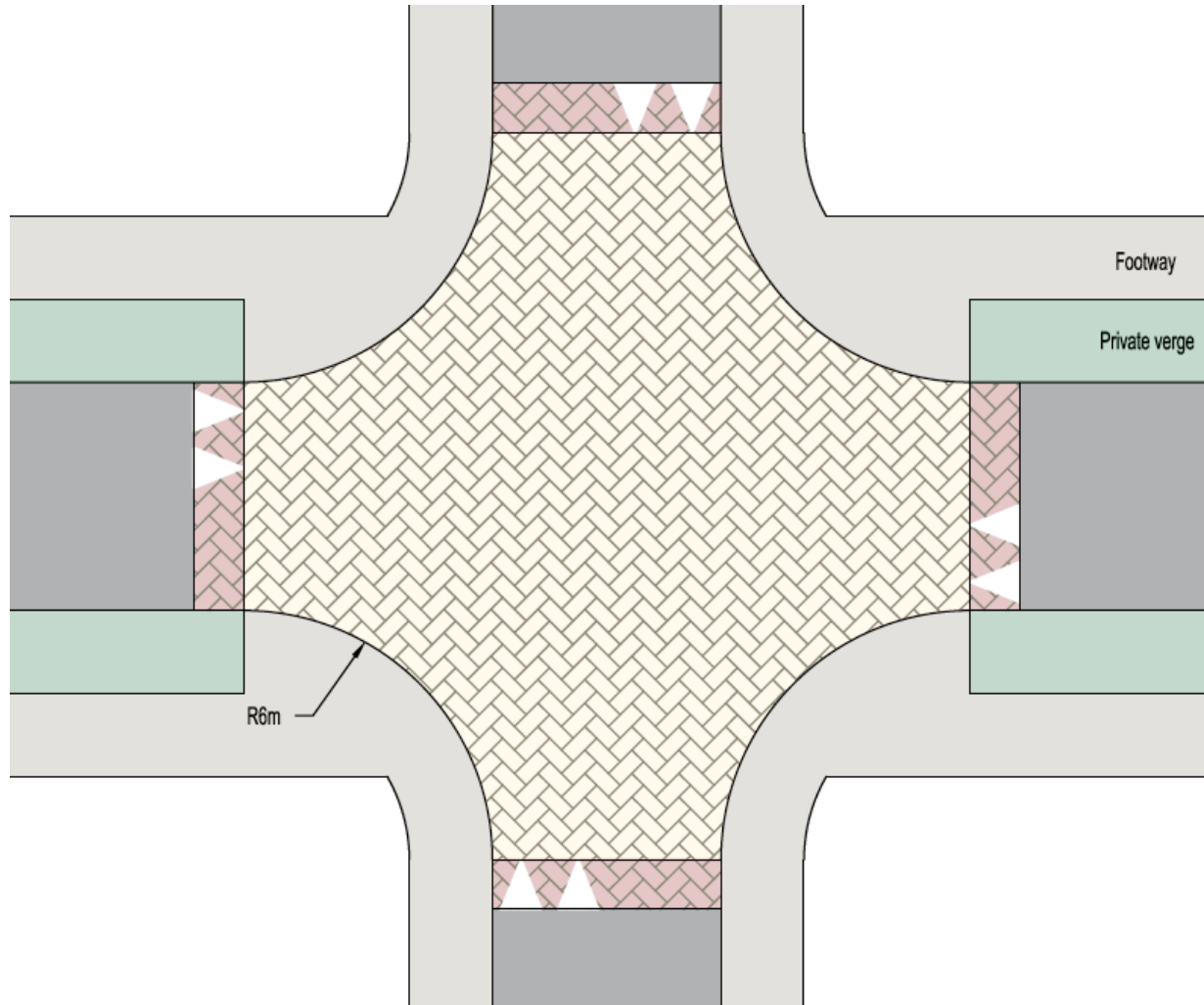


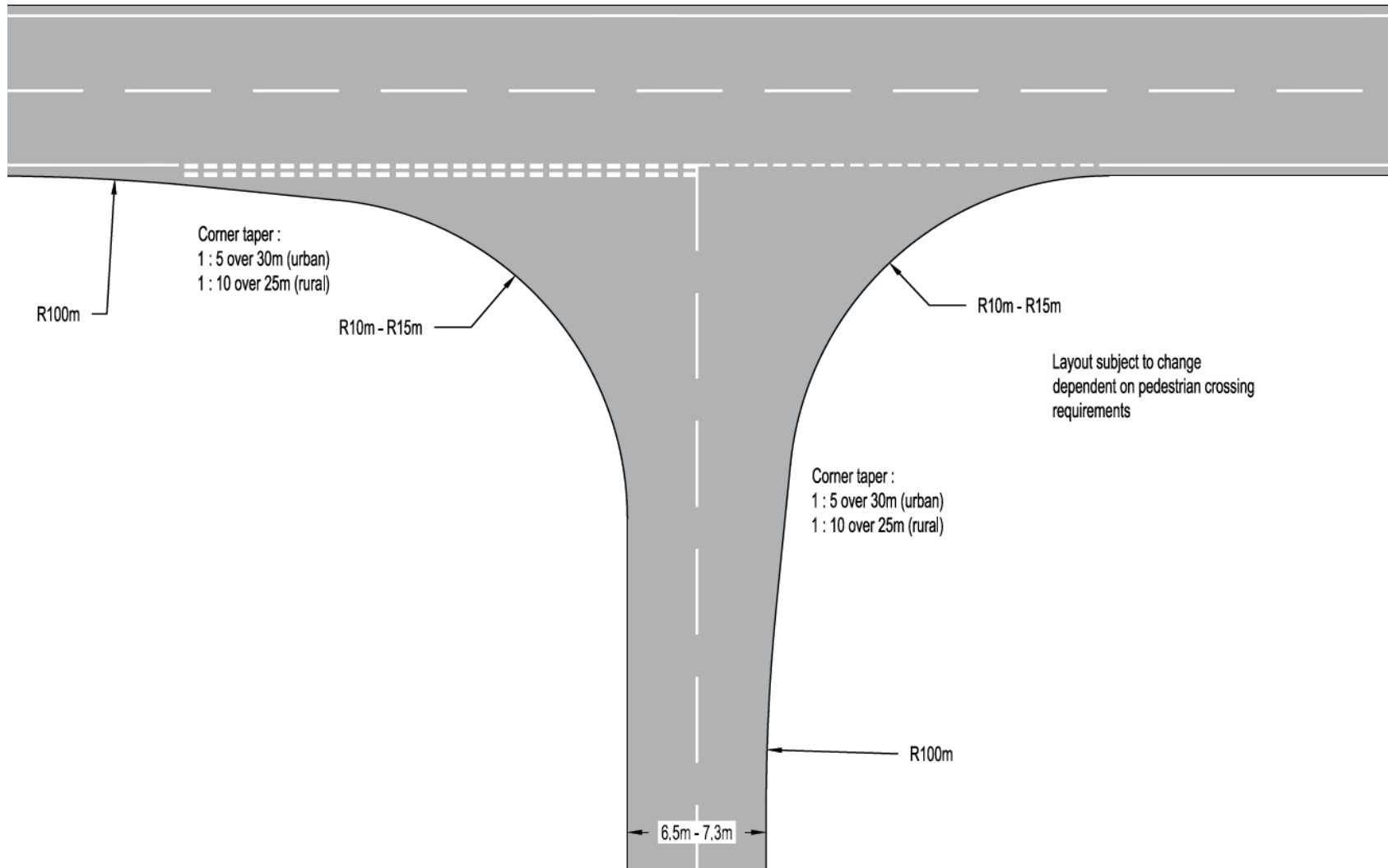














Cambridgeshire  
County Council

# Appendix A: Key Design Criteria



Link Type	Widths	Dwellings Served	Minimum Cycle Provision	Design Speed	Gradient	Visibility Splay	Min Vertical Curvature	Min Horizontal Curvature	Junction Radii	Kerb Upstand	Min Spacing of Speed Control Features	Min. Minor Road Junction Stagger	Comments
Distributor Road & Bus Routes	6.1m – 7.3m subject to vehicle tracking	Up to 100 with single point of access.  No upper limit, it multiple points of access provided; subject to suitable standard of access junction.	Cycle infrastructure off-carriageway.  Segregation advisable between pedestrians and cyclists.	20-30 mph  In 30 mph settings, a buffer between carriageway and NMU provision is required.  30 mph limits restricted to major infrastructure with prior agreement from the Engineer.	Max: 1:20 Min: 1:150  Up to 1:250 with channel blocks where the site cannot be re-profiled, at the Engineer's discretion.	2.4m x 43m (30mph)  25m (20mph)	Crest: 10m Sag: 9m	Subject to vehicle tracking & visibility	10m – 15m subject to vehicle tracking	125mm	80m (20mph)	30mph 43m (adj.) 21.5m (opp.)  20mph 25m (adj.) 12.5m (opp.)	