Cornwall Streetscape Design Guide

Version 0.7 07/11/2019

Contents

Introduction

Purpose of this guidance

This guide provides a policy background and template for the development of transport infrastructure (new or modifying existing facilities) to promote an appropriate hierarchy of transport infrastructure for the movement of goods and people in Cornwall.

The Streetscape Design Guide (CSDG) develops the principles of the Cornwall Design Guide (CDG) in the particular context of transport. The guide supports the policy set out in Connecting Cornwall: 2030 Local Transport Plan. The CSDG is purposefully high level and concise to ensure that it does not deter innovation and creativity but advises and inspires users to deliver high quality and sustainable projects. Like for the Cornwall Design Guide, it sets a number of general principles to follow and a number of outcomes expected from a design. The user is expected to demonstrate how a project follows the CSDG principles and delivers a maximum number, if not all outcomes. This gives flexibility to users and places the onus on them to design their own suitable solutions to each specific context. The principles are illustrated with a number of examples in context to help the user understanding how to implement them and provide inspiration.
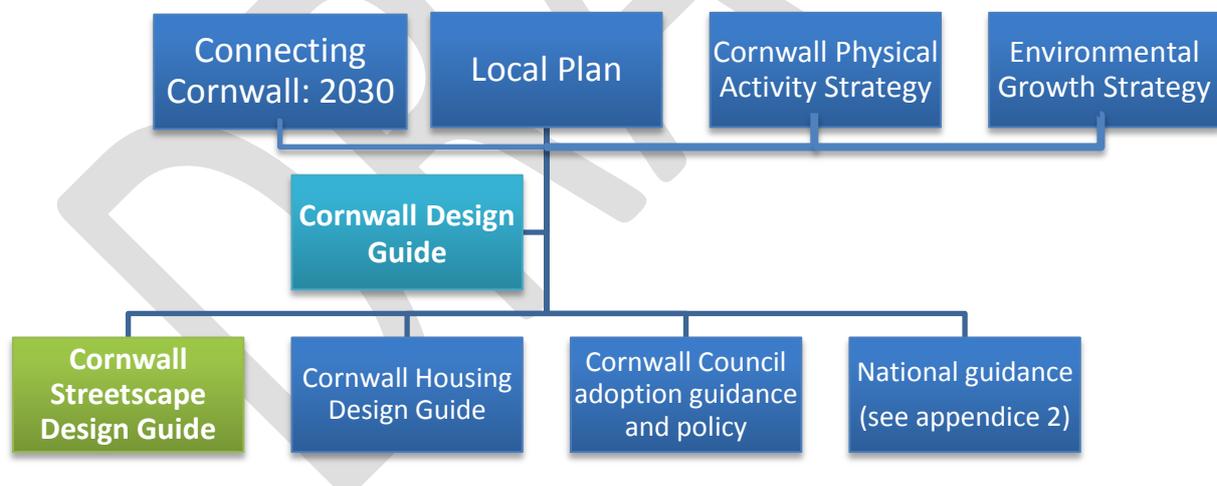
FIGURE 1 – STRATEGIES AND GUIDANCE CONTEXT

Our Vision

Streets in Cornwall will be of a high design quality, inclusive, safe and accessible for all, serve the current and future needs of the communities of Cornwall, support a dynamic society and economy, promote more sustainable and healthy lifestyles (mental and physical wellbeing), and minimise our impact on the built and natural environment while making the most of the local green infrastructure assets. The infrastructure that is provided for movement and access in the future must be designed in recognition of its crucial role in meeting the Cornish Climate Change emergency objectives including reducing our reliance on the private car.

A more sustainable modal hierarchy for our streets

Streets are central places in public life. They are multimodal and harbour a wide range of social activities. There is a need to balance the competing requirements of the users to bring about liveable neighbourhoods where sustainable travel is the norm and where streets and places are seen as destinations for social activity.

A priority to achieve this vision is to change the previous focus from the private car, onto reducing the need to travel and giving priority to active travel and public transport. This should be accompanied by reclaiming space from the private car to encourage a more diversified and sustainable mix of usages of public space and highways for communities, favouring social and economic activities over transport and parking uses. To implement these, Cornwall's modal hierarchy should lead the design from the outset for new or existing places and infrastructure. The modal hierarchy is a tool describing the order of priority for different transport modes when designing public space and within the delivered infrastructure.

