

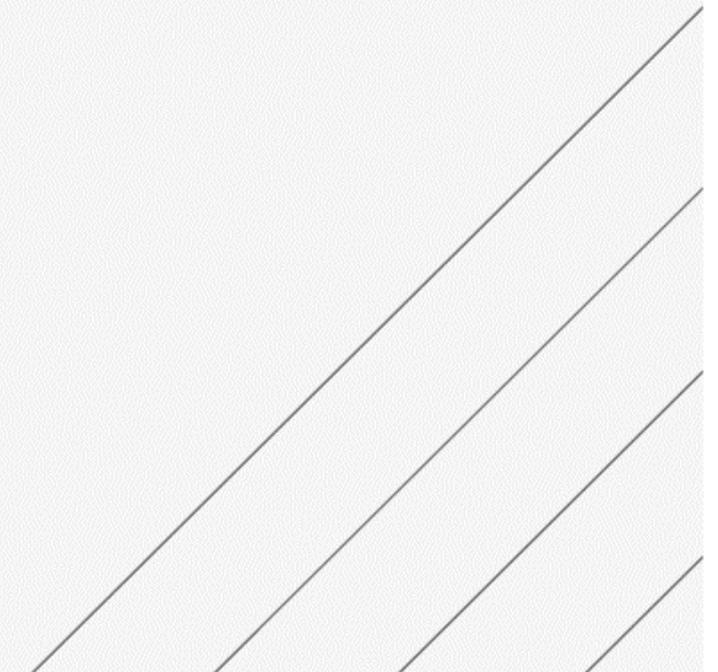


Highways Design Guide

Carmarthenshire County Council

2018

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Foreword

Carmarthenshire County Council recognise that appropriate development is essential to the economic, social and environmental fabric of our County, and in doing so supports our responsibilities under the Well-being of Future Generations (Wales) Act 2015. As such we, as a Local Authority, have a duty to all our residents to ensure the planning process is as smooth, transparent, consistent and accurate as possible.

Whilst the Local Planning Authority makes the final determination on any application, Highways Planning Liaison have a key role to play as consultees in assessing the likely impacts of any development. To assist Developers, Applicants and The Authority in this process, we have developed this Highways Design Guide, which will empower applicants and wider stakeholders to understand and apply our requirements in terms of all aspects of potential highways impacts, highways design and the application of appropriate local and national policy guidance.

We are confident that this will not only speed up the planning process, whilst underpinning our aims of a consistent, transparent service: but will also allow Carmarthenshire County to better assist Applicants, stakeholders and the wider community as resources can be focussed on delivering a more efficient service for all.



1. Introduction

1.1. Overview

Carmarthenshire County Council is strongly committed to facilitating good design which is fit for purpose and delivers environmental sustainability, economic development and social inclusion. Good design requires a collaborative, creative and inclusive approach with highways and transportation forming a key consideration throughout the life of a scheme.

Carmarthenshire County Council has produced this Highway Design Guide (HDG) with a view to setting out its expectations for new development in the county. It provides guidance to Developers and Applicants on preparing transport proposals and providing transport infrastructure and services to support new development. It also sets out the associated requirements during planning and construction.



The Local Planning Authority (LPA) is responsible for determining planning applications within Carmarthenshire unless the development is called in by the Planning Committee or Welsh Government. In such cases, the LPA makes a recommendation on the application, with the decision taken by the Planning Committee or Welsh Government.

As a statutory consultee, Carmarthenshire County Council's **Highways Planning Liaison is required to provide the LPA with an informed response and recommendations on individual planning applications**, falling within agreed consultation thresholds (as set out in Part 2.3.1).

This HDG has been adopted by Carmarthenshire County Council and the requirements outlined herein will be treated as a material planning consideration during the determination of planning applications and in defence of any decision at appeal. This HDG will also form the basis of the Highways Planning Liaison's assessment of a proposal and subsequent response to the LPA.

The LPA has the jurisdiction to accept, amend or disregard the recommendation of the Highways Planning Liaison team. The Highways Planning Liaison do not determine planning applications and cannot provide design support to Developers when they are appraising development proposals on behalf of the LPA.

It is recommended that Developers secure specialist consultancy support to assist them through the design, planning and construction process. Developer should note that certain design services can be procured through Carmarthenshire County Council's Highway Engineering Section (as outlined in [Technical Appendix B](#) of this HDG).

1.2. HDG Aims and Objectives

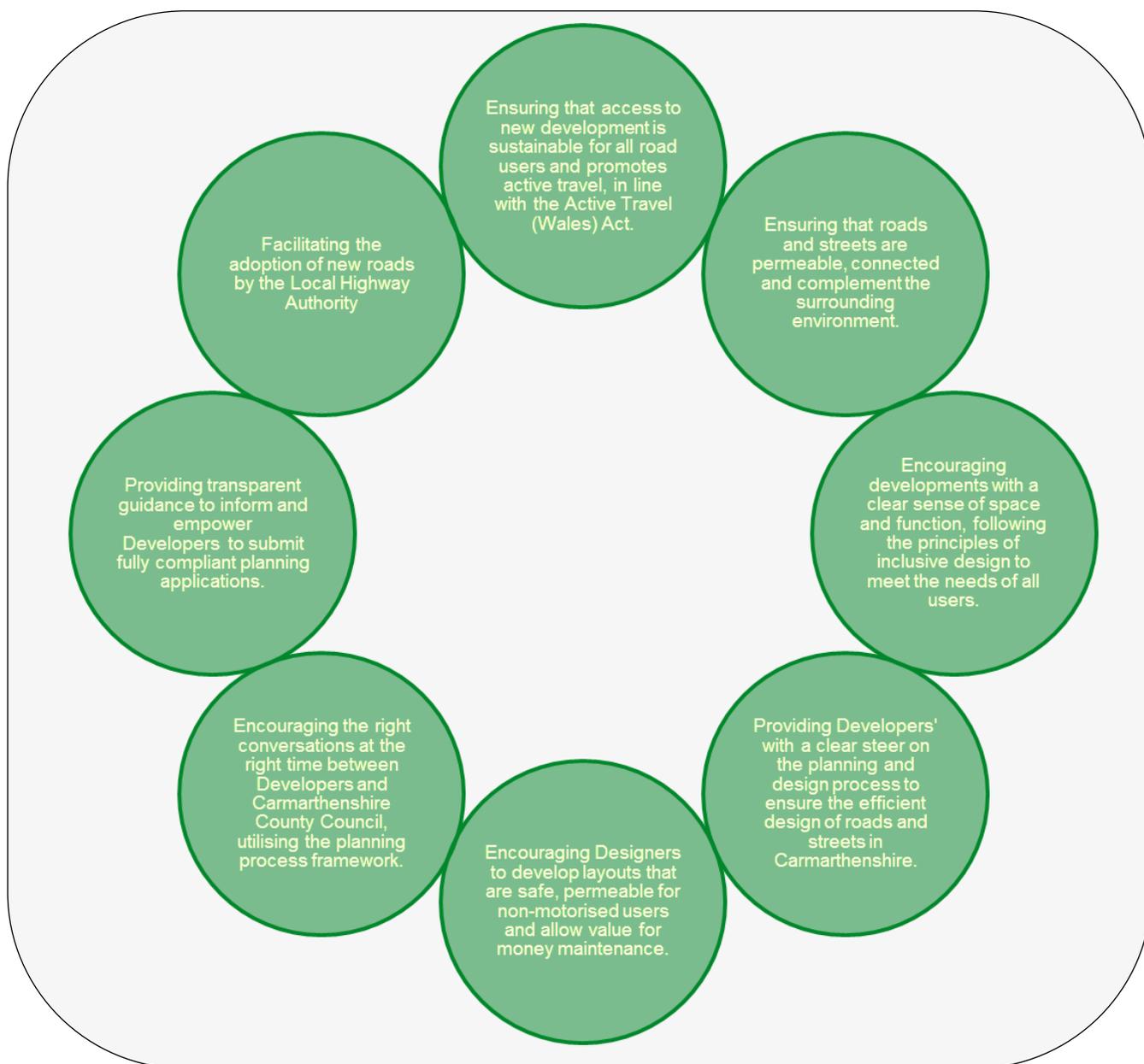
The principal aims of this HDG are to:

Encourage Developers to create layouts which have a distinctive character in their built environment and landscaping;

Set out transparent design standards to achieve safe and sustainable provision for all transport modes, with an emphasis on Active Travel; and

Facilitate a streamlined and cost-effective highways planning process for Carmarthenshire County Council and the Developer.

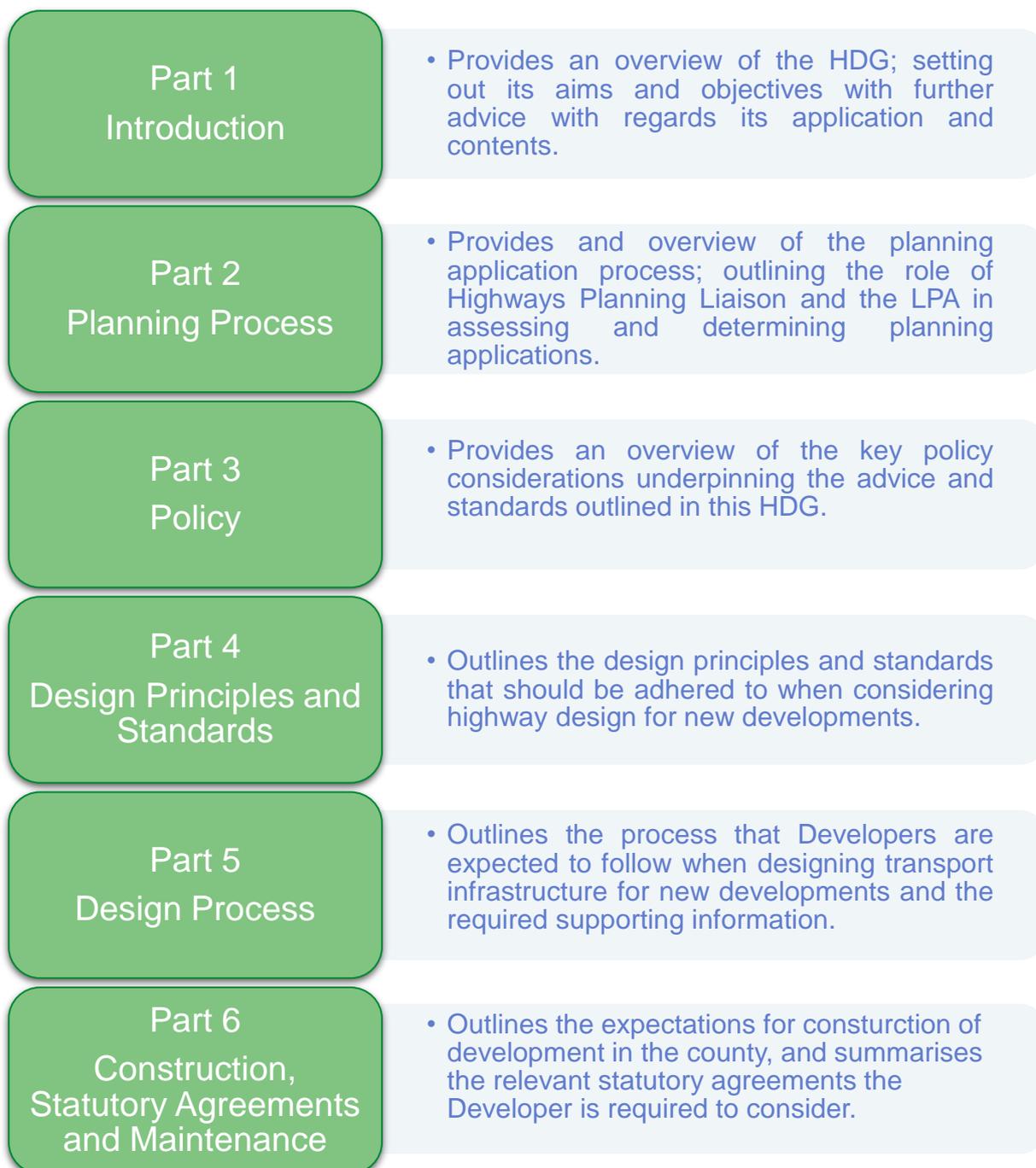
These aims are supported by the following key objectives:



1.3. HDG Application and Content

This HDG should be used by Developers' to guide the design of a scheme, formally engaging with relevant departments of Carmarthenshire County Council at appropriate stages in the planning process. All engagement on the design of developments should be channelled through the planning framework, using planning@carmarthenshire.gov.uk.

This document considers the key components of development planning, including scheme design, construction and maintenance. This HDG is split in to 6 parts as follows:



2. Planning Process

2.1. Overview

The purpose of the Welsh Government's planning system is to manage the development and use of land in the public interest. It needs to ensure economy, efficiency and amenity in the use of land and reconcile the needs of development and conservation, whilst also protecting natural resources and the historic environment.

This Part of the HDG provides an overview of the planning application process outlined in the Welsh Government's Development Management (DM) Manual. Further information and advice about the planning process, planning applications, national and local planning policies and planning guidance is provided on the [planning section](#)¹ of Carmarthenshire County Council's website.

2.2. The LPA, DM and Highways Planning Liaison

'Development' is defined by section 55 of the Town and Country Planning Act 1990 ('the 1990 Act') as:

'The carrying out of building, engineering, mining or other operations in, on, over or under land, or the making of any material change in the use of any buildings or other land.'

Development Management is a positive and proactive approach to shaping, considering, determining and delivering development proposals. It is led by the **LPA** working collaboratively with those proposing developments and other stakeholders.

Carmarthenshire County Council's development plan sets out a vision of how land uses will be distributed, to achieve sustainable development and support the goals set out in the Well Being of Future Generations (Wales) Act 2015. It is the role of Development Management to deliver that vision; guiding public and private investment to suitable locations using national and local policies to provide the jobs, homes and infrastructure required to meet the existing and future needs of Wales.

Development Management covers several stages of the implementation of a development project. The LPA and a Developer may adopt a collaborative approach when preparing a masterplan or alternatively the LPA will be presented with a final design, submitted by a Developer as a planning application.

The way in which planning applications are processed and scrutinised depends on whether they have potential benefits and impacts which are of national, major or local significance.

The LPA is responsible for determining all planning applications within Carmarthenshire unless the development is called in by the Planning Committee (primarily for Major Development) or Welsh Government (primarily for Developments of National Significance). In such cases, the LPA makes a recommendation on the application, with the decision taken by the Planning Committee or Welsh Government.

Highways Planning Liaison

As a statutory consultee, Carmarthenshire County Council's Highways Planning Liaison will provide the LPA with an informed response and recommendations on individual planning applications, falling within agreed consultation thresholds. Compliance with this HDG will be a material consideration during the Highways Planning Liaison's assessment of a proposal and subsequent response of the LPA.

¹ <https://www.carmarthenshire.gov.wales/home/council-services/planning/>

The LPA has the jurisdiction to accept, amend or disregard the recommendation of the Highways Planning Liaison team. The Highways Planning Liaison do not determine planning applications and cannot provide design support to Developers when they are appraising development proposals on behalf of the LPA.

2.3. Applying for Planning Permission

2.3.1. Pre-Application Procedures

Pre-application procedures aim to ensure that planning applications proceed smoothly and quickly once they are formally submitted. It allows significant planning issues to be addressed before a formal application is made and provides the community with an opportunity to engage with Developers at an early stage in the development process.

LPAs are required to provide a statutory pre-application service for those who request it; providing a written response to the applicant containing certain pre-determined information as a minimum. A fee is payable to the LPA for this service in line with a national fee schedule. LPA's can offer additional responses and meetings should an applicant request further pre-application advice beyond the statutory minimum requirements. Additional fees will be charged for these services.

Pre-application Consultation by Developers

Pre-application Consultation is required for all 'major' development applications, whether for full or outline permission. Prior to submitting an application for major development, the Developer must:

- publicise a draft of the application;
- consult community and specialist consultees; and
- write a report about the pre-application consultation undertaken.

The Developer is required to consult specialist consultees when a development exceeds thresholds specified by the Welsh Government. As a **specialist consultee**, Carmarthenshire's **Highways Planning Liaison** team will need to be consulted where a development is expected to alter or amend the existing highway infrastructure (including footways, footpaths or verges) and when a development:

- involves the laying out or construction of a new street;
- will significantly affect levels of traffic onto, or off, a trunk road;
- may prejudice improvement or construction of a highway;
- will generate significant levels of traffic;
- will significantly affect the nature of traffic generated; or
- the Development Control Officer is minded to refuse on highway parking grounds.

All information that would be required to be submitted as part of a formal planning application will be required by the Highways Planning Liaison team during Pre-Application Consultation. This information should be provided electronically and should include:

- Scaled plans, with north arrow, to identify the land to which the application relates;
- All other scaled plans, drawings and information that would be required to describe the proposed development. This includes any technical documents, such as a Transport Assessment and Travel Plan, needed to validate any subsequent application; and
- Design and Access Statement.

Highways Planning Liaison is required to provide a 'substantive response' to the Developer within the prescribed 28 day period, or within such a period that has been agreed in writing with the Developer.

A 'substantive response' is one which may:

- state that the specialist consultee has no comment to make;
- state that the specialist consultee has no objection to the proposed development and refers the applicant to current standing advice by the specialist consultee on the subject of the consultation;

- advise the applicant of any concerns identified in relation to the proposed development and how those concerns can be addressed; or
- advise the applicant that the specialist consultee has concerns and that it would object to an application for planning permission made in the same or substantially the same terms and sets out the reasons for those objections.