Speed control measures do not generally include vertical deflection except for cycle / pedestrian crossings and then at 1:20 with table tops of at least 6m length.  Speed control on 30mph roads must be considered in context of the development, setting, masterplan etc.  Bus stops on carriageway. Not in laybys.
Major Estate Roads	5.5m	Up to 100 with single point of access.  Up to 500 with multiple points of access.	Cycle infrastructure off-carriageway desirable but on-carriageway acceptable with appropriate consideration.	20 mph (to be secured through TRO)	Max: 1:20 Min: 1:150	2.4m x 25m	Subject to vehicle tracking & visibility	Subject to vehicle tracking & visibility	6m – 8m (urban)  10m (rural)	125mm	80m	25m (adj.) 12.5m (opp.)	Dwellings to have sufficient gardens / setback to ensure doors / windows / porches do not encroach the highway.  Localised narrowing / build-out may be appropriate for use; to be agreed with the Engineer.  White lining (lane markings, give-ways etc.) should generally be avoiding.
Minor Estate Roads	5.0m	Up to 100 with single point of access  Up to 300 with multiple points of access	On-street cycling acceptable.	20 mph (to be secured through TRO)	Max: 1:20 Min: 1:150	2.4m x 25m	Subject to vehicle tracking & visibility	Subject to vehicle tracking & visibility	6m	125mm	80m	25m (adj.) 12.5m (opp.)	