Modal hierarchy

Share of the population

Priority

Social interactions and absence of need to travel

Pedestrians, people with reduced mobility and vulnerable road users

Cyclists

Public Transport users

People doing business and providing city / town / village services

People in private Ultra Low Emission Vehicles (ULEVs)

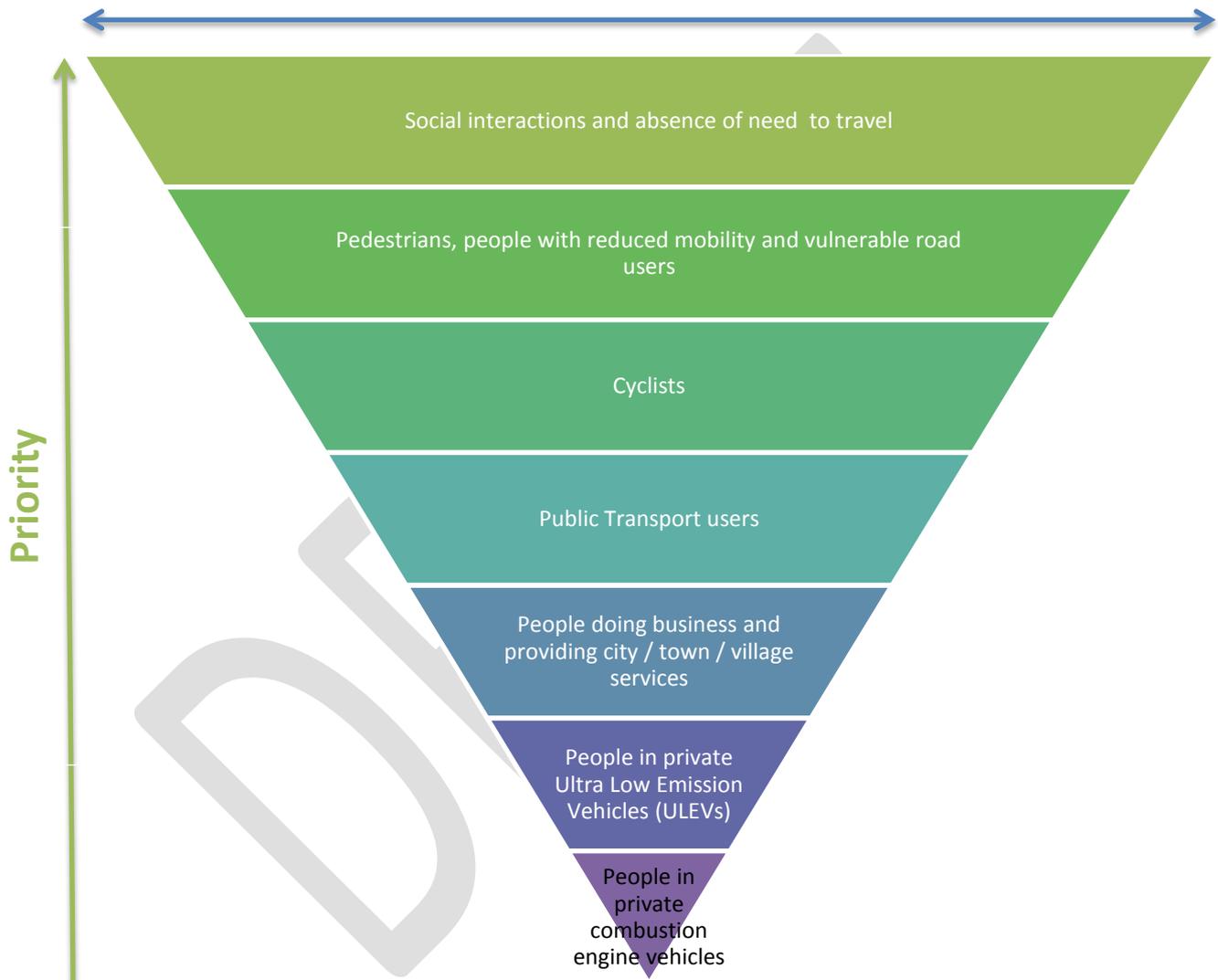People in private combustion engine vehicles

FIGURE 2 - MODAL HIERARCHY FOR MOST STREETS

For major highways, the higher speeds achieved by motorised modes will require segregated infrastructure for active travel modes to enable both traffics to travel safely. Segregation of the infrastructure should be applied where motorised modes speed limit is expected to be higher than 30 mph to accommodate higher motorised traffic volumes, higher speed and maintain a safe and attractive active travel network. If not properly applied, non-segregated infrastructure will mean modes with lower speeds will have to mix with motorised traffic. This will usually result in making

active travel infrastructure unappealing due to the perceived higher risk of collision. Segregation of active travel modes does not mean deprioritising them: zebra, toucan and other pedestrian crossings should, for example, not be omitted and no pedestrian fencing should be implemented. As a general rule, all new residential neighbourhoods should benefit from a 20mph speed limit and appropriate slow speed street design to enforce it. Older residential neighbourhoods will be provided with a similar speed limitation when adequate traffic calming street design is implemented.