All planning applications for development proposals that are subject to statutory pre-application consultation (PAC) must be accompanied by a pre-application consultation report in order to be valid. The PAC report must address the substantive response provided by Highways Planning Liaison. The points raised by Highways Planning Liaison in the substantive response should be tabulated in the PAC report, with details on how they have been addressed by the Developer provided in an adjacent column.

2.3.2. Planning Application Procedures

Applicants can submit an application electronically or in paper format to the LPA. The planning portal enables electronic submission of planning applications and applicants are encouraged to apply electronically.

Validating planning applications is essentially an administrative process. The Standard Application Form will be checked to ensure all relevant questions have been answered. If the LPA is satisfied it has received an application that meets the requirements set out in the Standard Application Form, including additional assessment documents (e.g Transport Assessment and Travel Plan), other legal requirements and any published local validation requirements (for major applications) it will be registered as a valid application. The LPA should then determine the application within the relevant time periods.

Applicants are encouraged to agree information requirements with the LPA prior to submission, through pre-application discussions, so that where possible, the information sought is proportionate to the nature of the scheme. Supporting transport and highways information, likely to be required for different application types, is considered in [Part 5.3.2](#) of this report.

LPA's are required to consult relevant **specialist consultees**, including **Highways Planning Liaison**, when the proposed development meets the specified criteria outlined for pre-application consultation. The duty to provide a 'substantive response' is slightly different depending on whether the development proposal was subject to mandatory pre-application consultation with the statutory consultee.

Where no mandatory pre-application consultation has taken place, a 'substantive response' is one which:

- states that the consultee has no comment to make;
- states that the consultee has no objection to the proposed development and refers the person consulting to current standing advice by the consultee on the subject of consultation;
- advises the person consulting of any concerns identified in relation to the proposed development and how those concerns can be addressed by the applicant; or
- advises that the consultee objects to the proposed development and sets out the reasons for the objection.

A 'substantive response' where pre-application consultation has been undertaken is one which:

- states that the consultee has no further comment to make in respect of the proposed development and confirms that any comments made previously (during pre-application consultation) remain relevant;
- advises the person consulting of any new concerns identified in relation to the proposed development, why the concerns were not identified previously (during pre-application consultation) and:
 - how the concerns can be addressed by the applicant; or
 - that the consultee objects to the proposed development and sets out the reasons for the objection.

2.4. Assessing and Determining Planning Applications

Where an application is made for planning permission, it may be granted unconditionally or subject to conditions. Alternatively, planning permission may be refused.

The LPA is responsible for determining all planning applications within Carmarthenshire unless the development is called in by the Planning Committee (Major Development) or Welsh Government (Developments of National Significance). In such cases, the LPA makes a recommendation on the application, with the decision taken by the Planning Committee or Welsh Government.

Applications for planning permission must be determined in accordance with the approved / adopted local development plan for Carmarthenshire unless material considerations indicate otherwise. Material considerations typically include current circumstances, policies in an emerging development plan, and planning policies of the Welsh Government. **Compliance with this HDG will be a material consideration when determining planning applications which may be informed by the recommendation provided by Highways Planning Liaison.**

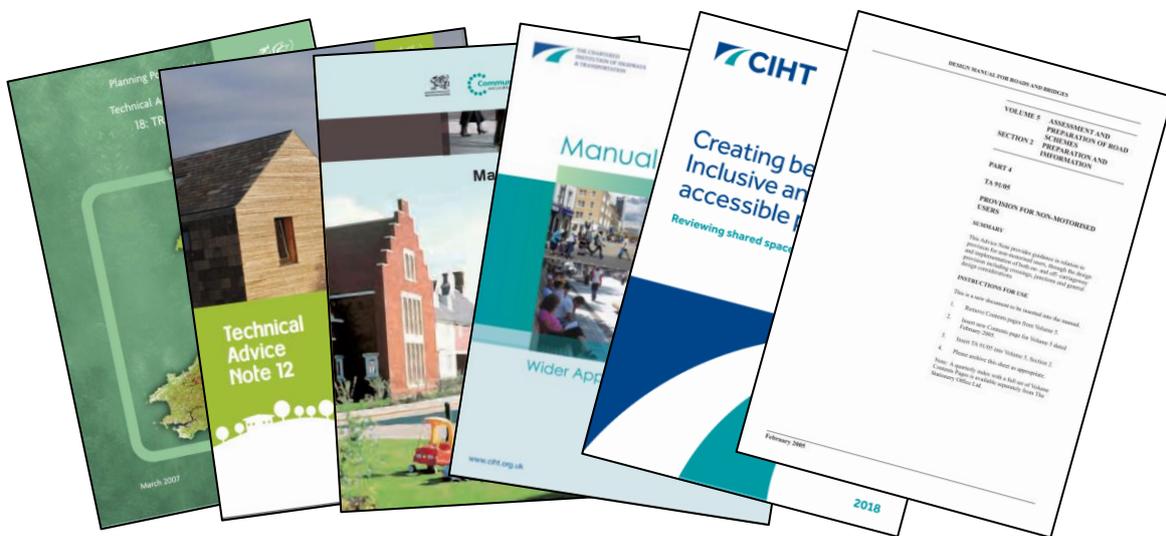
Where information has been provided to satisfy the minimum legal requirements for a valid planning application, but the LPA requires supplementary information to make a fully informed planning decision, or the quality of the information provided by the applicant may require challenge, the LPA may request additional submissions from the applicant.

In addition to the planning process outlined within this section, Developers should note that **drainage approval from the Sustainable Drainage Approval Body must be sought independently from planning approval**, more information on SAB is provided in [Part 4.4.3](#).

3. Policy Summary

The national policy context for planning within Wales is contained within Planning Policy Wales. It is supplemented by a series of Technical Advice Notes (TANs), notably TAN 12 (Design) and TAN 18 (Transport) which have been considered in the development of this HDG.

This HDG also takes into consideration the key principles set out in the Department for Transport's (DfT) Manual for Streets (MfS) and the Chartered Institution of Highways and Transportation (CIHT) Manual for Streets 2 (MfS 2). MfS primarily relates to lightly trafficked residential streets whilst its companion guide, MfS 2, extends beyond residential streets to provide both an urban and rural context. Without formally adopting these documents in verbatim, this HDG reflects the overarching principles of both MfS and MfS 2 within the local Carmarthenshire context. In certain circumstances this HDG also refers to wider guidance provided in the Design Manual for Road and Bridges (DMRB).



This Part of the HDG provides an overview of the key policy considerations underpinning the advice and standards outlined in this HDG. Furthermore, with [Part 5.2.1](#) of this HDG describing how a policy review should be one of the first tasks undertaken when preparing a development proposal, this part of the document may prove to be a useful source of reference for Developers.

Further policy related information is available on [Carmarthenshire County Council's Planning Policy](#)² page.

3.1. National Policy

TAN 18

TAN18 describes how to integrate land use and transport planning, and explains how transport impacts should be assessed and mitigated as appropriate, with Annex D providing guidance on Transport assessments. Relevant to this HDG, Chapter 5, Design of Development outlines the importance of street design in ensuring developments meet the needs of all users and helping to build the communities they serve. Annex B of TAN 18 sets out the guidelines for the provision of appropriate visibility standards; endorsing the recommended standards for visibility set out within MfS. The expectation for visibility provision within Carmarthenshire is set out in [Part 4.4.1](#) of this HDG.

² <https://www.carmarthenshire.gov.wales/home/council-services/planning/planning-policy/#.WvylGMKWw2w>

TAN 12

TAN12 provides overall guidance on how good design should be achieved through the planning process, with particular reference to design and access statements. It discusses how the residential highway network is a key component in 'Place', and that by adopting inclusive design principles, ease of access for all users will be ensured. This HDG endorses the principles of inclusive design, providing guidance for developing highway environments that are accessible for all users.

Manual for Streets

The MfS guidance document, published by the Department for Transport, focuses on lightly-trafficked residential streets, but many of its key principles may be applicable to other types of street, for example high streets and lightly-trafficked lanes in rural areas. It provides guidance on street design intended to put the needs of pedestrians first, and is focussed on streets with lower vehicle speeds.

It sets out principles for creating streets that form part of a balanced, well-connected network, which embody inclusive design. It recognises that streets need to be safe and cost-effective to construct and maintain, but also need to be attractive to have their own distinctive identity. This HDG is focused on highway environments with low vehicles speeds and therefore is underpinned by many of the MfS principles.

Manual for Streets 2

The document MfS2, published by the Chartered Institution of Highways and Transportation (CIHT) builds on the guidance set out in MfS. It does not supersede MfS; rather it is intended to bridge a perceived gap between MfS and DMRB, with the inclusion of guidance on how the principles of MfS can be applied more widely than as set out in the original document. This HDG considers the principles set out in both MfS and MfS2.

Design Manual for Roads and Bridges

The DMRB contains guidance and advice notes on current design standards, which generally apply to the trunk road network, or more heavily trafficked/ higher speed roads. Direction on when DMRB standards should be applied is provided in [Part 4.1](#) of this HDG.

Active Travel Wales – Designing for Cycling and Walking

The Active Travel (Wales) Act 2013 is landmark Welsh law to make it easier for people to walk and cycle in Wales, and the subsequent publication of the Active Travel Wales Act Design Guide followed in 2014.

It sets out guidelines intended to improve walking and cycling facilities within Wales. The Act sets a legal requirement in Wales for Local Authorities to map and plan for suitable routes for active travel, and to build and improve their infrastructure for walking and cycling. This HDG supports Active Travel Wales by following the user hierarchy outlined in [Part 4.2](#) of this HDG.

In line with Carmarthenshire County Council's responsibilities under the Active Travel (Wales) Act, Existing Route Maps (ERM) and Integrated Network Maps (INM) have been produced and are available on Carmarthenshire County Council's [Website](#).³

Equality Act 2010

The Equality Act brings together several pieces of anti-discrimination legislation to provide legal protection against discrimination on grounds of a series of 'protected characteristics' including age and disability. It requires reasonable adjustments to be made to public services and transport (amongst other things) to avoid putting disabled people at a substantial disadvantage. Good design within Carmarthenshire should adopt an inclusive approach ensuring that the needs of anyone with a specific need, arising from personal circumstances as defined in the Equality Act 2010, are met in full wherever it is reasonable and practicable to do so.

Examples of appropriate national guidance include:

³ <https://www.carmarthenshire.gov.wales/home/council-services/travel-roads-parking/active-travel/#.WybNycKWw2w>

- British Standard, BS8300:2009 on Access for Disabled People;
- Approved Document Part M 2004 of the Building Regulations 1984 and other relevant Approved Documents;
- Outcome of consultations with specialist advisers at Carmarthenshire County Council, or nationally recognised organisations with knowledge of the specific issues; and
- The results of current validated research (dated within in the last 5 years).

The Equality Act includes a new public-sector equality duty (the 'general duty'), replacing the separate duties on race, disability and gender equality. This came into force on 5 April 2011.

Department for Transport's Inclusive Transport Strategy

The Department for Transport's (DfT) Inclusive Transport Strategy (2018) outlines central Government's plan to make the transport system more inclusive and easier to negotiate for disabled people. Although the strategy is focussed on inclusion for disabled people, many of the improvements will also benefit other transport system users.

By 2030, the UK Government envisages that the transport system will provide equal access for disabled users, with assistance provided if there remains a barrier. This will be achieved through targeting the five key areas of the Inclusive Transport Strategy:

1. Awareness and enforcement of passenger rights;
2. Staff training;
3. Improving information;
4. Improving physical infrastructure; and
5. The future of inclusive travel – which considers technological advances and new business models that supports inclusive travel.

The document is intended to set a clear direction to industry on the importance of inclusive design as part of future innovation, and states that vehicles, stations and streetscapes should be designed and built so that they are inclusive and easy to use.

It also recommends that Local Authorities pause the development of shared space schemes in non-residential development, which incorporate a level surface. This directive is being reviewed by DfT and WG, and Developers should seek advice on the current status of the guidance at the time of developing scheme proposals.

Learner Travel (Wales) Measure 2008

The Learner Travel (Wales) Measure 2008 requires local authorities to assess the suitability of travel for learners between their home and places of education. The Welsh Government published the 'Learner Travel Statutory Provision and Operational Guidance (June 2014)', which includes statutory provisions which local authorities must consider in undertaking their responsibilities in line with the Learner Travel (Wales) Measure 2008. The application of Learner Travel Wales is discussed in [Part 5.2.3](#) of this HDG.

3.2. Regional Policy

Joint Transport Plan for South West Wales

The Joint Transport Plan replaces the former Regional Transport Plan, prepared by the former transport consortium made up of the four local authorities in South West Wales. The Joint Transport Plan provides the framework for improving connectivity in the region for the period of 2015 up to 2020.

3.3. Local Policy

Carmarthenshire Local Development Plan (2014)

The LDP sets out the spatial vision for Carmarthenshire (excluding the area within the Brecon Beacons National Park) and outlines a framework for growth and development in the county. It sets out land-use planning policies and proposals which are used in the determination of planning

applications and the identification of future growth opportunities. Carmarthenshire LDP can be found [here](#)⁴.

These policies include land-use allocations for different development types, including residential, and is intended to guide development up to 2021. Part 4.1 includes detail on 'Placemaking', and should be referred to in conjunction with this highway design guide. The Carmarthenshire LDP map can be found at the above link and shows areas in Carmarthenshire where development proposals have been submitted and approved.

Carmarthenshire are currently preparing a revised LDP (2018 – 2023).

CSS Wales Parking Standards (2014)

The document sets the Parking Standard guidelines for new developments in Wales. The standards seek to ensure a transparent and consistent approach to the provision of parking, submission of travel plans and sustainability considerations; informing Developers, designers and builders what is expected of them at an early stage of the development process. They identify the required number of spaces for different development types which also considers their location and context.

Carmarthenshire County Council will use the most up to date guidance as part of reviewing the suitability of parking proposals within a development.

Carmarthenshire Placemaking and Design SPG (September 2016)

This Supplementary Planning Guidance (SPG) has been prepared to guide and promote high quality, sustainable design within the County. It provides further guidance, and where applicable elaborates on the policies and proposals of the Carmarthenshire Local Development Plan (LDP), providing additional clarity to assist Developers in understanding the core requirements and considerations necessary to be included within a planning proposal.

The guidance contained within the SPG is aimed at securing a deliverable, coordinated, high standard of development and ensuring that proposals reflect and respect the character and requirements of Carmarthenshire; with Part 4.4, Accessibility and Ease of Movement and Part 4.5 Public Realm are of particular relevance to this HDG.

The guidance provided in the SPG should be considered in parallel with this HDG. However, with regards to transportation matters more weight should be given to advice provided in this HDG.

Carmarthenshire Parking Strategy 2018

The Carmarthenshire parking strategy 2018 acknowledges the challenges associated with car parking in rural areas but emphasises the importance of good design and communication with stakeholders; to ensure that parking does not undermine both the ability to provide public transport and the incentive to walk or cycle. The document recommends the use of the most recent nationally recognised parking standards, currently CSS Wales 2014.

The strategy includes the following:

- A review of the existing local, regional and national policy and guidance relating to parking, transportation and land use planning and how the objectives of the new strategy reflect the objectives set across the different policy levels;
- An assessment of the current levels of parking demand and capacity throughout towns in Carmarthenshire;
- A comparison of car parking charges across towns within Carmarthenshire and neighbouring authorities;
- Analysis of Penalty Charge Notice (PCN) data within Carmarthenshire;
- The influence of technology and potential interventions which CCC may consider in the future with a particular focus on electric vehicles; and
- It also outlines 11 parking strategy priority measures for Carmarthenshire based upon internal consultation with multiple stakeholders in CCC.

⁴ <http://www.cartogold.co.uk/CarmarthenshireLDP/index.html>

4. Design Principles and Standards

4.1. Overview

Supporting the principles of the Active Travel (Wales) Act and the Wellbeing of Future Generations Act, Carmarthenshire County Council encourages innovative design that is safe, inclusive, sustainable and well connected.