Shared Surface Streets	6.0m + 0.5m paved maintenance strips	Up to 12 if cul-de-sac	On-street cycling acceptable.	20 mph (to be secured through TRO)	Max: 1:20 Min: 1:80	2.4m x 25m	Subject to vehicle tracking & visibility	Subject to vehicle tracking & visibility	6m	25mm	80m	18m (adj.) 9m (opp.)	
Shared Private Drive	5m for a minimum length of 8m	Up to 5.			Max: 1:20 Min: N/A								Once past the initial access, the acceptability of an internal width of 3.7m – 4.1m is dependent upon site layout.
Emergency Access	4.1m desirable 3.7m min				Max: 1:20 Min: 1:150		Crest: 10m Sag: 9m	Subject to vehicle tracking & visibility					Emergency accesses may take the form of a footpath or cycle track for day-to-day use.
Single Driveway	3.1m - 3.6m				Max: 1:12 Min: N/A								
Cycle Track	2m one-way 3m two-way				Max: 1:20 Min: 1:150	2.4m x 25m	Crest: 6m Sag: 5m	25m desirable 15m min (subject to agreement)	4m				Pedestrian and cycle crossings should generally by uncontrolled unless located on major desire lines or across busy roads.
Footway	2m		Footways to be provided except on shared space streets.		Max: 1:20 Min: 1:150								
Shared Footway & Cycleway	3m desirable				Max: 1:20 Min: 1:150	2.4m x 25m	Crest: 6m Sag: 5m	25m desirable 15m min (subject to agreement)	4m				