Streetscape design principles

To achieve the objectives of this guide, the above-mentioned modal hierarchy should be evident in the design of the development and streetscape design should use the following principles:

Priority to active travel and sustainable use of private cars

Active travel and public transport must be at the core of new and updated infrastructure. Streets and neighbourhoods must be fully accessible for walking and cycling modes, either with active travel prioritised or with dedicated facilities. Segregation is not prioritised where vehicle speeds can be reduced significantly allowing greater permeability of non-motorised traffic within the overall streetscape. For major highways, speeds will naturally diverge with cars, lorries and public transport travelling at higher speeds. In these cases properly segregated networks will allow each mode user to travel safely at their relevant maximum speed.

Cycle infrastructure must be of a high quality and safety standards so that children from 12 y.o. age can safely ride unsupervised. This will support cycling in the area by a broad spectrum of the population and not only by experienced cycle users.

Permeability is the rule and any exceptions should be properly justified. Pedestrianised and cyclable infrastructure is desirable where place and social interaction takes priority over car usage. New infrastructure must be designed around desire lines, active travel links and public transport nodes and links, not the road network.

Parking provision needs to be appropriate for the location when designing a new development and the level of accessibility this development has to the surrounding community. Inter-connection between neighbourhoods should be based, in the first instance, on the ability to walk, cycle or use public transport to get from A to B.

Expected outcomes:

AT1 – All parts of the area are easily accessible by active travel where motorised modes' speed limit is not planned to be higher than 30mph or are equipped with safe crossings where motorised speed limit is higher than 30mph. Proper permeability encourages local residents and patrons to move using active travel modes as the principal mode within the development and to nearby points of interest.

AT2 – Safe active travel crossings are provided every 80 to 100m where motorised speed limit is 40mph or below.

AT3 – Parking provisions are strictly limited to the actual need of the current development and their location encourages active travel instead.

AT4 – Parking facilities are located and designed to ensure that the street scene is not dominated by cars. Parking is ideally away from the core or denser parts of the area, or on-street, and not on the building plots.

AT5 – Active travel paths and cycle lanes are 3m wide and suitable for the expected number of users. They respect desire lines and cycle parking infrastructure is in sufficient numbers and located at crossroads and nodes of social interactions.

AT6 – For major highways where motorised transport speeds are expected to be significantly higher than active travel, properly segregated networks are provided, with protected crossings.

AT7 – Cycle infrastructure is safe enough so that 12-year-old children can cycle on their own. Surfacing of cycle paths should be smooth tarmac to ensure year-round use for all ages and abilities including for people with wheelchairs and scooters.

AT8 – Secure cycle and electric bike storage for each resident should be provided at ground level with easy access, either for each building or in a suitable common space. Convenient and cycle parking should be provided in locations that are overlooked and convenient for services.

AT9 – Depending on the size of the project, the opportunity for installing a number of bike/eBike sharing stations has been considered.

Priority to public transport and accommodating new transport modes

Accessing public transport must be prioritised over car usage. Car usage must be deprioritised by design outside of major highways to enable a more balanced and sustainable transport modal mix. When looking at the possibility of developing new public transport routes, priority should be given to fast and frequent services along a major route, easily accessible by active travel in a radius of 400 meters, rather than try to make services run across each development. This will ensure public transport options are competitive and desirable to a majority of potential users. When public transport links are expected to cross the project area, contact should be made at an early stage with Cornwall Council Transport service to review the needs regarding public transport permeability.

Appropriate infrastructure must be in place to cater for existing and future electric vehicles using the site. Electric vehicle including bicycle charging networks need to be developed to combat the effects of topography on modal choice. Car parking facilities should be equipped with a minimum of charging points as per the Department for Transport regulations.

Expected outcomes:

PT1 – Local public transport options are easily reachable by active travel and stops are clearly visible, in central locations close to hubs of activities or junctions.

PT2 – Clear signage directs to public transport options and active travel routes, ideally with an indication of travel times.

PT3 – Priority is given to public transport over other motorised modes.