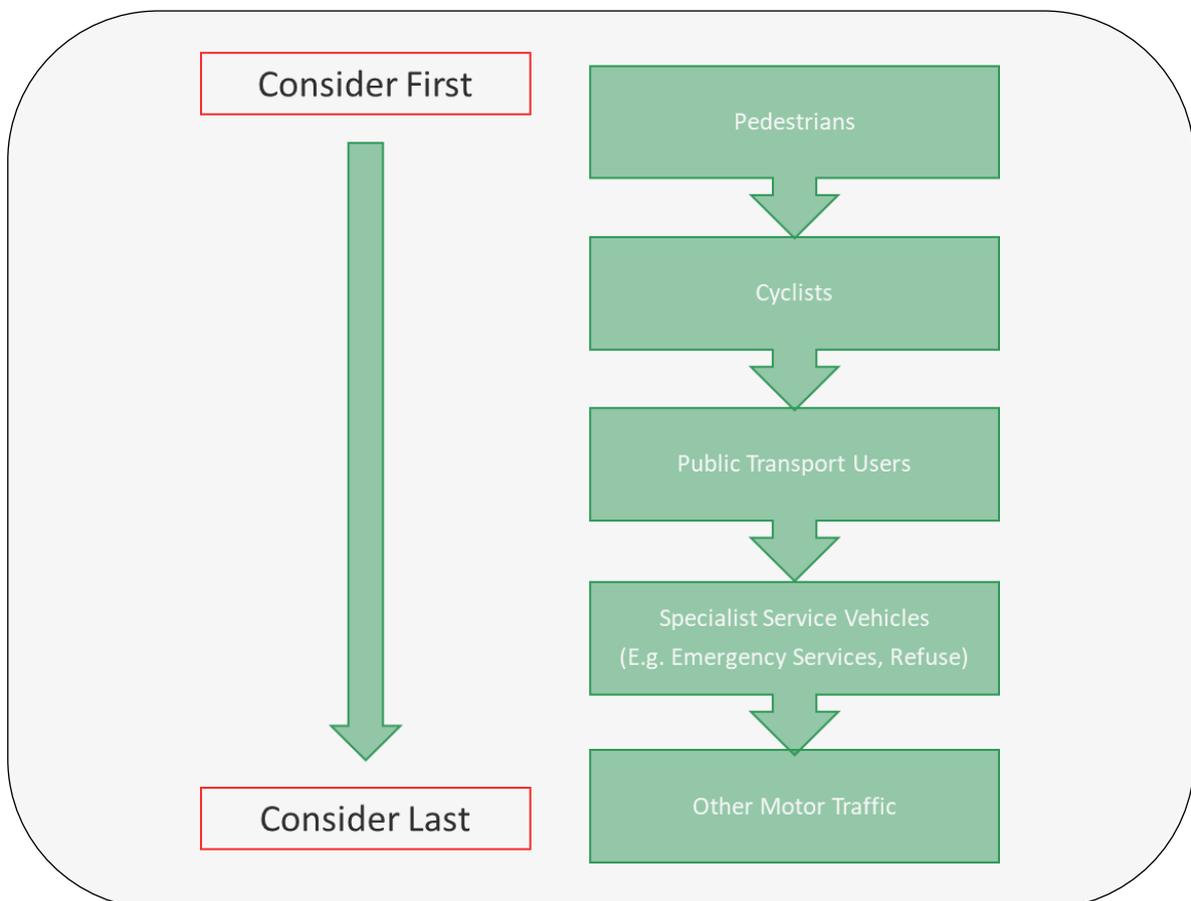
Developers are encouraged to create permeable site layouts that are to an adoptable standard and that will be offered to Carmarthenshire County Council for adoption. This section specifies when a particular road type is unlikely to be adopted by Carmarthenshire County Council. Where a development is not intended to be offered for adoption, the design should still be to an adoptable standard, to safeguard the efficient future maintenance of the highway environment within the development.

This Part of the HDG sets out the principles and standards that Carmarthenshire County Council expect to be applied when considering transport infrastructure and services for new developments. These standards relate to non-trunk roads and streets with a typical speed of 30mph or below, which Carmarthenshire Council expect the Developer to determine using appropriate survey information. For all other roads, reference should be made to DMRB guidelines.

4.2. Hierarchy of Transport Modes

Designers are expected to follow the hierarchy of transport modes shown in **Figure 4-1** within the design process; with vulnerable road users considered before all other modes of transport. However, a site must be easily accessible by all modes for it to be considered sustainable.

Figure 4-1 – Design Preparation



In adhering to this transport mode hierarchy, the provision for sustainable modes of travel will be inherent in the design and will help ensure that highways serve all transport users in a balanced way.

4.3. Access and Connectivity

When designing a development one of the key principles to establish in relation to transport is means of access and connectivity (both internally and externally). This section considers access and connectivity broadly in line with the hierarchy of transport modes presented in Figure 4-1. Specialist service vehicles are discussed in [Part 4.4.2](#) of this HDG.

4.3.1. Active Travel

Footways

The design of a development should prioritise the needs of pedestrians to ensure that the area is inclusive for all users. Developments should incorporate the principles of Active Travel Wales and should be permeable by ensuring off carriageway footways provide access between residential areas and nearby amenities (such as schools, workplace destinations, local shops and town centres).

Footways should follow existing and future desire lines and be designed so they encourage pedestrian movement with safety being a paramount consideration. They should be built with a minimum width of 2 metres and be well lit along their length.

A footway should border both sides of the carriageway where there are residential dwellings on both sides.

Where a development borders the existing highway where there are no existing footways, the development should be set back by 2 metres and a footway created to adoptable standards, in accordance with directives set out in the Active Travel Wales Act. Creation of the footway should be subject to a S.38/278 agreement. More information on Section 38 and 278 agreements is provided in [Part 6.2 and 6.3](#) of this HDG.

Crossings

Where a pedestrian desire line crosses a trafficked road, appropriate crossing points should be provided that are both safe and convenient. In line with the Active Travel Wales guidance, crossings should be accompanied by dropped kerbs and tactile paving to facilitate an inclusive design.

Developers should engage with Carmarthenshire County Council where off-site crossings are proposed to support the development.

Footpaths

Developers may wish to consider the use of footpaths to supplement footways. However, the future ownership and maintenance of new footpaths will need to be discussed and agreed with Carmarthenshire County Council.

Footpaths should generally be direct, with a focus on accessibility and permeability through the development; the footpath should be wide enough to suit the expected level of use. Pedestrians and cyclists should generally be accommodated on street rather than on routes segregated from motor traffic, as being seen by drivers, residents and other users affords a greater sense of security. To improve user experience and to facilitate a feeling of greater security, footpaths should be open, with no hidden corners, well-lit after dark and should be overlooked by dwellings.

A minimum width of 2 metres is normally required, but wider paths may be required in certain circumstances, for example, where the footpath is shared with cyclists, the minimum should be increased to 3 metres.

Footpaths should be easy to use throughout the network for those with prams and wheelchairs. Steps should be avoided wherever possible but, if unavoidable, the provision of suitable ramps or alternative routes to cater for prams and wheelchairs may well be necessary.

Provision should be made for the drainage of footpaths. However, where adjoining land is to be adopted by Carmarthenshire County Council as public open space, it may not be necessary to provide positive drainage.

Cycleways

Dedicated cycleways can form routes for cyclists that motorised vehicles are not permitted to use (except for emergency and maintenance vehicles). Pedestrians, however, do have the right to use cycleways and in some cases, it is appropriate for cycleways to be provided adjacent to footways.

Where flows are expected to be low the cycle route may be unsegregated (i.e. shared between cyclists and pedestrians with no separation by kerb or white line), but where such an arrangement is proposed the Developer must demonstrate that the design is safe for all users.

Movements from side to side are necessary to stabilise a bicycle when moving, with the extent of movement reducing as the speed of the cyclist increases. The space required needs to take into account of wobble room, physical barriers (e.g. kerbs, walls), surrounding infrastructure (e.g. bus lanes, width of adjacent traffic lane, volume of pedestrians on adjacent footway), and geometry of the cycle space (e.g. more space is required on a curve where it deviates around parked cars or loading bays).

When designing a cycle link, Developers should take account of the context within which the cycle provision will be sited. **Table 4-1** presents the preferred provision, as set out in the Active Travel (Wales) Design Guidance.

Table 4-1 Preferred minimum provision – cycle links (source: Active Travel Wales)

Speed Limit	Number of Motor Traffic Lanes	Motor Traffic Flow (AADT)	Preferred Minimum Provision by Cycle Route Type	
			Secondary Cycle Route	Primary Cycle Route
20 mph	Irrelevant	1-2500	Quiet Streets: combined traffic	Cycle Streets or Quiet Streets: Combined traffic
		2000-5000		Cycle Lanes
		> 4000	Cycle Lanes	
30 mph	2 lanes in total	0-500	Cycle Tracks	
		> 4000		
	More than two lanes	Irrelevant		
40 mph and over	Irrelevant		Cycle Tracks (excluding light segregation and hybrid tracks)	

Notes:

- This table does not include the Basic Network or cycle tracks away from highways
- Designers should always consider the potential to reduce traffic speed and volume to create acceptable conditions;
- There is some overlap between traffic flow ranges to allow for flexibility;
- Speed means speed limit, but if actual speeds are significantly higher, consider the next highest category of speed;
- Cycle tracks includes light segregation and hybrid tracks unless noted; and

- *In rural areas achieving speeds of 20 mph may be difficult and so shared routes with speeds of up to 30 mph will be acceptable, with motor vehicle flows of up to 1000 vehicles a day.*

As set out in the Active Travel Wales Guidance, a cycleway can take a variety of forms, ranging from, but not limited to;

- Cycle bypass at carriageway narrowing;
- Cycle only access;
- Contraflow cycle lane (segregated and unsegregated);
- Cycle lane (with various priorities); and
- Cycle track (with various priorities).

Where a cycle track is proposed, Carmarthenshire County Council will expect Designers to achieve the desirable minimum width of 3m.

Carmarthenshire County Council expect Designers to refer to the Active Travel (Wales) Design Guidance when designing a highway that may contain on-road cyclists. The guidance states that carriageway lane widths between 3.1m and 3.9m should not be used as drivers may attempt to pass cyclists without sufficient clearance.

4.3.2. Public Transport

The provision and access for public transport at all developments should be promoted, to ensure design is sustainable and future proofed. Pedestrian footways to public transport interchanges (i.e. bus stops and, where applicable, train stations) should be considered within the design to ensure that opportunities to utilise sustainable transport modes are maximised. The location of bus stops within new developments should be carefully considered to ensure that the whole development has efficient access to public transport facilities. Carmarthenshire County Council expect new development to accord with guidance set out in Guidelines for Planning for Public Transport in Developments by CIHT, which suggested that 400m should be taken as the maximum desirable walking distance to a bus stop.

Developers should consider the impact of their development on the public transport network, and where appropriate Carmarthenshire County Council will expect Developers to contribute to public transport improvements.

Public Transport improvements may include, but are not limited to:

- Contributions towards the funding of improved bus service provision;
- Kerb improvements at bus stops;
- Provision of bus shelter;
- Bus flag in rural areas; and
- Improvement to pedestrian routes to public transport interchange.

4.3.3. Vehicular Movement

TAN18 makes a clear distinction between roads and streets; with roads considered to be highways with the primary function of accommodating vehicular traffic movements. Streets are identified as routes typically lined with buildings and public spaces where the place (i.e people) function is considered to be more important than the movement (i.e traffic) function. It is essential that Designers consider the expected movement and place function of the highway, during the development of a design.

Vehicular Access

Developers should take account of the function of the road within Carmarthenshire's Highway Network Hierarchy when considering vehicular access to a new development. Carmarthenshire's Highway Network Hierarchy can be obtained on request and road category definitions are provided in **Table 4-2**.

The Highway Network Hierarchy was established to support an overall Highway Asset Management Plan that prioritises highway infrastructure investment. The hierarchy will underpin and improve the

management, prioritisation and service levels for highway maintenance and infrastructure investment and will support the Council's Key Outcomes from the Corporate Strategy 2018 / 2023.

Highway access should be provided from the lowest **appropriate** road classification. Access to development off roads identified as strategic; both in the context of the Local Highway Network and the Trunk Road Network (Table 4-2 Road Categories 1 and 2) will be considered on a site by site basis.

The Trunk Road Network is a system of strategic routes of national importance which cater for the through movement of long distance traffic. The trunk road network includes the key east-west links (M4, A48, A40) and the A483 north-south link within Carmarthenshire. The Welsh Government and their South Wales Trunk Road Agent (SWTRA) will also need to be consulted on any proposals affecting the Trunk Road Network.

Where a development is proposed to be served by substandard width rural roads and is remote from higher categories of road, consideration must be given to the improvement of the existing roads. This could include the provision of passing bays, which may require the setting back of the front boundary of a development.

Table 4-2 Highway Network Hierarchy Definitions

Category	Type of Road General Description	Description
1. Motorway	Limited access – motorway regulations apply	Routes for fast moving long distance traffic/ Fully grade separated and restrictions on use.
2. Strategic	Trunk and some Principal 'A' class roads between Primary Destinations	Routes for fast moving long distance traffic with little frontage access for pedestrian traffic. Speed limits are usually in excess of 40 mph and there are few junctions/ Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited.
3a. Main Distributor	Major Urban Network and Inter-Primary Links. Short-Medium distance traffic	Routes between Strategic Routes and linking urban centres to the strategic network with limited frontage access. In urban areas speed limits are usually 40 mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety.
3b. Secondary Distributor	B and C Class roads and some unclassified urban routes carrying bus, HGV and local traffic with frontage access and frequent junctions	In residential and other built up areas these roads have 20 or 30 mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On-street parking is generally unrestricted except for safety reasons. In rural areas these roads link the larger villages, bus routes and HGV generators to the Strategic and Main Distributor Network.
4a. Link Road	Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions	In urban areas these are often residential or industrial interconnecting roads with 20 or 30 mph speed limits, random pedestrian movements and uncontrolled parking. In rural areas these roads link the smaller villages to the distributor roads. They are of varying width and not always capable of carrying two-way traffic.
4b. Local Access Road	Roads serving limited numbers of properties carrying only access traffic	In rural areas these roads serve small settlements and provide access to individual properties and land. They are often only single lane width and unsuitable for HGVs. In urban areas they are often residential loop roads or cul-de-sacs.
5a. Minor Road	Little used roads serving very limited number of properties	Locally defined roads.
5b. Lane	Minor routes and low use tracks that provide access to isolated properties	In rural areas these are often narrow roads serving isolated agricultural buildings or properties. In urban areas these are often metalled lanes serving garages or the rear of properties.
5c. Green Lane or Track	Lanes and tracks that are generally unsuitable for vehicular traffic	Lanes and tracks that are unsuitable for vehicular traffic but may be used as a footpath, part of a Cycle Trail or by horse riders, generally for leisure purposes.
5d. Disused Track	Unmetalled tracks that are unrecognisable as a road	Roads that have become un-useable having fallen into disuse through regression or agricultural use.

Access Junctions

The requirements of HA TD 42/95 should be considered when deciding the most appropriate form of access junction with the existing highway network. For large developments, it may be more appropriate in certain circumstances to consider the provision of a roundabout or traffic signals (as opposed to a simple priority junction), to provide greater capacity and control.

Where a new junction or significant alteration to an existing junction is proposed for site access, a Transport Assessment / Statement will typically be required to support the associated planning application. The Transport Assessment / Statement will need to demonstrate that the proposed junction arrangement is acceptable from an engineering, operational and safety perspective. Further information on Transport Assessments / Statements and submission requirements to support planning applications is provided in [Part 5.2.3](#) of this HDG.

Basic geometric requirements for junctions, depending on the development and access road type, are considered later in this section of the HDG.

Vehicular Connectivity

The type of roads required for new development should be designed in line with guidance provided in this section of the HDG. Designers should also consider the typical road network standards provided in [Appendix A](#) and the standard details provided in [Appendix B](#).

Where a Developer is proposing alternative road type to that considered within this HDG, early engagement with Carmarthenshire County Council is recommended. In such instances there may be a requirement for the associated elements of the development proposal to accord with design standards set out in the Design Manual for Roads and Bridges e.g. for a major residential access road serving more than 300 dwellings.

The following sections consider Residential Streets and Employment and Commercial Highways.

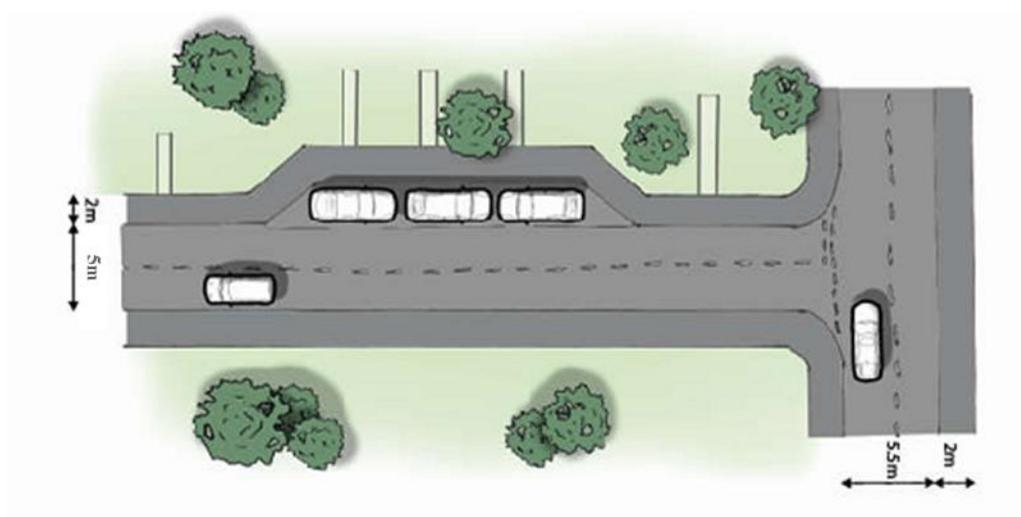
Residential Streets

Residential streets are typically considered to be low to medium in terms of movement and place function. Consequently, they should be designed to reflect the importance of pedestrians and other non-car users.

To maintain a flexible approach to design, Carmarthenshire County Council consider the number of dwellings being served by a residential street as being an appropriate starting point to consider the key design parameters. Nonetheless, designers should also consider the wider function of the street.

Carmarthenshire County Council expect all internal residential streets to be designed to maintain speeds up to a maximum of 20mph, and the Developer should provide swept path analysis, in accordance with the specification outlined in [Part 4.4.2](#) of this HDG, to demonstrate that the appropriate refuse vehicle can safely negotiate the development.

