Essex Highways

SAFER GREENER HEALTHIER
Transforming travel in Essex

Mobility Hubs and Integrated Transport Halts

Implementation Guide

September 2024

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Executive Summary

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What is a Mobility Hub?

This definition has been developed for use across Hubs and Halts in Essex: Mobility Hubs are…

"safe and connected places that facilitate convenient access to public, shared and active travel modes"

Public travel modes refer to the local bus and rail services, whilst shared modes refer to micro-mobility solutions such as e-scooters, bike share facilities, cargo bike hire, and car clubs, and finally active travel modes refer to walking, cycling, and wheeling.

What are the benefits of Mobility Hubs?

- **Reclaiming urban space and implementing smart and sustainable transport modes** for viable travel alternatives
- Enhance public transport, promoting **user-friendly, accessible, multi-modal travel experience**
- **Expand mobility possibilities, promote safe, green, affordable** travel options, and improving **local economies.**
- Hubs **improve public spaces, reduce dwell time** and **reduce crime**

How Mobility Hubs unlocks growth and supports productivity

- More sustainable travel → **more housing without road network deterioration**
- Increasing mobility options → **expanded job opportunities and improved productivity**
- Mobility Hubs → **integrated land use and transport planning** (in line with emerging DfT focus on connectivity to improve the planning system)

Why Mobility Hubs are expected to work

- Proof in Norway that they contribute to an environment where **lower car ownership** is possible, allowing for **greater PT and active travel use** (30% decrease in private car ownership in two years of mobility hub operation in Bergen)
- Public support for measures to create viable sustainable travel options including car clubs
- **Aligned with existing Essex transport, parking and planning policies.**

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Affordability and Funding

Mobility hubs can achieve commercial viability when built with a successful economic underpinning that ensures the long-term commercial sustainability. Although the funding source may differ from hub to hub across Essex, there are various public, private, and third-party funding sources capable of providing both initial and ongoing financial support, for example:

- Planning funding, e.g., developer (or other) s106 contributions, Community Infrastructure Levy (CIL)
- Rent, concession, service charges, e.g., parking permits or rent from commercial activities
- Advertising and sponsorships – to be obtained through the ECC Bus Shelter Contract
- User charges, e.g., fares, tariffs, subscriptions / memberships, donations

Grant funding is another potential funding method to explore, this includes Local Enterprise, regeneration funds and charities.

Many mobility hub components are available from a **variety of suppliers** and in **assorted styles, types and specifications** ranging from basic to advanced standards. This creates a **spectrum of component costs** which in turns ensures that mobility hubs can be tailored to accommodate a range of affordability requirements.

Operation and Maintenance

The operation and maintenance aspects of a mobility hub must be agreed on a **case-by-case basis** for each site and component, where appropriate, however **hubs can be looked after in partnership with other transport providers** by including the hub components within the **existing maintenance regimes** carried out by rail or bus station operational staff or in **partnership with staff** at nearby bicycle stores or hire facilities. Maintenance can also be **outsourced to management companies.**

The TravelEssex App could provide an opportunity **to offer a reporting system for maintenance issues** across all components of a mobility hub. However, this would need to be developed in conjunction with other ECC departments.

Many component suppliers offer management and maintenance within their contracts, however management from ECC or district council will be required **for commercially driven components** such as parcel lockers, car clubs or bike / scooter hire. Similarly, the **ECC Bus Shelter Contract** will consider management and maintenance requirements for components including the bus shelters, timetables, pole and flag signage, and RTPI.

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How do Mobility Hubs support ECC ambitions?

Mobility hubs align with many local policies as well as active travel and bus strategies by supporting targets to increase cycling and walking trips and bus patronage to reduce congestion on the road network and contribute towards reducing transport-related air pollutants.

Hubs can contribute to the delivery of the emerging LTP4 through future transport strategies as they emphasise and encourage alternative travel and can offer improved public transport services and infrastructure.