Cambridgeshire  
County Council

## **Appendix B: Side Slopes, Ditches & Watercourse**



		Level verge width (measured from carriageway / footway nearside edge)			
		Less than 0.5m	0.5m - 0.99m	1m - 1.99m	2m or greater
Depth of ditch invert / watercourse water level	Less than 0.5m	1:3	1:2	1:2	1:1.5
	0.5m - 0.99m	N/A	1:3	1:2	1:2
	1.0m - 1.49m	N/A	N/A	1:3	1:2
	1.5m or greater	N/A	N/A	N/A	1:3

Where a footway or cycle track is present, a three rail fence may be required on safety grounds at the Engineer's discretion.

Each ditch adjacent to new or widened highway must be assessed on a site-by-site basis. The above values are initial values in lieu of a ground investigation and a geotechnical assessment.

Where poor ground conditions exist, the above may be subject to review.



## Appendix C: Useful Links



- *'Highway Adoption: The Adoption of Roads into the Public Highway (1980 Highways Act)'* – Department for Transport <https://www.gov.uk/government/publications/adoption-of-roads-by-highway-authorities>
- *'National Design Guide: Planning practice guidance for beautiful, enduring and successful places'* – Ministry of Housing, Communities & Local Government <https://www.gov.uk/government/publications/national-design-guide>
- *'Inclusive mobility: making transport accessible for passengers and pedestrians'* – Department for Transport <https://www.gov.uk/government/publications/inclusive-mobility-making-transport-accessible-for-passengers-and-pedestrians>
- Local Transport Notes – Department for Transport <https://www.gov.uk/government/collections/local-transport-notes>
- DfT Circulars – Advice for Transport Professionals and Local Councils <https://www.gov.uk/government/collections/dft-circular>
- *'Manual for Streets'* – Department for Transport <https://www.gov.uk/government/publications/manual-for-streets>
- *'Design Manual for Roads and Bridges'* – Standards for Highways <https://www.standardsforhighways.co.uk/dmrb/>
- *'MCHW Volume 3 Highway Construction Details'* – Standards for Highways <https://www.standardsforhighways.co.uk/ha/standards/mchw/vol3/section1.htm>
- *'MCHW Volume 1 Specification for Highways Works'* – Standards for Highways <https://www.standardsforhighways.co.uk/ha/standards/mchw/vol1/index.htm>
- The Traffic Signs Regulations and General Directions <https://www.tsrgd.co.uk/#tsrgd-pdfs>
- *'Traffic Signs Manual'* – Department for Transport <https://www.gov.uk/government/publications/traffic-signs-manual>
- *'Guidance on the Use of Tactile Paving Surfaces'* – Department for Transport <https://www.gov.uk/government/publications/inclusive-mobility-using-tactile-paving-surfaces>
- *Cambridgeshire County Council Highways Development* <https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/roads-and-pathways/highways-development>
- *Cambridgeshire County Council Highways Searches* <https://www.cambridgeshire.gov.uk/business/highway-searches>
- *Cambridgeshire County Council Developing New Communities* <https://www.cambridgeshire.gov.uk/business/planning-and-development/developing-new-communities>
- *Cambridgeshire County Council Highway Licences and Permits* <https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/roads-and-pathways/highway-licences-and-permits>
- *Cambridgeshire County Council Flood and Water* <https://www.cambridgeshire.gov.uk/business/planning-and-development/flood-and-water>
- *Cambridgeshire County Council Traffic Regulation Orders* <https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/roads-and-pathways/traffic-regulation-orders>
- *Cambridgeshire County Council Rights of Way* <https://www.cambridgeshire.gov.uk/residents/libraries-leisure-culture/arts-green-spaces-activities/rights-of-way>
- *Cambridgeshire County Council Definitive Map and Statement* <https://www.cambridgeshire.gov.uk/residents/libraries-leisure-culture/arts-green-spaces-activities/definitive-map-and-statement>
- *Cambridgeshire County Council Road Safety* <https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/roads-and-pathways/road-safety>