Carmarthenshire County Council typically expect carriageway widths of internal residential streets to be a desirable minimum of 5.5 metres, with footways of 2 metres in width bordering both sides of the street where there are residential dwellings on both sides. Where the Designer proposes a reduced width of 5 metres it will be expected that off-carriageway visitor parking is provided at a rate of 1 space per 5 dwellings.



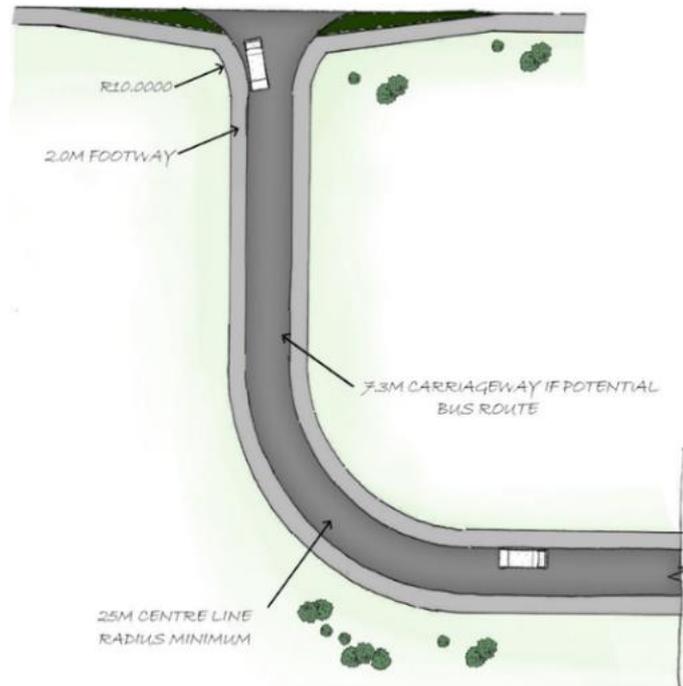
A reduced carriageway width will not be accepted where a street is serving 50 or more dwellings; to safeguard the free flow of two-way traffic within a residential development. A reduced carriageway width will only be accepted where it can be demonstrated that traffic can flow freely within a residential development whilst being able to accommodate emergency and service vehicles

Shared surface streets, in their traditional sense, generally have minimal segregation between modes of road user and therefore their design should incorporate significant traffic calming measures.

Carmarthenshire County Council will not adopt, and will only accept 'shared surface' type streets in certain circumstances, such as conservation areas and where traffic volumes are forecast to be very low. Designers should engage with Carmarthenshire County Council at an early stage of the design if shared surface is being proposed. This is particularly important given that the Welsh Government are currently reviewing their suitability.

The general principles outlined above are reflected in the geometric requirements tabled in [Appendix A](#) which includes the following different types of residential streets.

- **Major Access Roads**
 - serving up to a maximum of 300 dwellings.

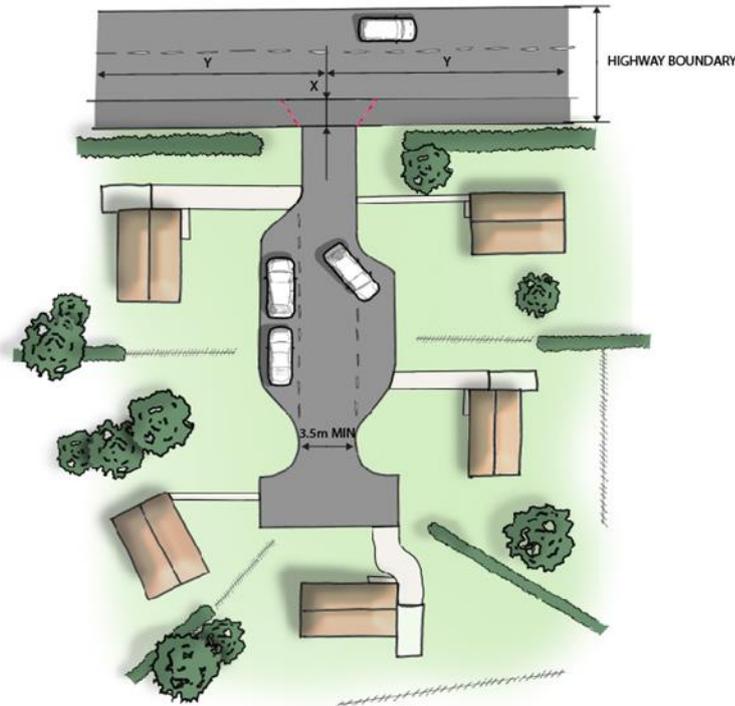


- **Minor Access Roads (including a single access point, cul-de-sac and through route)**
 - serving up to 150 dwellings.

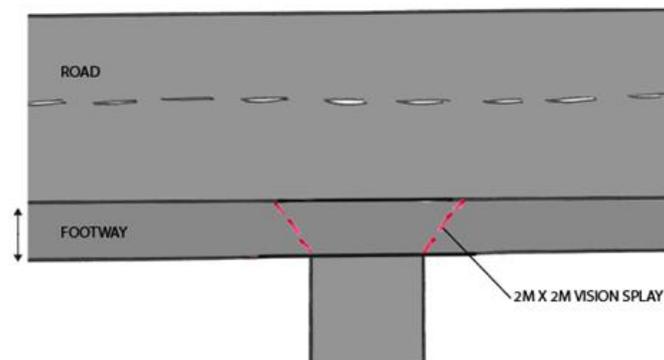


- **Shared Surfaces, including Home Zones**
 - serving up to 16 dwellings.

- **Private Drives**
 - Single and shared drives serving up to 4/5 residential dwellings.



A private drive should allow for a visibility splay of 2m by 2m, to ensure a suitable visibility envelope between driveway vehicles and pedestrians is achieved, and a vehicle crossover should be provided in accordance with the specifications included within [Appendix B](#).



Employment and Commercial Highways

Industrial and commercial estate roads must be designed specifically to cater for use by large commercial vehicles. In this respect the Freight Transport Association (FTA) has produced a document entitled *Designing for Deliveries (2016)*⁵ which includes a series of templates to assist designers and planners. This FTA document should be considered in tandem with the guidance provided in this HDG.

The manoeuvring characteristics of heavy commercial vehicles will form a key consideration in assessing design proposals for commercial and industrial developments; with a requirement on the Developer to demonstrate the appropriateness of any design proposals through the submission of scaled plans and Swept Path Analysis (SPA).

Furthermore, operational requirements with specific reference to the provision of turning, loading and storage facilities within the site curtilage should be identified during the planning application process. Estate roads must be designed with peak hour pedestrian and vehicle flows in mind whilst vehicle speeds must be minimised whenever possible to produce a safe and appropriate environment. Employment and commercial roads should include the provision of footways on both sides of the carriageway.

4.4. Highway Design Parameters

Section 4.3.3 of this HDG considered vehicular access and connectivity within a development site in terms of access junction and carriageway type. This section of the HDG provides supplementary guidance on the carriageway, operational and engineering parameters that require consideration during design.

4.4.1. Carriageway Parameters

These parameters are associated with the geometric design of a highway, with regards to alignment, visibility and headroom.

Horizontal Alignment

Horizontal curvature is based on the design speed of a road. Designers are recommended to utilise the guidance included within MfS, which makes reference to TD 9/93 of the DMRB.

Widening on Bends

Widening of the carriageway at bends should be determined by using swept path analysis of the largest vehicles likely to utilise the road. The volume and composition of traffic needs to be assessed to determine whether it is necessary to cater for two large vehicles passing each other at the bend or whether there is sufficient forward visibility to enable one driver to stop and wait for the other to pass.

Effective Straights

To maintain low vehicle speeds and safeguard the wellbeing of road users Carmarthenshire County Council will not expect any straight lengths of carriageway greater than 60m to be part of the design. Any straight lengths of carriageway greater than 60m will normally require the introduction of a speed reducing feature to keep speeds low which would add undesirable design, construction and maintenance costs. If there is to be a shared surface the effective straight should not exceed 40m.

Vertical Alignment

A maximum longitudinal carriageway gradient of 1 in 20 (5%) is generally considered desirable although where there are existing topography constraints, a gradient of 1 in 10 (10%) should be considered as a practical maximum. Where gradients exceed 5% the Developer will be required to provide grit bins, which would need to be located appropriately.

The composition of street users should be assessed in designing the vertical alignment, Carmarthenshire County Council would expect the gradient to be reduced to no more than 1 in 33 (3%) where a significant number of pedestrians or cyclists use the route.

⁵ <https://fta.co.uk/press-releases/20160610-fta-publishes-updated-guide-to-truck-turning-and-manoeuving>

Carmarthenshire County Council expect a minimum gradient of 1 in 80 (1.25%) on new developments, to ensure positive drainage is achieved. Where longitudinal gradient is slacker than 1 in 120 (0.83%) channel blocks will be required.

Carmarthenshire County Council expect crossfalls of 1:40 (2.5%) for both carriageway and footway to ensure positive drainage is achieved.

Vertical Curvature

The minimum length of vertical curvature should be based on the required forward visibility to achieve the minimum Stopping Sight Distance (SSD), as set out in **the junction visibility section below**.

A visibility envelope should be measured from a minimum driver's eye height of between 1.05m and 2.0m to an object height of between 0.6m and 2.0m all above the road surface. It should be checked in both the vertical and horizontal planes between two points. In certain circumstances Carmarthenshire County Council may request that the minimum object height be reduced to 0.26m, conforming with DMRB standards.

In addition, the minimum vertical curve length of any section of road should not be less than 20m.

Headroom

The Developer should consider headroom in the design of new developments. Carmarthenshire County Council expect the headroom for all road types to follow guidance provided in DMRB TD 27/05 which requires construction headroom between 5.30m and 6.45m (plus associated sag curve compensation).

The minimum headroom over footpaths should be 2.4 metres unless it is a shared-use path in which case the minimum should be 2.7 metres.

Visibility

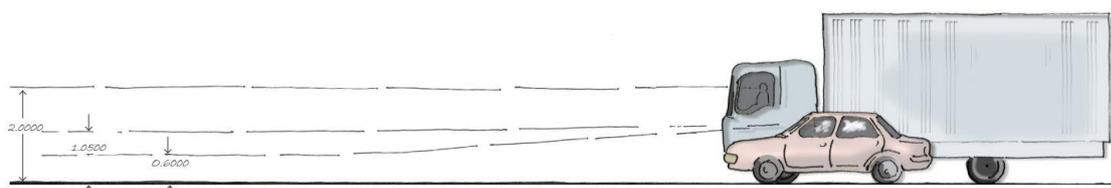
Sightlines

Sightlines are imperative when considering the safety of users on the highway network, as they give road users sufficient opportunity to identify and slow down for potential hazards. It is necessary to consider the driver's line of vision, in both vertical and horizontal planes, and the stopping distance of the vehicle.

Vertical Visibility Envelope

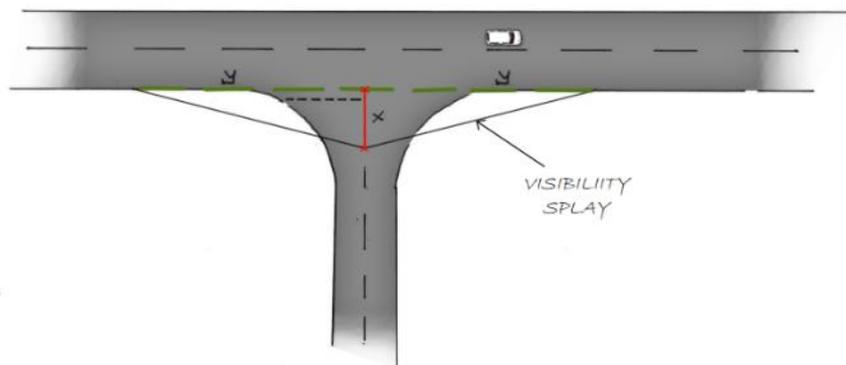
The vertical visibility envelope is the area within a driver's vision which should remain clear to enable a driver to see a potential hazard and react appropriately. A height of 600mm should be taken as the point above which unobstructed visibility should be provided, wherever the potential exists for conflicts between motorists and young children. The maximum height for the vertical visibility envelope is considered to be up to 2 metres for HGVs; Carmarthenshire County Council therefore consider the envelope to be 0.6 metres (min) up to 2 metres (max).

In certain circumstances Carmarthenshire County Council may request that the minimum object height be reduced to 0.26 metres, conforming with DMRB standards.



Junction Visibility

Junction visibility should be measured with determination of 'X' and 'Y' values.



The 'X' distance expected by Carmarthenshire County Council is 2.4 metres, which represents the typical distance between the driver and the front of the vehicle, with the 'Y' visibility distance being measured along the nearside edge of the carriageway. Whilst MfS acknowledges that vehicles will normally be travelling a distance from the kerb line, Carmarthenshire County Council expect the Y distance to be measured along the kerb line to safeguard cyclists and pedestrians who may be on, or close to, the kerb line. As a guide, for roads where the speed limit is unknown reference can be made to the Table B in TAN 18, reflected below for reference.

Table 4-3 Visibility Standards

Speed	Kilometres per hour	16	20	24	25	30	32	40	45	48	50	60
	Miles per hour	10	12	15	16	19	20	25	28	30	31	37
SSD (metres)		9	12	15	16	20	22	31	36	40	43	56
SSD adjusted for bonnet length. (2.4m)		11	14	17	18	23	25	33	39	43	45	59
Additional features will be needed to achieve low speeds												

However, Carmarthenshire County Council support the visibility standards set out in MfS2 and expect Designers to make reference to the Site Stopping Distance (SSD) formula presented in MfS2:

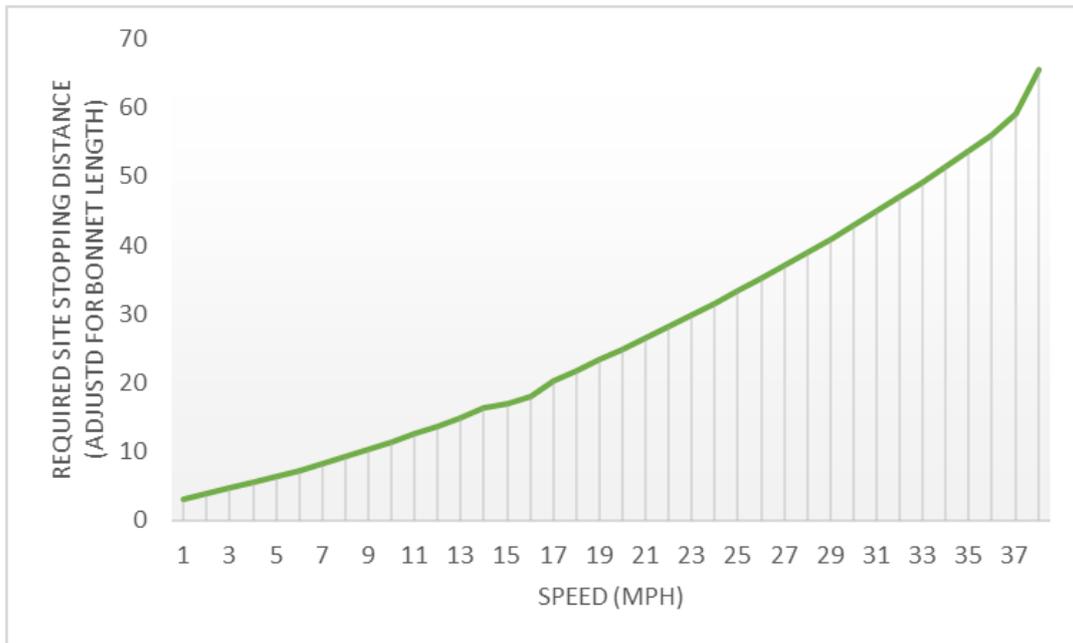
SSD = vt + v²/2(d+0.1a), where:

- V= speed in metres per second;
- T= driver perception reaction time in seconds;
- D= deceleration in m/s²; and
- A= longitudinal gradient (positive for upgrades and negative for downgrades).

For new streets the design speed should be determined with consideration given to the intended function of the junction being designed. For existing streets, the 85th percentile wet weather speed should be used, derived using site observation surveys during free-flowing conditions. If the surveys are undertaken in dry-weather conditions then a correction of -4kph is applied to determine wet weather speeds.

A graph below gives resents indicative Site Stopping Distance requirements for the 'Y' value.

Figure 4-2 – Site Stopping Distance



The graph is based on reaction times that are appropriate for cars and Light Goods Vehicles (1.5s) with a zero gradient and 5% gradient for indicative purposes. However, Developers would be expected to use the formula outlined above to determine appropriate visibility requirements. It should also be noted that Heavy Vehicles may have different deceleration characteristics. As a guide, MfS2 suggests that bus/HGV Sight Stopping Distances should not need to be assessed when the combined proportion of HGV traffic is less than 5% of traffic flow.

As described previously, these standards relate to non-trunk roads and streets with a typical speed of 30mph or below. For all other roads, visibility should be taken from DMRB guidelines.

Forward Visibility

Forward visibility is the distance that drivers need to see ahead, to stop safely for any obstructions in the carriageway.

Carmarthenshire County Council expect that the minimum forward visibility for each road type should be calculated based on the SSD formula set out in the *Junction Visibility* section of this HDG. The forward visibility should be measured along the centreline of the inner traffic lane.