Hubs encourage the use of bus and rail stations as interchanges to sustainable transport modes such as walking, cycling, scooting, and wheeling for first or last mile journeys. Hubs also provide travel information and can improve the accessibility and attractiveness of public transport by helping groups with additional travel requirements to navigate the public transport network safely.

ECC, in collaboration with Tendring District Council and Colchester City Council, have developed a draft plan for the TCB Garden Community which focuses on meeting the needs of a growing population over the next 30 to 40 years through housing developments and transport and infrastructure improvements. Mobility hubs will help to reduce reliance on the car in the Garden Community by encouraging public transport, and sustainable travel connections to and from the proposed RTS stop for those that wish to commute or visit surrounding areas. Facilities such as sheltered cycle parking, car clubs and micromobility such as e-scooters will help to reduce the likelihood of community severance by providing what is required for sustainable first and last mile journeys.

- **What are we doing to take MHs forwards?**
- Through a phased delivery approach, mobility hubs and halts will be piloted in new communities and alongside new transport infrastructure;
- Additionally, spatial trip attraction and generation analysis will inform the ideal location of mobility hubs both within new and existing communities.

To ensure that mobility hubs are rolled out coherently and consistently across the county:

- Local authorities will be engaged, and District Level mobility hub champions recruited;
- A procurement review of essential hub components will be undertaken to derive consistency and pricing reliability;
- Updated mobility hub expectations for developers of new communities will be published;
- A branding strategy for the mobility hub network will be developed and consulted on.

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0. Contents

0. Contents

The guide has been split into seven sections covering the life cycle of mobility hubs from concept to design and roll out.

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0.1 User Guide

This Mobility Hubs and Integrated Transport Halts Implementation Guide has been designed to be the go-to document for ECC officers and developers looking to create new or improve existing mobility hubs and halts.
To fulfil this purpose, the guide incorporates a wide variety of mobility hub aspects and use-cases. Whilst it is recommended to review the entire guide, for convenience the lists below highlight key slides pertaining to likely guide goals.

I'm interested in…

Getting an overview on mobility hubs

Building mobility hubs in large-scale developments and garden communities

Creating or improving the viability of mobility hub in an existing community

1. Introduction

1.1 Why have ECC developed this Guide?

- This guide has been funded by Homes England and the Essex Climate Action Commission to reflect the wider sustainable travel aims and targets within Garden Communities. Though the guide has applicability to both garden, new and existing communities since hubs are part of a network of transport facilities which span both new and existing communities and destinations.

- This Guide aims to improve the efficiency of the design process by clearly identifying requirements and options for Hubs/Halts and anticipating their future management and maintenance needs so that they can be brought forward in a consistent manner which are fit for purpose long into the future. It has been developed in collaboration with stakeholders to guide decision making on implementing Hubs/Halts across Essex and is grounded in meeting customer needs and providing high quality public transport.

- If we are to develop and support truly sustainable local communities and economies, we need to provide more flexible and convenient transport solutions, reduce the need to travel, create direct sustainable travel choices between local areas and provide for residual long-distance travel needs in the most sustainable way.

- In addition, there is a need to be more creative with how we utilise space and create communities that support active and healthy lifestyles. By developing this strategy to deliver Mobility Hubs/Halts across Essex, it puts us in a good position to capitalise on any targeted government funding that comes forward to help with implementation.

(Image Source[1]: Used in Essex RTS work - Belfast Rapid Transit)

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1.2 What is the purpose of this Guide?

- This Guide recommends a consistent and cohesive countywide approach to help facilitate delivery of a network of Hubs/Halts across Essex. It is a 'living document' and as mobility hubs begin to be implemented both in Essex and in other places, it is expected that the guide will be updated and refined to reflect emerging good practice and lessons learned.

- The Guide is intended to provide a delivery tool setting out agreed design principles and standards for application across Essex to support the planning and development of networks of hubs within communities:

  1. To develop a standardised approach across Essex so that Hubs/Halts can be easily implemented and understood by users
  2. Recognising that Essex is a diverse county and enabling Hubs/Halts to be deployed in all geographical contexts (urban/rural sub-classifications)
  3. Provide a resource for developers / planning authorities / transport operators and other interested parties to consider how mobility hubs can benefit their projects and plans.