PT4 – ULEV-charging points are provided in sufficient number and power for the expected usage at the time of delivery and are in-line with current regulations.

PT5 – Depending on the size of the project, the opportunity for installing a number of car/ULEV sharing stations or a car-club has been reviewed.

Sense of place and social interaction

Transport and built infrastructure must participate in delivering human-centred welcoming, safe places. They support social interactions and place-shaping to create healthy communities with great quality of life. Humans are defined by their social nature so a real sense of place inducing social interactions is vital to our health and wellbeing, including mental wellbeing. Well-designed places support healthy communities, lowering crime and antisocial behaviour and encouraging positive interactions such as community events. Agreeable places which favour social interactions also support the vitality of high street shops and local businesses.

Car parking should not dominate the landscape of a built environment. Driveways are not recommended, and preferred options should be, by preference order: car-less developments or blocks in very dense neighbourhoods such as town centres, parking grouped away from the development or on-street parking. These solutions will support the necessary modal shift towards sustainable modes of transportation.

Expected outcomes:

PS1 – Around built environment, pedestrian priority removes or calms traffic to create a safe environment for everyday street play and socialising. For major highways, active travel benefits from segregated facilities wide enough to accommodate active travel modes and social activities expected at the location.

PS2 – Developments includes well designed open spaces that are enabling social interaction.

PS3 – Anti-social behaviour and crime have been minimised by designing in social interactions, internal mobility and social surveillance.

PS4 – In projects retrofitting older designs, proper attention has been given to where land could be reclaimed from car usage to use it for higher tiers of the modal hierarchy.

Inclusivity and accessibility

The design of infrastructure must ensure that the needs of all users are fully considered. Therefore street layout design will not simply follow prescriptive standards relating to widths, gradients, cross falls, radii, etc., but will be designed in a manner that allows for the appropriate activities to be undertaken within the context of the place.

Developments need to be permeable to active travel modes and redline boundaries for development need breaks so that adjoining neighbourhoods can connect to each other seamlessly. Urban extensions identified with the Local Plan and the Site Allocation Development Plan Documents (SADPD) need to be master-planned as a single network of transportation links and not end up as a series of culs-de-sac. Developers designing new streets and paths should consider the entire network of streets and facilities in the neighbourhood to plan a respecting the street pattern and desire lines.

Within Cornwall Council there is a requirement to produce a 'Comprehensive Impact Assessment' for each scheme which is independently reviewed for compliance with the Equality Act 2010 and

other relevant legislation. Comprehensive Impact Assessments are published on the Cornwall Council website to ensure transparency in the assessment and review process - https://www.cornwall.gov.uk/community-and-living/equality-and-diversity/comprehensive-impact-assessment-cia/

Expected outcomes:

IA1 – All parts of the site are made accessible for users with reduced mobility.

IA2 – Material and design provide a suitable environment for users with visual impairments.

IA3 – The design includes provisions for users with reduced mobility, users who are neurodiverse.

IA4 – Permeability of the site is ensured by multiple active travel paths following desire line inside the developments and towards links and nodes in nearby neighbourhoods. Cul-de-sac-type patterns are absent.

IA5 – The streets and paths network connect and aligns with the existing network of the wider area. Provisions have been made to connect with potential future links and developments.

Distinctively Cornish

Streets must respect and make the most of Cornish heritage, landscapes, culture and architecture. These aspect must not be used to refrain from implementing changes to make streets more sustainable: the design should use architecture, materials, street furniture, drainage and green infrastructure to enhance its immediate environment. Innovations and creativity are welcomed and must integrate well in their environment without necessarily blending in. Integration of public art in the streetscape is encouraged where it is of a high quality and enhances the sense of place.

Expected outcomes:

K1 – The design and place-shaping support the Cornish and local architectural heritages. The overall streetscape design is of high quality, and blends in the local architecture, landscape and green infrastructure.

K2 – Streets, paths and spaces are named using local toponyms and local history. Street and junction signs show place names bilingually in English and Cornish, or the place-name in Cornish alone.

K3 – The layout of the streets and open spaces respects and supports the local historical layout of streets and ways.

K4 – The material used is appropriate for the location and contributes to highlighting the distinctiveness of the place.

Green and sustainable

Green and blue infrastructure should be integrated at the core of each project and integrate with transport infrastructure. In new neighbourhoods, integrated transport and green/blue infrastructure must provide most of the services to the community (drainage, recreation, transport, community hubs, sports facilities…).