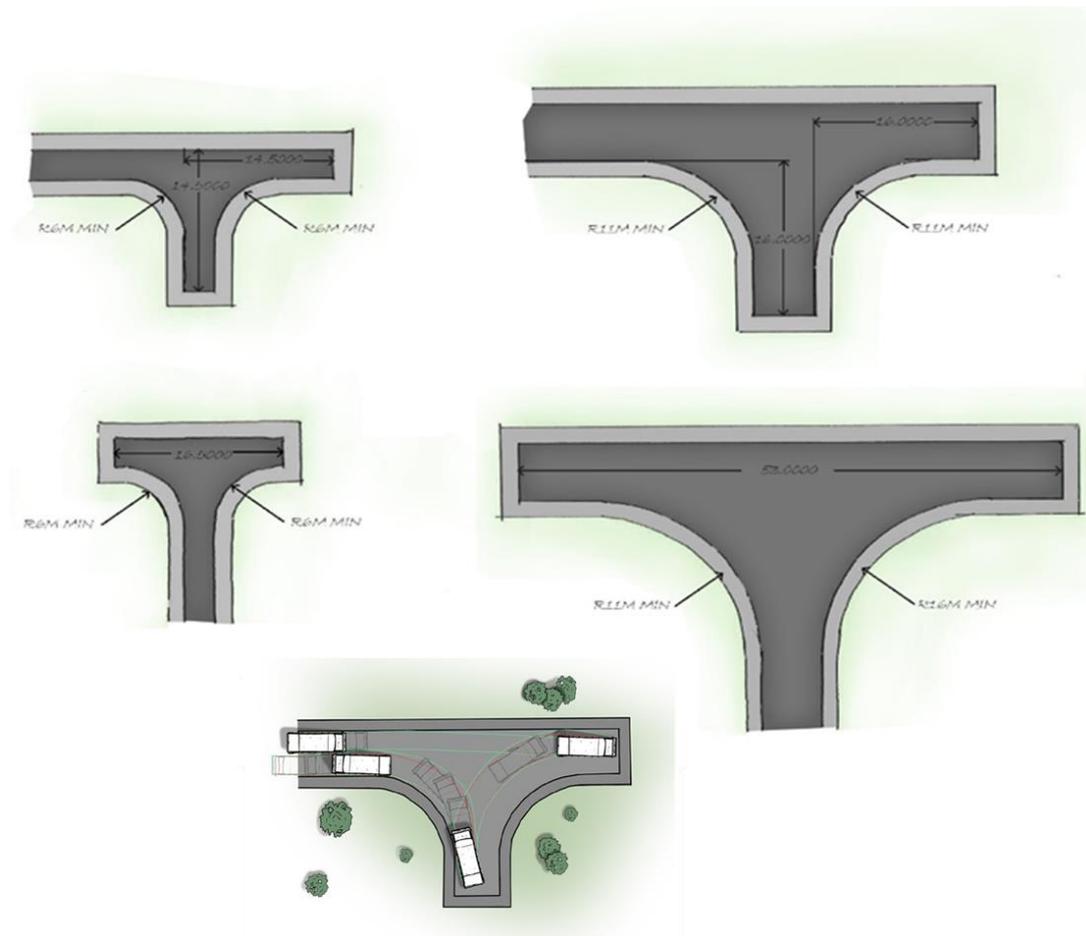
For road types not considered within this HDG, the visibility standards stipulated in the DMRB should be applied.

4.4.2. Operational Parameters

This section outlines Carmarthenshire County Council's expectations with regards to the operational parameters of highway design, where the Designer should be considering the function of the street and how road users operate within the highway space.

Turning Heads

Turning heads should allow vehicles to enter and exit an area in forward gear. Their design should be future proofed to allow access into surrounding land parcels that may undergo development. All turning heads should be provided with swept path analysis to demonstrate that they are adequate for the development and can accommodate the appropriate size of vehicle (e.g. service, delivery and refuse vehicles).



Speed Control

All developments should be designed to maintain appropriate speeds limits, which will vary depending on the nature of the road and development context.

Carmarthenshire County Council are always receptive to innovative speed control designs that can be integrated within the highway network, however preference is given to horizontal deflection and geometric speed control rather than vertical deflection measures.

The Developer may wish to propose surface texture changes as part of integrating speed control into the design, however in such cases the Developer must ensure that the proposed material is easily sourced and provides value for money.

The control of speed should be considered within the design prior to the planning submission stage, to ensure that speed control features are intrinsic to the residential development layout. This ensures that potential 'bolt-on' features, incorporated at a later stage, are avoided.

Parking

Parking for new developments should be provided in accordance with CSS Parking Standards (2014), with reference to the appropriate development type and zone allocation. Carmarthenshire County Council have not developed a zoning plan, but instead expect the Developer to indicate the proposed zone allocation, which will be agreed on a site by site basis.

The CSS 2014 contains design guidance for parking layouts and sets out the recommended number of spaces for new developments.

For additional guidance on Cycle Parking Designers should also make reference to guidance set out in the Welsh Government document 'Design Guidance: Active Travel (Wales) Act 2013'.

Central government's Road to Zero strategy sets out an ambition to ensure that at least 50% of cars on the road are ultra-low emission vehicles by 2030, supported by a significant roll-out of electric vehicle infrastructure. Supporting and facilitating the uptake of alternative fuel vehicles is a key policy aim of Carmarthenshire County Council, as set out in the Carmarthenshire Parking Strategy 2018.

In order to ensure that all new developments are equipped with the infrastructure required by the increasing numbers of electric vehicles, and Carmarthenshire County Council's aspirations for future uptake of electric vehicles, all developments will be expected to provide charging points at a percentage of the full parking provision.

Carmarthenshire County Council will expect electric charging points to be provided at a rate of **3%** of the overall parking provision at all commercial developments, and details of how they will be provided and managed should be included within the accompanying Transport Assessment / Transport Statement as described in **Part 5.2.3** of this HDG.

Pick up / Drop off

With regards to educational establishments, CSS 2014 also sets out the requirements for pupil pick up and drop off areas at new school developments. There should be an area provided for the picking up and setting down of school children within the curtilage of the school premises, which should include a facility for vehicles to turn without reversing. Turning areas should be separate from pupil circulation areas to safeguard the safety of pupils walking or cycling to school.

For creche / child care establishments, availability of adequate kerbside capacity (i.e. unrestricted parking) should be taken account of. Developers must demonstrate that there is sufficient capacity to accommodate the pick up and drop off of children without having a detrimental impact on the free-flow of traffic on the highway.

Servicing

All developments should be designed to facilitate ease of access for servicing vehicles, including emergency services, deliveries, and refuse vehicles. Swept path analysis of refuse and emergency vehicles is mandatory for all new developments.

Provision should be made for emergency service vehicles being able to access all residential dwellings, with Fire Tenders being able to reach within a 45-metre hose distance from all parts of each dwelling house. Emergency vehicles should not have to reverse more than 10 metres from the end of an access road; provision should be made for safe and efficient turning opportunities. As a guide, for emergency vehicles there should be a minimal operational width of 3.5 metres between kerbs to allow suitable operating space, however this should be increased to 3.7 metres where walls form an obstruction.

Refuse vehicles should be able to safely negotiate new developments, with the vehicles being able to access 25 metres of each dwelling house or refuse storage locations. Refuse vehicles should not have to reverse more than 12 metres from the end of an access road; provision should be made for safe and efficient turning opportunities.

The Developer is expected to demonstrate that the highway layout is suitable using swept path analysis, as described in **Part 5.2.3**. Carmarthenshire County Council typically operate **26t rigid three axle Refuse Collection Vehicles, with rear wheel steering**, and these vehicles specifications should be used for any associated swept path analysis.

For retail developments, and in particular small convenience type stores, appropriate servicing arrangements should be presented as part of the planning application. It should be demonstrated that the existing and proposed highway network is suitable to accommodate the prescribed servicing vehicle. The Developer should agree servicing arrangements prior to submission of the planning application by including relevant details in the pre-application discussions discussed in **Part 5**.

4.4.3. Engineering Parameters

This section provides information of the expectations from Carmarthenshire County Council with regards to drainage and structures associated with the highway.

Structures

Any structure that supports the highway (such as a bridge, culvert, or retaining wall) should be considered as part of the highway, and therefore should be included within the adoption agreement. The appearance and choice of material should be discussed with Carmarthenshire County Council at the earliest opportunity, and will be expected to be constructed to minimise future maintenance costs.

All structures proposed as part of a new development require Approval in Principle (in accordance with DMRB BD2/12) before any works can commence on site.

Drainage

Surface water drainage should be compliant with the requirements set out in the Carmarthenshire Council drainage strategy, to mitigate the potential adverse impact of any new development on flood risk. A groundwater flood risk assessment should be undertaken for all new developments within any area that may include a high risk of groundwater flooding. The discharge of private water into highway drainage systems will not be permitted.

All drainage designs should be verified by an appropriate drainage consultant, prior to the granting of technical approval. Where drainage infrastructure is required to be laid under the adoptable highway then written assurance must be provided by Welsh Water that an adoption agreement between the Developer and Welsh Water has been established.

All prospective maintainable highway drains should be located within land that is to be adopted by Carmarthenshire County Council. All surface water run-off should be contained within the curtilage of the development, and will not be permitted to run onto the adopted highway.

Sustainable Drainage Systems

Sustainable Drainage Systems (SuDS) that are designed to maximise the amount of water that is retained within a development will be considered by Carmarthenshire County Council on a case by case basis. As a general principle the use of SuDS within larger developments is currently supported, however the Developer must demonstrate that there is sufficient storage capacity through the use of balancing ponds and wetland areas (outside of the highway boundary) to reduce the impacts of any potential flooding.

Legislation, effective from the 7th January 2019 dictates that consent for any drainage infrastructure will be required from the Sustainable Drainage Approval Body (SAB). Further information on the process can be found at <https://www.carmarthenshire.gov.wales/> and any associated enquires should be sent to SAB@carmarthenshire.gov.uk.

Developers should note that if the quantum of development is of two properties or more, over 100m² of construction area, or has any drainage implications, then **SAB approval must be sought independently from the planning approval**. Construction cannot commence until the two permissions (planning and SAB) have been granted.

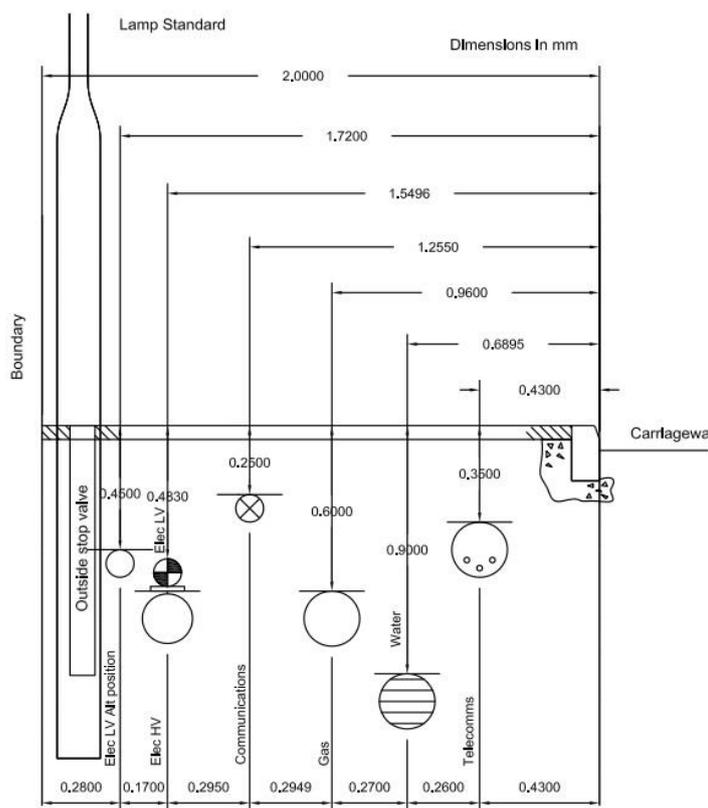
SAB approval will also be required for any planning permissions granted subject to a condition, where an application for discharge of the condition has not been made prior to the 7th January 2020.

Statutory and Other Services

During the design of any development the needs of the statutory authorities should be taken into account at an early stage. To ensure ease of future maintenance Carmarthenshire County Council expect mains to be located in footways or verges, however if no other route is available then appropriate alternate installation arrangements should be discussed with Carmarthenshire County Council and all relevant statutory undertakers.

It is recommended that Developers contact all relevant statutory undertakers at the early stages of design to ensure their apparatus can be installed in an efficient manner, and comply as much as is practicable with the recommendations of the National Joint Utilities Group (NJUG) for arrangement of mains within a service corridor, as shown in **Figure 4.3**:

Figure 4-3 – NJUG recommendations for arrangement of main in service corridor



The Designer should consider the position and level of utility covers within the design of a new road layout, particularly on bends or within braking/ steering areas. A suitable skid resistant cover may be required, which should be discussed with Carmarthenshire County Council.

4.4.4. Aesthetics Parameters

This section sets out Carmarthenshire County Council's expectations with regards to the aesthetics of a highway environment, which is reliant upon the materials, landscaping and lighting provided within a highway environment.

Materials and Specification

All roads and residential streets should comply with the materials and construction specification standards set out by Carmarthenshire County Council. The use of standard materials ensure that designs are sympathetic to the future maintenance of the development.

Where a Developer is intending to use non-standard materials, it must be demonstrated that the materials are easy and cost-effective to source compared to the standard materials promoted by Carmarthenshire County Council. The Developer may be required to agree commuted sums to cover any non-standard materials and construction specifications, as set out in **Part 6.3**.

Landscaping

The design of roads that includes landscaping should be sympathetically considered with future maintenance in mind. Carmarthenshire County Council will normally only adopt the paved services and verges which are critical to the functioning of the highway, and therefore any planting must not be positioned near structures or services.

Tree species should be selected which have a modest canopy and the appropriately planted with the use of tree grids and root barriers, and the Developer may be required to pay commuted sums to cover future maintenance. Where landscaping is proposed close to footways or cycleways, thorny species will not be supported by Carmarthenshire County Council. If existing hedges contain thorny species, cycle tracks shall be positioned at least 3 metres from the extremities of the hedge to prevent problems with hedge-cutting debris. Existing hedges adjacent to the existing highway shall be transferred to frontages for maintenance.

If there are existing landscape features considered of value by Carmarthenshire County Council, the Developer, as part of the design process, must attempt where possible to position the access in a safe location that allows the landscape feature to be retained.

Existing trees, which may become maintainable by Carmarthenshire County Council, should be the subject of condition survey to determine their importance, and may be subject to commuted sum payments to cover future maintenance costs.

Street Lighting

Street lighting is an important consideration in the design of a new development and roads. Street lighting should assist in creating developments that minimise the fear of crime whilst also minimising any potential environmental impact. Designers are encouraged to use best practice in systems and operations for street lighting, and should engage with the Carmarthenshire County Council street lighting team for current specifications.

In areas of historic importance, Developers may be required to source lighting specifications that are sympathetic to the historic environment to ensure the character of the area is retained.

5. Design Process

5.1. Overview

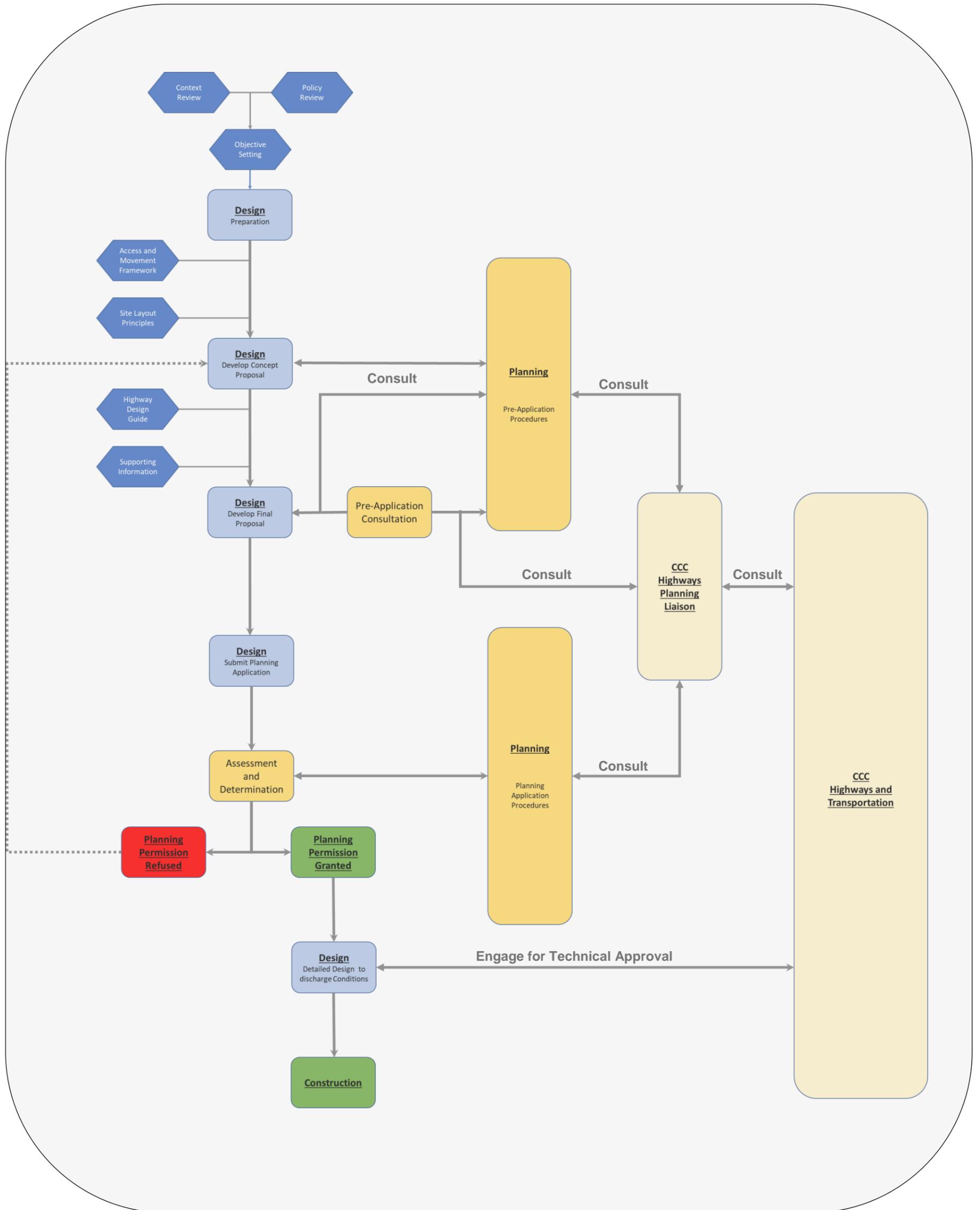
New designs should be developed in consultation and engagement with the local planning authority, stakeholders and the community. However, it is important that consultation and engagement is formally initiated at appropriate stages during the planning process and that the full life cycle of a scheme is considered from the outset. Carmarthenshire County Council expect Designers to use this HDG as a toolkit to inform the design of a development, as a way of minimising the need for iterative engagement with Highways Planning Liaison.