- Whilst this Guide sets out principles and a strategic approach, it is recognised that there will be minor local variations.
- This Guide therefore does not provide a prescriptive list of the form or appearance of the Hub/Halt entity but instead defines the key ingredients and principles that must be considered to inform the development of such schemes as they come forward.
- However, at the root of the guidance is the concept that users must come first, and they need consistency and reliability if they are to confidently use mobility hubs across Essex.

(Image Source[2]: Essex Highways, 2022*)*

1.3 Who is this Guide intended for?

This Guide is aimed at local planning and transport authorities as well as developers of new sites to guide the development of hub/halt infrastructure across Essex.

It is <u>not</u> intended to be a public facing document. However, this guide will be publicly available for those who are interested.

It is recommended that the concept and terminology used throughout this Guide goes through a marketing review before it is presented to the public, if used in public consultation exercises, to ensure it is relatable and easy to understand. Alternatively, a brief summary of the guide can be used as appropriate depending on the context.

- For online publication, this will ensure that the public can read the document and understand the intended message without a technical expert present to explain.

- For public engagement events, this will ensure that any feedback gained will be relevant and constructive

Did you know.....?

Up to 43% of car trips in Essex are under three miles, a journey which could, for many people be made on foot (which would take around 30 minutes) or on a bike (a 15-minute ride).

➢ A network of Mobility Hubs/Halts across Essex has the potential to transform how we get around our communities

(Image Source[3]: Eltis)

1.4 Definition of Hubs/Halts

The concept of Mobility Hubs can vary considerably. This definition has been developed for use across Hubs and Halts in Essex:

"Safe and connected places that facilitate convenient access to public, shared and active travel modes"

Bus and Rail

Micro-mobility solutions (i.e. e-scooters, bike share, cargo bikes), Car Clubs

Walking, Cycling and Wheeling

In addition, Mobility Hubs can provide:

- Logistics elements for first/last mile delivery goods
- Green public space
- Community facilities

(Image Source[4]: CoMoUK)

1.4 Definition of Hubs/Halts

1.4.1 Notes on Definitions used

- ‘Shared’ transport refers to micro-mobility modes (E-bikes, E-scooters) which are not owned
- Use of word ‘Connected’: the hub/halt connecting into wider transport and digital infrastructure
- Use of word ‘Places’: rather than ‘spaces’ to bring in the people / destination aspect
- The ‘community’, ‘logistics’ elements can be provided, their inclusion being dependent upon location / demand / funding availability
- The ‘public realm’ aspect: in and of itself (within the hub area specifically / the direct footprint of the hub), it will improve the public realm / make it attractive for use by providing the following components:
    - To make it inclusive and comfortable: level walking surfaces, level access, tactile paving, raised kerbs for boarding and alighting, shelter from weather extremes
    - To make it safe: lighting, CCTV
    - To make it convenient and easy to understand and use: wayfinding between travel modes, RTPI?
    - To make it attractive: to have a sense of quality / appeal about it (this is the area of subjectivity)
    - To take micro-opportunities to contribute to greening and biodiversity
    - To allow for tie in to existing onward infrastructure e.g., a cycle path or pedestrian crossing
- Additional public realm elements could be considered to further improve hub/halt attractiveness, but these would be dependent upon the location itself, funding opportunities and aspirations and would not be expected to be delivered as part of the hubs/halts as entities. Wider public realm is not integral to the hub and should always be seen as something adding additional benefits.