Water features should be kept or returned (when previously covered) at surface level or as often as possible to take full advantage of their potential for excellent green infrastructure and biodiversity gain. Sustainable Drainage Systems (SuDS) and sustainable water retention features should be incorporated unless specific reasons preclude them. Parking provisions should support water retention with permeable surface materials.

Expected outcomes:

GS1 – The project prioritises sustainability in its network and limits the need for motorised transport to the minimum needs.

GS2 – The project exploits internal and nearby green and blue infrastructure assets such as woodland, wetlands, water features, etc. They are central to the design, well connected and provide multiple environmental and social services.

GS3 – Green infrastructure is used to reduce sound and air pollution.

GS4 – Water features are integrated in the SUDS network to reinforce the sustainability of the project. Appropriate consideration has been put in using them to improve biodiversity.

GS5 – Measures have been taken to increase biodiversity or, if not reasonably achievable, to minimise biodiversity loss as far as possible.

GS6 – For major highways, local assets have been used to integrate the project in the landscape and minimise its impact on the environment.

Flexibility, functionality, simplicity, safety

Simplicity

Material selection must ensure that the infrastructure provided is robust, has a long service life and maintenance is straightforward. The whole life costs of the infrastructure must be considered and commuted sums may be used to ensure that the infrastructure can be maintained for an appropriate length of time without additional burden to the public purse.

The master planning has to avoid overdesign such as designs, material or equipment that is difficult to use, inconvenient and/or expensive and complicated to maintain. Overdesign can also be the cluttering of the street with signs and street furniture. Simple designs should be prioritised to enable the street to be adapted as it evolves with its community.

Flexibility and functionality

Public space must be flexible to enable multiple current and future usage and activities to happen in the same places at different times. The design should, where it is possible, allow for several uses as much as possible, such as refuse collection, car parking, active travel, public transport, leisure, drainage, etc.

Safety

Managing the interaction between vehicles, and pedestrians and cyclists is critical. Historically, this has been done through regulation and control of the environment, which typically results in segregation of users at the detriment of people walking and cycling.

In the design process there is a need to evaluate and manage 'risk' and promote a balance between the likelihood and severity of an event taking place.

All users must feel safe to live and circulate in the streets and in the entire neighbourhood. This must include considerations such as appropriate lighting or social policing designed in.

Health and Wellbeing

Streets should support the physical and mental health and wellbeing of the communities they serve. They should encourage sustainable modes, such as walking and cycling. With almost two-thirds of adults and one-third of children in overweight in the UK, streets have an important role in enabling day-to-day physical activity. Appropriate streetscape, without controlled access such as controlled crossings, respect the desire lines between the various locations and community hubs. Pedestrians and cyclists should not feel intimidated by vehicular traffic and should feel comfortable within the streetscape.

Following the modal hierarchy, the transport infrastructure and the overall master planning has to contribute to the local improvement of air quality.

Expected outcomes:

SF1 – New streets are wide enough to accommodate different usages such as social activities, active travel, parking and the safe passage of vehicles, including refuse vehicles, fire trucks, ambulances and delivery trucks. Space is kept flexible to enable different usages in time (e.g. street events, deliveries, refuse collection, school runs, etc.) and not only parking or vehicular traffic.

SF2 – Well designed and high-quality street furniture should be included where it has a clear and necessary function. The design avoids the cluttering of pavement or open spaces.

SF3 – Guard rails are absent of the design and a very small number of bollards are only used where there is a clear safety reason.

SF4 – The surface, infrastructure and furniture of the street network are designed and planned to be easily maintainable for a reasonable cost.

SF5 – Street infrastructure, including active travel and public transport infrastructure, is to be implemented from the start of the project. Connections and integration with future adjoining neighbourhoods are planned and will be implemented before the end of the delivery.

SF6 – Where street furniture is used to protect a modal filter, it is equipped with reflective material to warn cyclists and pedestrians at night.

SF7 – Adequate provisions have been taken to ensure developments are accessible for the emergency services (note this does not mean all streets and ways must necessarily be accessible to motorised transport at all times).

SF8 – The design ensures that all users feel safe.

SF9 – The speed limit and design speed are appropriate for the expected use of the street network. Where motorised vehicles are expected to move at more than 30 mph, segregated infrastructure is provided for active travel. Where motorised vehicles are moving at 30 mph and slower, modes are mixed and active travel is prioritised by design.

SF10 – The design gives its dwellers the opportunity to have an active lifestyle and to improve their mental wellbeing.

SF11 – Motorised transport and sources of potential nuisance (air pollution, visual pollution, sound, odour, etc.) are kept to a minimum.