This Part of the HDG outlines the approach that Carmarthenshire County Council expect Developers to follow when considering the highway design of a new development.

5.2. Scheme Life Cycle

Figure 5-1 presents an overview of the key design stages, from inception through to implementation, as recommended by Carmarthenshire County Council. The design stages are presented alongside the key pre-application and planning application milestones described in [Part 2](#) of this HDG. The remainder of this section expands on the individual design components with further advice provided on opportunities for formal engagement within the planning framework.

Figure 5-1 - Scheme Life Cycle

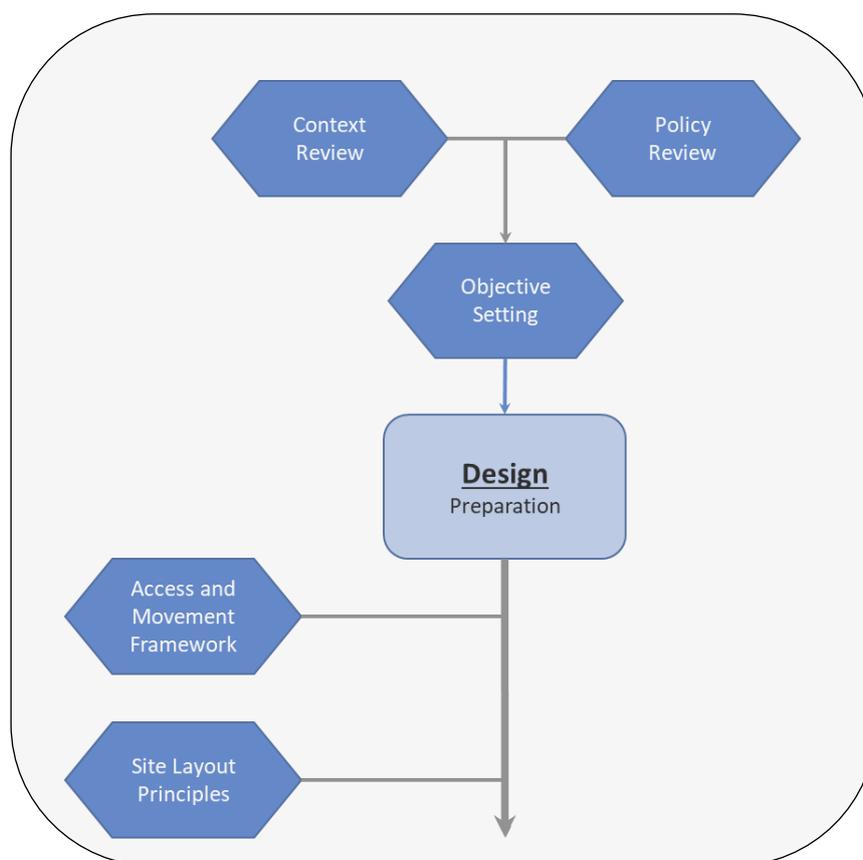


5.2.1. Design Preparation

Figure 5-2 below outlines the approach that Developers should adopt when preparing a design for a new development in Carmarthenshire.

The process should start with a policy and context review to ensure appropriate design objectives are established from the outset. This approach will ensure that the layout of the site and the supporting access and movement framework comply with policy and complement the character of the surrounding area and transport network.

Figure 5-2 – Design Preparation



Policy and Context Review

The **policy review** should consider both planning and transportation policies; with a need for the overarching design objectives and subsequent development proposal to comply with national, regional and local policy (see [Part 3](#) of this HDG for further information on policy).

The **context review** should consider the character of the surrounding area and the transport system serving the development site. Establishing basic transport information to inform the design is particularly important and should identify both opportunities and constraints for site travel by all transport modes. A range of techniques are available when assessing the transport system, including site observation and surveys, review of historic records, access auditing and the analysis of information held by statutory undertakers and agencies.

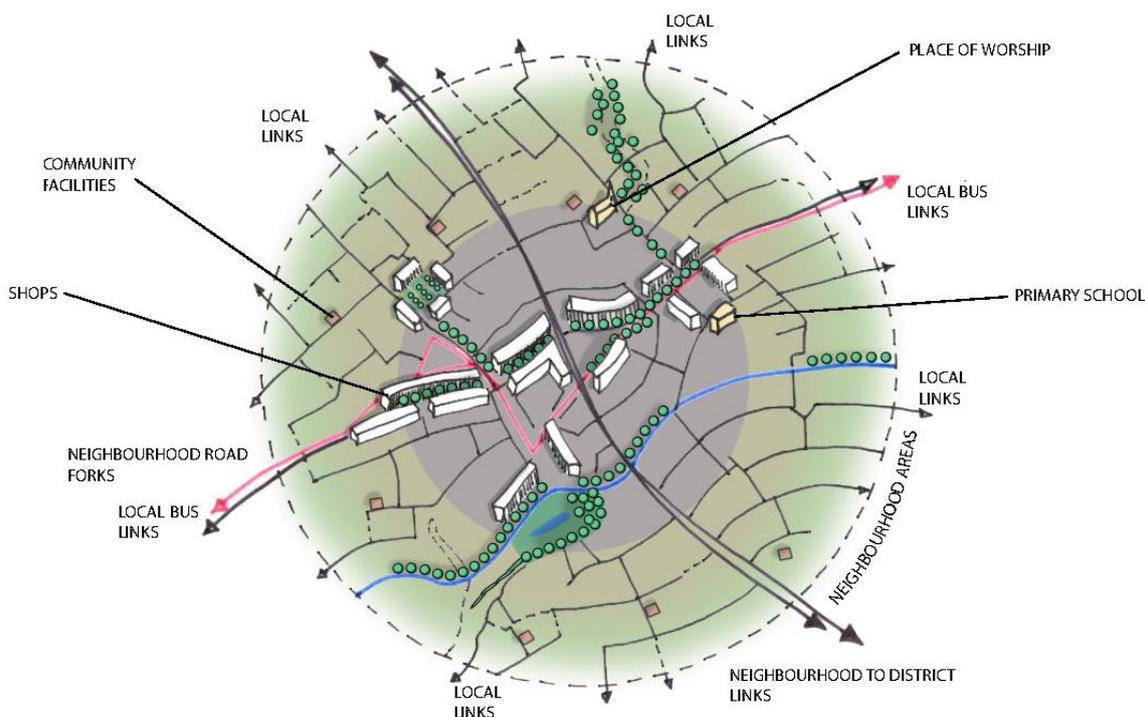
Objective Setting

On completion of the policy and context review, measurable **design objectives**, reflecting expected site activities, should be established. Typical transport related objectives might include, but should not be limited to:

- Ensuring safe and convenient active travel links with nearby services and facilities;
- Ensuring the site is adequately served by public transport;
- Securing multiple vehicular accesses to the site; and
- Keeping traffic speeds to a maximum of 20mph for residential development.

Access and Movement Framework and Site Layout Principles

The access and movement framework should consider general movement to and through the site. For new developments, understanding the movement and place function of the surrounding area will enable appropriate points of connection and linkages to be identified so that important desire lines can be achieved. Designers should utilise this information when making the required considerations on access and connectivity as outlined in [Part 4.3](#) of this HDG. Developing a well-informed access and movement framework will ensure that the development proposals enhance the existing movement framework of the surrounding area.



As discussed in [Part 4.2](#), Designers are expected to consider the hierarchy of transport modes shown in [Figure 4-1](#) when developing the access and movement framework and establishing site layout principles. In adhering to this transport mode hierarchy, the provision for sustainable modes of travel will be inherent in the design and will help ensure that highways serve all transport users in a balanced way.

To further encourage travel by active modes and public transport, the following overarching **site layout principles** should be adopted:

- The site should be safe, permeable and easy to navigate;
- Pedestrians and cyclists should generally be accommodated on street rather than on routes segregated from motor traffic; and
- The site should be well connected to surrounding transport provision and services.

Further information with regards the highways and transportation principles that Carmarthenshire County Council expect Developers to adopt is provided in [Part 4](#) of this report.

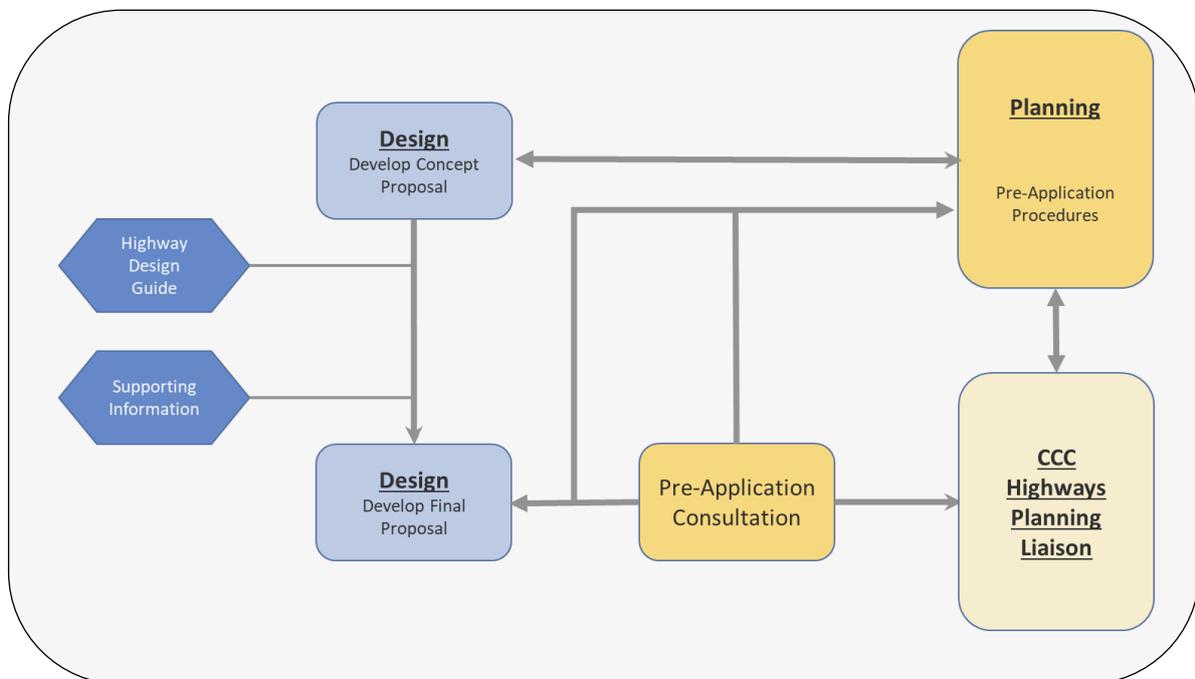
5.2.2. Developing a Proposal

With the access and movement framework in place and the site layout principles established, a development proposal and site layout plan (or masterplan for larger more complex developments) should be produced.

From a transport perspective, the proposal should demonstrate how a safe, accessible, maintainable and future proofed scheme will be delivered. The site layout plan (or masterplan) should be developed in line with guidance provided in [Part 4](#) of this HDG with regards the overarching design principles and standards.

Figure 5-3 below shows the approaches that could be adopted when producing a development proposal within Carmarthenshire.

Figure 5-3 – Developing a Proposal



Concept Proposal

For major developments and more complex schemes, it is recommended that Developers / Applicants consult with Carmarthenshire County Council on their access and movement framework and site layout principles during development of a concept proposal. The planning department offer pre-application services for those who request it; allowing significant issues to be addressed before a formal application is made.

Pre-application procedures aim to ensure that planning applications proceed smoothly and quickly once they are formally submitted. The process allows planning officers, in consultation with Highways Planning Liaison and other stakeholders, to provide their professional opinion on the prospect of gaining planning permission. Nonetheless, any advice given at this stage is informal and will not bind the LPA in the event of a formal planning application.

Applicants are encouraged to agree information requirements with the LPA (including for PAC) prior to submission, through pre-application discussions, so that where possible, the information sought is proportionate to the nature of the scheme.

For smaller less complex schemes developing a concept proposal in consultation with Carmarthenshire County Council is not typically required.

Final Proposal

When developing a final proposal, careful consideration is required of all critical highway and transportation features which impact on the efficiency and quality of the development. This should include but should not be limited to:

- Internal and external connectivity by all transport modes;
- Street layouts and dimensions;
- Parking provision and design;
- Landscaping;
- Materials, management and maintenance;
- Access for service vehicles including emergency services;
- Speeds control;
- Drainage; and
- Routes for utilities.

Part 4 of this HDG sets out the principles and standards that should be adopted when designing these critical features for a new development. The information that should be provided to support a development proposal is outlined later within this section of the HDG. This information will be required for the proposal to be properly assessed.

Pre-Application Consultation (PAC)

PAC is required for all 'major' development applications, whether for full or outline permission. The Developer is required to consult specialist consultees when a development exceeds thresholds specified by the Welsh Government. As a **specialist consultee**, Carmarthenshire's **Highways Planning Liaison** will need to be consulted where a development is expected to alter or amend the existing highway infrastructure (including footways, footpaths or verges) and / or exceeds the Welsh Government thresholds outlined in **Part 2.3.1** of this HDG. All planning applications for development proposals that are subject to PAC must be accompanied by a PAC report to be valid. The PAC report must address the substantive response provided by Highways Planning Liaison. The points raised by Highways Planning Liaison in the substantive response should be tabulated in the PAC report, with details on how they have been addressed by the Developer provided in an adjacent column.

All information that would be required to be submitted as part of a formal planning application will be required by the Highways Planning Liaison team during Pre-Application Consultation. The following section sets out the information that should be provided to support a development proposal during both Pre-Application Consultation and for a formal planning application.

5.2.3. Supporting Information

Carmarthenshire County Council expect planning submissions to be accompanied by appropriate plans and information to ensure that their recommendation on the acceptability of a development from a transport perspective is based on a robust evidence base.

The level of information required for pre-application consultation or to support a planning application will vary depending on the type of development being proposed and the key considerations Carmarthenshire County Council expect during the development of a particular design. **Table 5-1** outlines the key consideration expected for the following different development types:

- | | |
|-----------------------------|--------------------------------|
| • Residential | • Creche / Childcare |
| • Retail | • Health |
| • Hospitality (Food Retail) | • Agricultural Intensification |
| • Education | |

Details of the associated assessment and supporting information requirements are provided following Table 5-1.