1.5 Objectives & Ambitions

1. To act as agents of mode shift and behaviour change

improving travel choice, making public transport more convenient and user friendly

2. To form part of an integrated countywide network

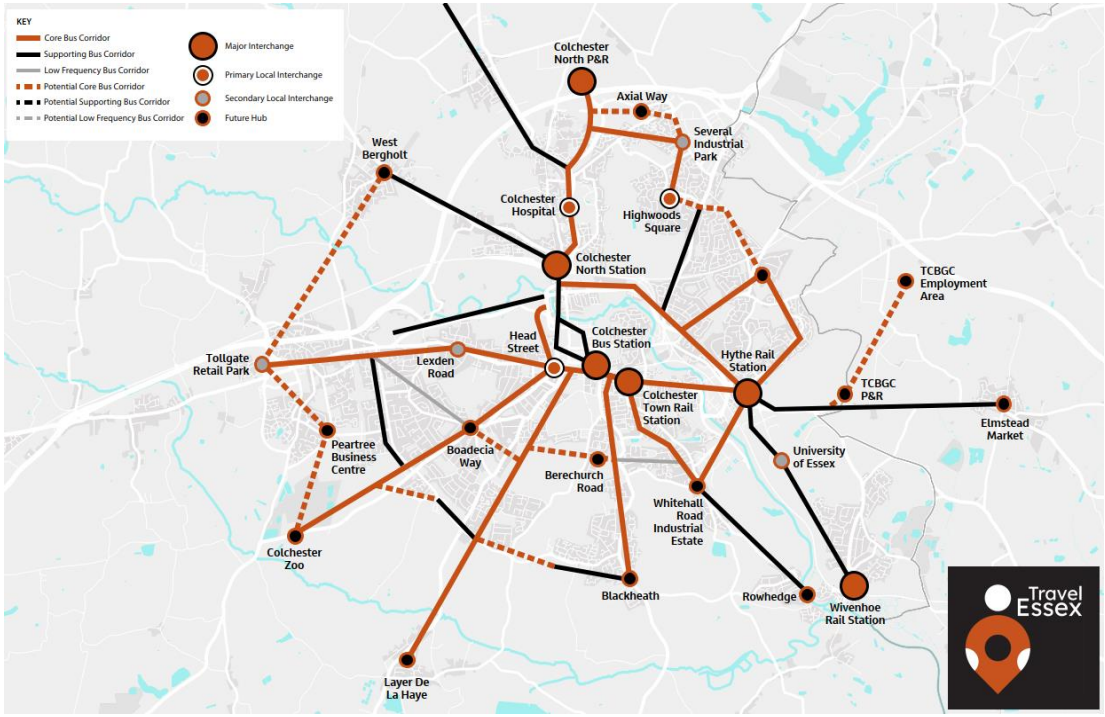
rather than standalone entities) to enable wider travel connectivity

3. To be future proofed

towards creating a more resilient transport network that is adaptable to cater for future needs *(for example through a modular design that is flexible to cater for future needs / changing demands)*

4. To be commercialy beneficial

operators through increasing patronage on transport services and facilitating income generating opportunities



(Image Source[5]: Essex Highways)

1.5 Objectives & Ambitions

1.5.1 Why are Mobility Hubs important?

Mobility Hubs provide additional facilities which improve people's journeys and journey experiences. These facilities are integrated to make them more user friendly and support the shift to more sustainable modes of transport.

Safer

- Reimagine and reclaim unused space
- Safer networks
- Reducing transport poverty by rebalancing areas to take account of all types of transport user
- Accessible and inclusive mobility
- Increased natural surveillance reducing bicycle theft, public transport vandalization, and inviting a diverse range of population to engage with sustainable mobility options

Greener

- Encouraging modal shift to sustainable travel choices
- Promote low carbon technologies such as electric vehicles, e-bikes and e-scooters
- Support improved air quality
- Densification of new development – reusing existing space

Healthier

- Supporting Well Designed Neighbourhoods - making it easier for people to increase physical activity by walking and cycling
- Integrate new communities to combat loneliness, TRSE and community severance
- Encourage healthier lifestyles and positive behaviour change