Table 5-1 Key Design Considerations by Development Type

Development Type \ Considerations	Residential	Retail	Hospitality (Food Retail)	Education	Crèche / Childcare	Health	Agricultural Intensification
Access by all modes	✓	✓	✓	✓	✓	✓	✓
Access junction layout	✓	✓	✓	✓	✓	✓	✓
Sustainable transport options	✓	✓	✓	✓	✓	✓	-
Learner Travel Assessment	✓	-	-	✓	-		
Parking	✓	✓	✓	✓	-	✓	-
Pick-up / drop-off	-	-	-	✓	✓	✓	-
Deliveries and Servicing	-	✓	✓	✓	-	✓	-
Delivery / Servicing Management Plan	-	✓	✓	✓	-	✓	-
Emergency vehicle access	✓	✓	✓	✓	✓	✓	✓
Opening / operational hours	-	✓	✓	✓	✓	✓	-
Trip generation during peak periods	✓	✓	✓	✓	✓	✓	✓
Travel Planning	✓	✓	✓	✓	-	✓	-
Road safety for all users	✓	✓	✓	✓	✓	✓	✓
Outside of hours use	-	-	-	✓	✓	✓	
Incremental increases in use	-	-	-	-	-	-	✓
Passing places	-	-	-	-	-	-	✓
Damage and impact to highway	-	-	-	-	-	-	✓

- **Access by all modes** – the accessibility of the proposed site by all modes of travel. This includes consideration of access to the site by heavy-duty vehicles, which is inclusive of ‘swept path analysis’;

- **Access junction layout** – the appropriateness of the proposed access junction, especially with regard for sustainable transport and heavy-duty vehicle movements, which is inclusive of ‘swept path analysis’;
- **Sustainable transport options** – the existing accessibility of the site by sustainable transport modes, as well as the potential future improvements that can be implemented to improve sustainable access. This will need to make explicit reference to the Integrated Network Map, produced by Carmarthenshire County Council, which summarises the existing and future aspirations for active travel within Carmarthenshire;
- **Learner Travel Assessment** - Chapter 5 of the Learner Travel Wales guidance provides statutory guidance on risk assessing walked routes to school. The purpose of this assessment is to ensure safe routes to school for all school pupils. If, as part of the safe routes to school assessment, problems are identified Developers will be expected to contribute to addressing the problem, or supporting free school transport.
- **Parking** – the proposed parking levels appraised against the standards, for both vehicles and pedal cycles;
- **Pick-up / drop-off** – the proposed pick-up / drop-off arrangements, and the potential wider implications;
- **Deliveries and Servicing** – the impact of the proposed delivery and servicing movements, including ‘swept path analysis’;
- **Delivery / Servicing Management Plan** – a management plan to mitigate any potential safety or operational constraints associated with delivery and servicing movements;
- **Emergency vehicle access** – the access arrangements for vehicles accessing the site in the case of an emergency. This will need to consider the appropriateness of the proposed access, and discuss whether a separate emergency access is required;
- **Opening / operational hours** – the proposed opening / operational hours of the development;
- **Trip generation during peak periods** – the anticipated trip generation of the proposed development during the peak periods, and the impact of the vehicle trips on the wider highway network;
- **Travel Planning** – a Travel Plan that outlines a list of measures to encourage sustainable travel at the proposed development;
- **Road safety for all users** – the road safety implications of the proposed development for all road users;
- **Outside of hours use** – any potential other uses of the proposed development that will occur away from the stated operational hours;
- **Incremental increases in use** – the increase in use at the proposed development, which will impact the surrounding highway network for all users;
- **Passing places** – the location of passing places, which will need to be at appropriate points in agreement with Carmarthenshire County Council; and
- **Damage and impact to highway** – the potential damage to the highway infrastructure that could be attributed to the proposed development.

The key considerations outlined in Table 5-1 and described above reflect the baseline requirements for the different types of development. A Design and Access Statement and Evidence based Submission will be required to demonstrate appropriate consideration has been given as per Table 2.1 for all development applications.

Design and Access Statement

Design and Access Statements (DAS) are required to ensure that both design quality and inclusive access and connectivity are given appropriate consideration in the planning process. The requirements of a DAS reflect the objectives of good design as set out in PPW and TAN 12.

A DAS should demonstrate and clearly communicate the logical design process; setting out the main access elements of a scheme and demonstrating compliance with the objectives of this HDG and Carmarthenshire County Council Policy. Elements of the development being offered for adoption

should be clearly stated within the Design and Access statement, along with details on servicing and emergency access arrangements.

Evidence Based Submissions

Planning submissions should be accompanied by appropriate plans to ensure that the proposal can be properly assessed. It is expected that plans are submitted to Carmarthenshire County Council to demonstrate that the design can accommodate appropriate vehicle types and that schemes are deliverable.

Swept path analysis should be used to determine the suitability of a design to accommodate the appropriate size of vehicle. Whilst it may be acceptable for the occasional large vehicle to have to cross lanes to negotiate a particular junction (e.g. refuse vehicle), a development that will need to accommodate more frequent large vehicles (e.g. buses, delivery or service vehicles) may require more generous swept paths.

Streets that are required to accommodate a bus route should allow for two buses passing each other in opposite directions, which should be clearly shown on an appropriate plan.

All swept path analysis for servicing vehicles should be undertaken using the **26t rigid three axle Refuse Collection Vehicles, with rear wheel steering**, as used within the county.

For private driveways and residential parking areas Carmarthenshire County Council typically expect swept path analysis to be undertaken using a standard car, to demonstrate that the parking provision is appropriate to allow vehicles to negotiate the spaces safely without interfering with the free-flow of traffic and highway safety.

An important consideration for highway design is the existing land ownership on which the scheme will be constructed. If a highway scheme requires 3rd party land then the Developer will be required to demonstrate that an appropriate agreement through planning (e.g. Section 106) has been entered into and approved. This is to ensure that the land can be secured to safeguard the safe implementation of the proposed highway scheme.

Carmarthenshire County Council expect all highway scheme drawings to be accompanied by a land ownership plan to ensure that proposed mitigation is deliverable within the available land constraints.

Additional Highway and Transportation Submissions

Carmarthenshire County Council may require further information to support a planning application depending on the exact nature of the proposed development. An overview of other highway submissions that may be required to support a development proposal is provided below.

Transport Assessment

Planning applications for a new development in Carmarthenshire may require a Transport Assessment or Transport Statement to review the potential impact of the scheme on the surrounding transportation network. Reference should be made to the Carmarthenshire County Council document: 'Transport Assessment Guidance for Developments in Carmarthenshire', in addition to TAN 18.

Carmarthenshire County Council's 'Transport Assessment Guidance for Developments in Carmarthenshire' and Annex D of TAN 18 provide guidance on the required structure and content of both Transport Assessments and Transport Statements. They also set out the typical thresholds for developments which require assessment; these are included in [Appendix C](#). Carmarthenshire County Council will consider whether a Transport Assessment or Transport Statement is appropriate for a new development on a case by case basis.

Travel Planning

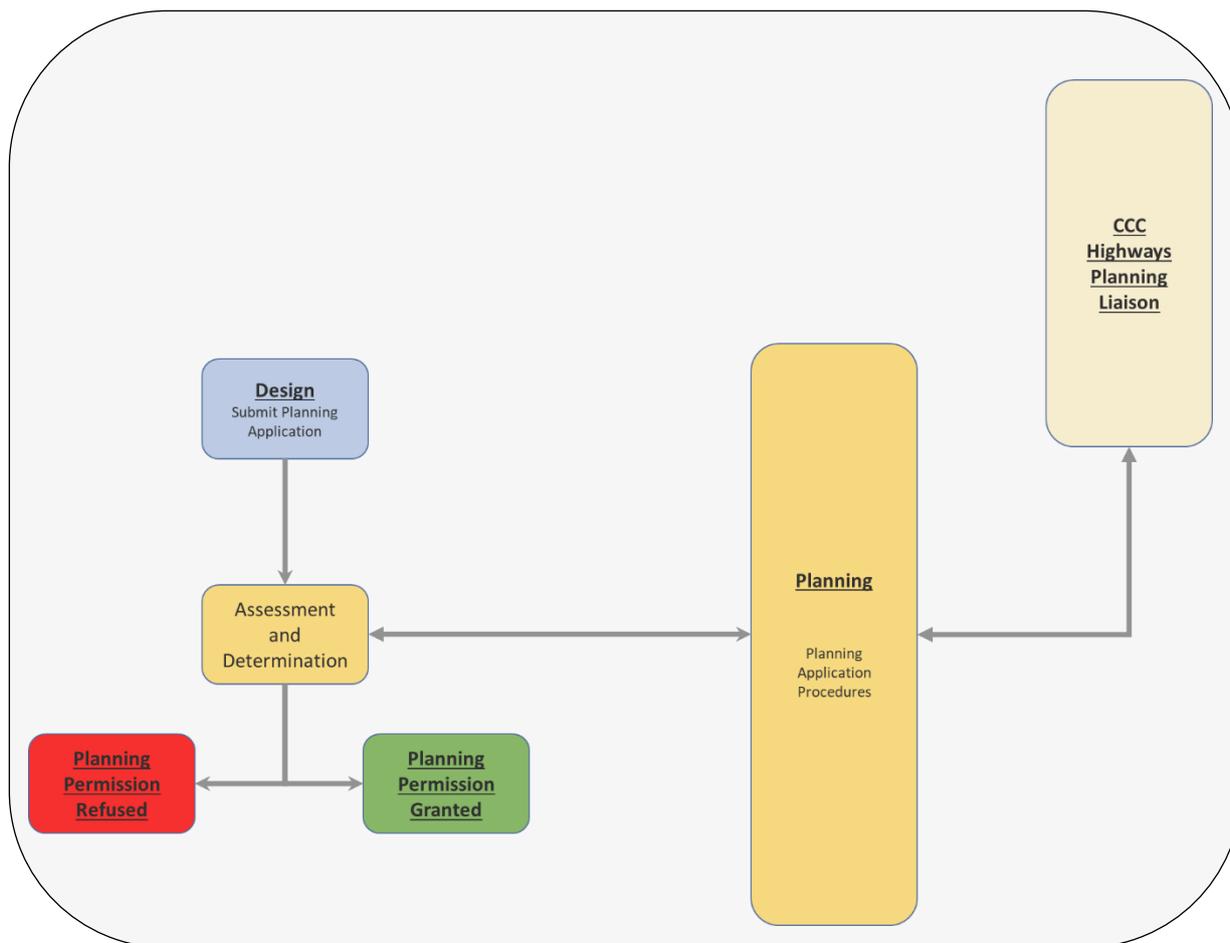
A successful Travel Plan can lower the volume of traffic generated by a development and can play a key role in improving local air quality and the health of the population. A judgment as to whether a proposed development should be supported by a Travel Plan will be made on a case by case basis. A Travel Plan should be site specific and should be developed to offer a range of measures that are intended to reduce the need to travel using the private car.

A Travel Plan should not be used as a means of avoiding other necessary mitigation responsibilities which may be secured through the S106 process described in [Part 6.2](#).

5.2.4. Planning – Application, Assessment and Determination

Figure 5-4 below outlines the planning application process as described in [Part 2](#) of this HDG.

Figure 5-4 – Application, Assessment and Determination Process



Applicants are encouraged to agree exact information requirements with the LPA prior to submission, through pre-application discussions, so that where possible, the information sought is proportionate to the nature of the scheme. Carmarthenshire County Council’s planning portal enables electronic submission of planning applications and applicants are encouraged to apply electronically.

The Local Planning Authority (LPA) is responsible for determining almost all planning applications within Carmarthenshire. As a statutory consultee, Highways Planning Liaison, is required to provide the LPA with an informed response and recommendations on individual planning applications falling within Welsh Government’s consultation thresholds. However, it should be noted that Highways Planning Liaison can only make recommendations and the final decision on whether planning approval should be granted rests with the LPA.

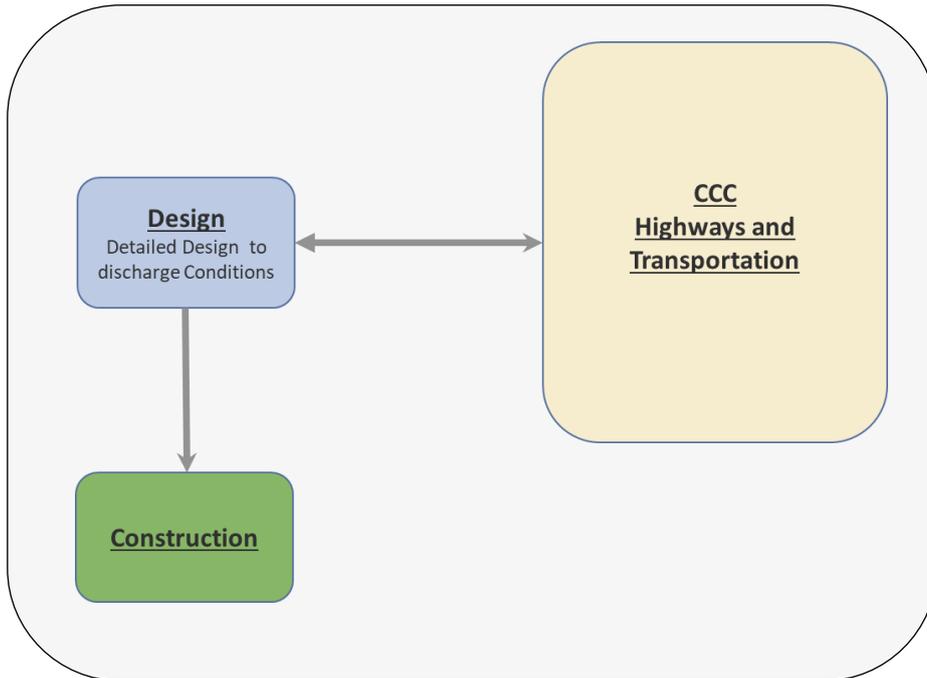
Compliance with the guidance provided in this document will form the basis of recommendations made by Carmarthenshire County Council’s Highways Development Control section to the LPA with regards individual planning applications.

Highways Development Control will provide one of the following three recommendations to the LPA.

- No highway objections to the development proposal;
- A recommendation for approval subject to planning conditions; or
- A recommendation for approval.

The LPA may grant planning permission subject to conditions or statutory agreements; requiring specific approval for aspects of the development before implementation. This process is illustrated in **Figure 5-5** and is discussed further in **Part 6** of this HDG.

Figure 5-5 – Detailed Design and Technical Approval



6. Construction, Statutory Agreements and Maintenance

This section of the HDG provides information to Developers on Carmarthenshire County Council's expectations for construction of development within the county. It also provides an overview of the key statutory agreements that should be resolved as part of the planning and design processes set out in [Parts 2 and 5](#) of this HDG. It also underlines the importance of understanding the future maintenance responsibilities of Carmarthenshire County Council, and sets out the mechanisms in place to ensure a sustainable and cost-effective maintenance procedure is in place for highway environments in the county.

This section of the HDG should be read in parallel with the HDG toolkit which can be obtained from Carmarthenshire County Council on request.

6.1. Construction

At times construction activities can have a significant impact on the surrounding community, particularly in relation to impacts on roads, noise and air quality. Developers are expected to prepare a Construction Management Plan (CMP), which should be developed to minimise the impact of construction.

Developers (and Contractors) should **ensure that the CMP is fully approved prior to the commencement of construction** programmes.

As a minimum, CMPs should include:

- Construction programme;
- Construction site plan;
- Construction vehicle trip generation and specification;
- HGV routes to/ from the construction site; and
- Appropriate mitigation.

Wind farms are a prime example of a development type whereby CMPs are essential and will be required to ensure that construction activities (including transporting key components to / from site) will not have an undue impact on the surrounding highway network. Further information on Wind Farms and associated requirements is provided in [Appendix D](#).

6.2. Planning Conditions and Statutory Agreements

The LPA may grant planning permission subject to conditions or statutory agreements as outlined in earlier in this HDG. Information about highway related planning conditions, statutory agreements and associated requirements is provided below.

Section 106 Planning Obligations

A Section 106 agreement is the process by which obligations upon the Developer are put in place to render the development acceptable to Carmarthenshire County Council. A Section 106 agreement is entered into by Carmarthenshire County Council and the land owner and / or the Developer and could involve physical works or financial contributions depending on the nature of the development and associated mitigation measures. Further information on Section 106 agreements is provided in Carmarthenshire County Council's Planning Obligations SPG which can be found on the Carmarthenshire County Council [website](#)⁶.

The Developer should seek early engagement on potential Section 106 contributions.

⁶ <https://www.carmarthenshire.gov.wales/media/3701/planning-obligations-spg.pdf>

Section 278 Applications

In accordance with the Highways Act 1980, the Developer would be required to enter into a Section 278 agreement with Carmarthenshire County Council where a new development requires any works to the existing highway. This enables the Developer to make alterations or improvements to the existing adopted highway. Where a Section 278 agreement is required the Developer should seek early engagement with Carmarthenshire County Council, and the agreement should be concluded (including Technical Approval) prior to construction commencing.

Developers will be required to obtain a Section 58 notice for all Section 278 works, to prevent new highway being dug up within 3 to 5 years of construction.

Where the works to the existing highway requires additional land outside the highway boundary, which will be adopted by Carmarthenshire County Council, a combined Section 38/278 agreement may be required.

Section 38 Applications and Adoption

When designing new roads and streets there should be a presumption that they will be adopted by Carmarthenshire County Council. New highway infrastructure will need to be provided in line with the requirements and specifications of the highway department as set out in this HDG. Technical Approval from Carmarthenshire County Council will be required. More information on Section 38 Applications and Adoption is provided in [Part 6.3](#).

Traffic Regulation Orders

Traffic Regulation Orders (TRO) are legal documents which are used to enforce carriageway restrictions, and include:

- Speed limit;
- Parking restrictions;
- One-way streets;
- Loading/ servicing
- Banned turns; and
- Bus lanes.

Any highway schemes reliant upon permanent TROs **should not commence until the relevant Orders have been approved** by Carmarthenshire County Council.

In order to create a TRO, the Developer must follow the standard TRO process which can be time consuming **may impact on the development programme** due to the nature of the process.

The process includes a public consultation period where key stakeholders are consulted on the TRO design. TROs must be advertised in the local press, inviting the public to comment on the proposals during a specified Notice period (21 days). There is no set timescale for the making of TRO, as each Order is different and the timescales are often linked to the number of objections received.

Carmarthenshire County Council recommends that **Developers incorporate the TRO process into the development programme at an early stage**, to avoid the implementation of development being delayed by a dependence on an outstanding TRO approval.

In order to allow the TRO application to be process, the Developer should provide Carmarthenshire County Council with:

- Traffic Regulation Order Location Plan;
- Detailed drawing presenting the full scheme of highway works, clearly demarcating the Order with relevant details;
- Draft Order Schedule (in text format); and
- Relevant supporting data, which may include but not be limited to speed data and accident reports.

The costs incurred by Carmarthenshire County Council in processing a TRO application will be borne by the Developer, with the recovery of costs to Carmarthenshire County Council being provided for in the Section 278 or 38 agreement.

Street Works and Road Works Notices

Developers may need to place new utilities and services within the adopted highway boundary, or alter existing services already within the adopted highway boundary. Under the New Roads and Street Works Act (NRSWA) a Section 50 licence allows a person without a statutory right, to place, retain and remove apparatus in the street, and to do work necessary for that purpose.

For street works, Section 50 and Schedule 3 of NRSWA allows the Developer to undertake the works necessary.

Where private work is required on a highway or where works will affect any part of the highway including placing of signs or cones; but for work that does not require excavation, installation, changing or repair of utility apparatus, then the Developer will be required to obtain permission to book road space in order to work on the highway. To discuss exact requirements the Developer should contact Carmarthenshire County Council at planning@carmarthenshire.gov.uk

Advanced Payment Codes

The Advance Payment Code (APC) is a legal requirement under Sections 219 – 225 of the Highways Act 1980, and is intended to ensure that liability is covered for any new street works to be carried out for new development. It guarantees that sufficient funds will be available to cover the cost of making up any street affected by works to adoptable standards.

The Developer must not commence construction of any new highway prior to either a Section 38 Agreement being signed, or the receipt of the APC bond. Furthermore, building construction in a new development must not commence until new access roads are completed to base course.

6.3. Maintenance

The maintenance of highway environment is a key aspect of safeguarding the safety and well-being of the people of Carmarthenshire. Poorly maintained highway environments have the potential to reduce the quality and ease of everyday trips, whether they are made on foot, by bicycle, public transport or private car.

Therefore, when designing developments there should be a presumption that they will be adopted by Carmarthenshire County Council, and as such all streets should comply with the requirements and specifications set out in this document. Where streets are not intended to be offered for adoption, the design should still be to an adoptable standard, to safeguard the efficient future maintenance of the highway environment within the development.

Where the design **does not comply with the standard layouts** specified by Carmarthenshire County Council, early engagement should be sought with the adoptions team and the **Developer will be required to provide commuted sums** to cover future maintenance costs and obligations.

Adoption requirements and Section 38 Applications

Carmarthenshire County Council, under Sections 219 – 225 Highways Act 1980, is required upon approval of building regulations to serve notice to Developers to secure a bond in respect of the street works associated with the new development. Designers should build and offer the newly constructed highway for adoption and for the street works to be undertaken as part of a Section 38 Agreement of the Highways Act.

Prior to entering into a Section 38 agreement the Developer must have obtained **full planning permission** for the development, which should include full approval of any reserved matters relating to the highway, including approval of drainage and structures. The Developer must also prove title to the land that is to be included within the agreement, as described in [Part 5.2.3](#) of this document.

The Developer should request adoption in writing and submit detailed design drawings to Carmarthenshire County Council accompanied with the following information:

- A location plan;
- Detailed engineering layout;
- Longitudinal sections;
- Highway construction details;
- Drainage layout plan and manhole schedule;
- Drainage construction drawing;
- Stage 1 and 2 Road Safety Audit, including Designers Response and an Exception Report where necessary;
- HD 42/17 – the walking, cycling, horse riding assessment and review where necessary;
- Copy of the planning permission notice;
- Evidence of written assurance provided by Welsh Water that an adoption agreement between the Developer and Welsh Water has been established;
- Street lighting schemes and specifications;
- Details of Traffic Regulation Orders where required;
- Highway drainage details, including calculations and catchment plans where required;
- Evidence of Approval in Principle for highway structures where required; and
- Detailed plans of junction designs, traffic signs and road markings where required.

If any details have been amended from the original approved drawings as part of the granting of planning permission, then these should be clearly shown within the submitted information.

Carmarthenshire County Council require payment of all costs for checking of the design and for preparing the Section 38 agreement, to cover any costs incurred by Carmarthenshire County Council should the development not take place.

These costs will be deducted from the final administration and inspection fees once the Section 38 agreement is entered. Subject to technical checks and receipt of appropriate fees, Carmarthenshire County Council will notify the Developer of the date of adoption and notify all other interested parties.

Commuted Sums

In terms of Highway Adoption there will be an expectation that under normal circumstances all Developers will submit designs that meet highway adoption requirements as set out in this HDG. Where adoption is intended to be offered, the Developer will be required to provide commuted sums.

Commuted sums are the financial contributions made by Developers (third parties) to Highway Authorities as compensation for taking on the **future maintenance responsibility of new highways or highway improvements**. The financial contributions are usually, although not exclusively, secured through legal agreements under Section 38 and / or Section 278 of the Highways Act 1980.

The practice of agreeing commuted sums has historically varied by Highway Authority, however Carmarthenshire County Council seeks to clarify the process. This will improve the efficiency of the commuted sums process, ensuring a quality environment with enhanced materials and street design is achieved.

Commuted sums will be required for the future maintenance of highways that fall into the following categories:

- Alterations to the existing highway to form an access to a development;
- New highways constructed;
- Additional features to be adopted that require maintenance over and above that normally expected to access a development;
- The use of approved alternative materials over and above standard highway construction materials; and

- Utilisation of existing highway infrastructure by a proposed development.

When agreeing commuted sums with Carmarthenshire County Council, Developers should follow a process of best practice, as follows:

- Dialogue between Carmarthenshire County Council and the applicant should be established prior to planning approval and at the earliest stage possible;
- Section 38 legal agreements are the preferred method for highways adoption;
- Commuted sums are appropriate for any new works carried out to facilitate new developments as part of a Section 278 agreement. There is no requirement for Carmarthenshire County council to calculate a 'degree of benefit'; and
- The agreed commuted sum figure should be calculated immediately prior to the development infrastructure becoming adopted, with the figure adjusted periodically throughout design and construction to accommodate any price fluctuations.

For the commuted sums calculation in Carmarthenshire, as a guide Developers should use a period of maintenance of 30 years however this should be discussed and agreed with Carmarthenshire County Council. The following formula should be used to calculate the maintenance obligation:

$$\text{Commuted sum} = \sum M_p / (1+D/100)^T$$

Where: M_p = Estimated periodic maintenance cost
based on current rates.

D = Periodic Discounted Rate (effective
annual interest rate)(%)

T = Time period before expenditure will be incurred or
cyclical period (years)

Appendices



Appendix A. Typical Road Network Standards

	Major Access Roads			Minor Access Roads			Shared Surfaces	Shared Private Drives	Employment and Commercial Highways		
Criteria	Street Specification			Street Specification			Street Specification	Street Specification	Street Specification		
	Standard Design	With Cycle lane on a Bus Route	On a Bus Route	Standard Design	Cul-de-Sac	Two Access Points			Distributor Road	Access Road	Cul-de-Sac
Max Number of Dwellings	300			Up to 150	Up to 50	150 - 300	Considered on a case by case basis	5	N/A		
Design Speeds											
Speed Limit	30 mph (at entrance) reducing to 20 mph			20 mph (at entrance)			15 mph	10 mph (at entrance)	30 mph (at entrance) reducing to 20 mph		
Control Speed	20 mph			20 mph (internally)			15mph	10 mph (internally)	20 mph		
Street dimensions and character											
Carriageway Width	5.5 m	10.3 m	7.3 m (standard width)	5.5m	5m	5.5m	Generally, 6.8m but should be subject to swept path analysis	3.2m for single dwelling. 3.5m for shared with passing places as appropriate	7.3 m standard width (3.65 m lanes)		
Footway	2.0m (3.0m if shared with cyclists)	2 m	2 m	Both sides of the carriageway with a minimum 2m width			Shared space	No	2.0m (3.0m shared cycle)		
Cycle way	No	1.5m	Cycles permitted to use bus lane	No			Shared space	No			
Verge	No			No			No	No	No		
Direct vehicular access to properties	Yes			Yes			Yes	Yes	No		
Public Transport											
Bus access	No	Yes	Yes	Should be considered where further development phases are proposed			No	No	Yes	Yes	No
Street design details											
Traffic calming	Preference is given to horizontal deflection and geometric layout measures rather than vertical deflection measures.			Preference is given to horizontal deflection and geometric layout measures rather than vertical deflection measures.			N/A	N/A	Preference is given to horizontal deflection and geometric layout measures rather than vertical deflection measures.		
Vehicle swept path to be accommodated	Refuse Vehicles	Refuse Vehicles and a further requirement to demonstrate that a Bus and Standard Vehicle can pass each other along the route	Refuse Vehicles and a further requirement to demonstrate that a Bus and Standard Vehicle can pass each other along the route	Refuse Vehicles When designed to allow bus access there is a further requirement to demonstrate that a Bus and Standard Vehicle can pass each other along the route			Refuse Vehicle	Standard design vehicle	16.5 HGV	Swept path analysis of a bus and standard design vehicle should be able to pass each other around the route.	
Gradients	10% (1:10) Maximum 1.25% (1:80) Minimum 0.83% (1:120) Minimum with channel blocks			10% (1:10) Maximum 1.25% (1:80) Minimum 0.83% (1:120) Minimum with channel blocks			10% (1:10) Maximum 1.25% (1:80) Minimum 0.83% (1:120) Minimum with channel blocks	10% (1:10) Maximum 1.25% (1:80) Minimum 0.83% (1:120) Minimum with channel blocks	10% (1:10) Maximum 1.25% (1:80) Minimum 0.83% (1:120) Minimum with channel blocks		
Minimum forward visibility	Calculate using SSD distance formula from MFS for appropriate observed speeds			Calculate using SSD distance formula from MFS for appropriate observed speeds			Calculate using SSD distance formula from MFS for appropriate observed speeds	Calculate using SSD distance formula from MFS for appropriate observed speeds	Calculate using SSD distance formula from MFS for appropriate observed speeds		
Junction sightlines (x/y) (onto road)	X distance - 2.4m, Y distance - Calculate using SSD distance formula from MFS for appropriate observed speeds			X distance - 2.4m, Y distance - Calculate using SSD distance formula from MFS for appropriate observed speeds			X distance - 2.4m, Y distance - Calculate using SSD distance formula from MFS for appropriate observed speeds	X distance - 2.4m, Y distance - Calculate using SSD distance formula from MFS for appropriate observed speeds	X distance - 2.4m, Y distance - Calculate using SSD distance formula from MFS for appropriate observed speeds		
Minimum Junction radii	10m			6m (10m with a major access or higher)			Determined by swept path analysis	6 m or 10 m when accessing off a classified highway	15m		
Centreline Radius	25m minimum			20m minimum			Determined by swept path analysis	N/A	25m minimum		

Appendix B. Standard Details

Appendix C. Carmarthenshire County Council Transport Assessment Thresholds

NB The thresholds specified below are for guidance only. The level of assessment required should be agreed with the County Council.

Land Use	Use Class	Size	Threshold		
			No Assessment (Less Than)	Transport Statement (Between)	Transport Assessment (More Than)
Food Retail	A1	GFA	250 m ²	250 – 1,000 m ²	1,000 m ²
Non-Food Retail	A1	GFA	800 m ²	800 – 1,000 m ²	1,000 m ²
Financial & Professional Services	A2	GFA	1,000 m ²	1,000 – 2,500 m ²	2,500 m ²
Restaurants & Cafés	A3	GFA	300 m ²	300 – 2,500 m ²	2,500 m ²
Drinking Establishments	A4	GFA	300 m ²	300 – 600 m ²	600 m ²
Hot Food Takeaway	A5	GFA	250 m ²	250 – 500 m ²	500 m ²
Business	B1	GFA	1,500 m ²	1,500 – 2,500 m ²	2,500 m ²
General Industry	B2	GFA	2,500 m ²	2,500 – 5,000 m ²	5,000 m ²
Storage & Distribution	B8	GFA	3,000 m ²	3,000 – 10,000 m ²	10,000 m ²
Hotels	C1	Bedrooms	50 bedrooms	50 - 100 bedrooms	100 bedrooms
Residential Institutions	C2	Beds	30 beds	30 - 50 beds	50 beds
Residential	C3	Dwellings	50	50 – 100	100
Non-Residential Institutions – Schools	D1	GFA	-	-	All New Schools
Non-Residential Institutions – Higher/Further Education	D1	GFA	500 m ²	500 – 2,500 m ²	2,500 m ²
Non-Residential Institutions – Conference Facilities	D1	GFA	500 m ²	500 – 1,000 m ²	1,000 m ²
Assembly & Leisure	D2	GFA	500 m ²	500 – 1,000 m ²	1,000 m ²
Stadia	-	Seats	Discuss with Council	Discuss with Council	1,500 seats
Other	-	-	Less than 30 Vehicle Movs/Hour	30 – 60 Vehicle Movs/Hour	60 + Vehicle Movs/Hour

Appendix D. Wind Farm Best Practice

Overview

In order to ensure construction of a wind farm can be undertaken successfully and efficiently, effective traffic management is required. Of particular note, wind farm traffic management should consider the impact of construction on the performance of the surrounding highway network, and the impact of abnormal loads on the roads. It is considered therefore that effective traffic management will: improve road safety (all users), reduce environmental risk, promote consultation with local communities and minimise road congestion.

This appendix identifies the fundamental considerations related to constructing wind farms within the boundary of Carmarthenshire County Council (CCC). These fundamental considerations have then been used to identify good practice relating to wind farm traffic management.

Fundamental Considerations

The following are considered as fundamental considerations for developing effective wind farm traffic management:

- Distributing relevant permits;
- Engaging with key stakeholders;
- Planning appropriate transport routes;
- Providing safe and appropriate site accesses;
- Considering the health and safety of all road users;
- Providing clear and concise signage; and
- Producing a Traffic Management Plan (TMP).

Effective Traffic Management – Good Practice

Road Cleaning

Developers should arrange for the regular use of a street sweeper vehicle to clean the public highway surrounding the wind farm. Although wheel-wash facilities are likely to be introduced on-site to clean vehicles, it is expected that some dirt will be transported to the public highway, and therefore arranging a street sweeper to clean the surrounding roads is considered an appropriate measure to ensure a clean project.

Speed Limits

The designated speed limits on public highways may not always be appropriate for wind farm construction traffic, as the (usually) local rural nature of the surrounding highway are not designed for heavy goods vehicles. Therefore, it may be appropriate to introduce lower speed limits for construction traffic, in order to increase road safety and minimise nuisance to the public. Developers should also consider how this measure is policed with construction staff, with evidence provided to demonstrate the adopted policing method.

Within the wind farm construction site, speed limits should be set at a level appropriate to the on-site risks.

Information

Developers will need to inform local communities of the proposed works, key delivery dates and timings. There are several potential methods for undertaking this consultation, with the following potential options: door-to-door visits, letter drops, community hub notices, dissemination via community councils, and local newspaper notices. The information provision should be proportional to the works.

A designated point of contact within the site (usually the Site Manager / Community Liaison Officer) will be provided to local communities, so that concerned individuals can raise queries.

Traffic Flow Management

When planning for wind farm construction, Developers will need to manage traffic flows on the public highway surrounding the site. The typical traffic flows (during both peak and off-peak times), road-

type, and proximity to 'sensitive receptors' (such as local schools) will need to be considered, as well as the time of year (particularly relating to holiday periods), time of day, and typical weather, when developing traffic flow management options.

Developers should minimise disruption and inconvenience to other road users through providing appropriate mitigation. The most appropriate mitigation will need to be determined; however, they could be: traffic signals, stop-go signage, and / or road closures and diversions.

Site Access(es)

When designing site accesses to wind farm construction sights, consideration should be given to providing sufficient visibility for all road users. This could require modification of the existing roadside fabric / vegetation.

Any proposed access to a wind farm construction site will need to be of sufficient width to accommodate the largest abnormal loads that will require access to the site. Any potential entrance control points will also need to be located a sufficient distance from the site access to prevent accessing vehicles from queueing / waiting on the public highway.

Vehicle Driving

A banksman will be required at the site access to advise egressing site vehicles that the public highway is clear. Vehicle drivers will need to be instructed to never expect other road users to stop for them, and to always follow the Highway Code.

Dry-Running

Prior to the delivery of abnormal loads, 'dry-runs' should be undertaken as far in advance as practical / possible. Developers will need to inform the local communities prior to commencement of the 'dry-runs'.

Reinstatement

A pre-condition survey, co-ordinated with CCC (including the South Wales Trunk Road Agent, if relevant), will be required prior to the commencement of works to determine the areas of existing degradation and damage. As part of this, the Developer will need to consider the need for landscaping to mitigate the impact of construction traffic.

During the wind farm construction, the public highway will be maintained by the Developer, including the prompt reinstatement of damaged infrastructure / verges.

Traffic Management Plan

A good and effective TMP will need to address / consider / provide the following:

- School opening and closing times, peak traffic times, and holiday periods, to ensure wind farm construction traffic movements are undertaken during the most appropriate periods;
- Consultation with local communities, which will include advanced notification of abnormal load deliveries;
- Street sweepers to clear the public highway;
- Pre-condition surveys;
- Specific environmental risks; and
- Key contacts, which will include the: Police, Trunk and Local Highway Authorities, key stakeholders, and local school / important institutions on the proposed transport routes.