Economy

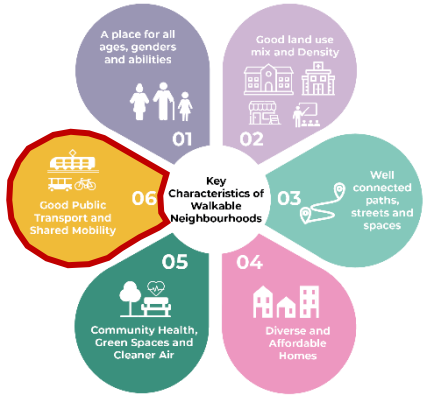
- Revitalisation of communities creating spend in the local area
- Affordable travel options, improved travel time and predictability
- Improved connectivity encouraging public transport for all trips
- Reduce road network pressures
- Provide flexibility to embrace technological innovations

1.6 Mobility Hubs and Large-Scale Developments/Garden Communities

Whilst this mobility hub guidance is applicable to a wide variety of different environments across Essex, it has been specifically prepared as part of a package of measures aimed at maximising the opportunities and mitigating against the impact of new development across the county, particularly large-scale and Garden Community sites. This work ties into two other recent and ongoing ECC projects:

Well Designed Neighbourhoods

This work presents design principles, in particular exemplar street types, for new developments that promote sustainable travel choices and foster healthy communities.



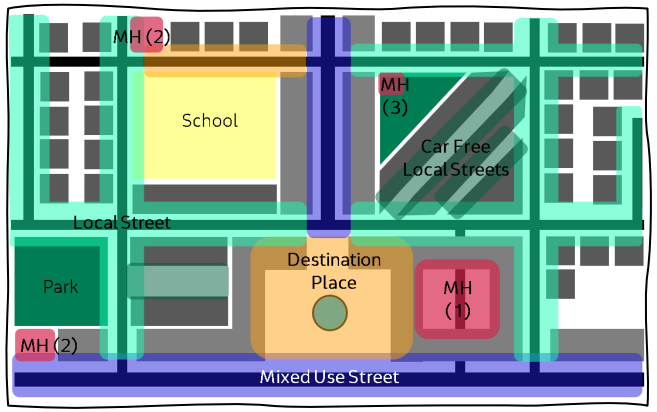


Diagram provides example locations. Not all would be pursued in such a small area.

Mobility hubs represent a key opportunity to embed sustainable travel choices in line with Well Designed Neighbourhood principles. For further detail see 5.2.1.

Transport Assessment & Travel Plan Guidance

In 2024 Essex County Council released new guidance and tools for officers involved in the Transport Assessment and Travel Plan process, ensuring consistency, best-practice and supporting ECC ambitions to reduce emissions and encourage sustainable travel.

The newly phased process to develop both TAs and TPs encourages collaboration between the developer and ECC to create suitable and context-appropriate transport strategies to mitigate against the new journeys to and from the developments.

The agreed mitigations (often formalised as Section 106 agreements) are then monitored against targets to ensure compliance and address unexpected risks.

Mobility hubs will become a prime tool within the development mitigation agreement process and ECC officers and developers are encouraged to refer to this guide to ensure hubs/halt opportunities are sustainably realised. For further detail see 4.9.2.

These measures, in combination with this Mobility Hubs Implementation Guide, will ensure that mobility hubs are a go-to transport solution for new major developments in Essex, maximising opportunities for improved and increased sustainable travel.

1.7 Mobility Hubs and Existing Communities

- Whilst new communities and major development projects represent excellent opportunities to embed active and public transport infrastructure into local areas, existing communities should not miss out on the roll out of mobility hub infrastructure.
- Where available land is restricted or highly expensive, innovative, small-scale solutions can be adopted to incorporate smaller mobility hubs and halts appropriately into local environments.
- For example, reclaiming three street-side parking spaces could provide space for up to 24 parked bikes, a bus shelter, bench and local information board, meeting the criteria for a 'local' mobility hub.
- At a larger scale, straightforward interventions can often immediately transform existing railway stations, bus stations and park & ride facilities into more efficient and better-connected mobility hubs.
- For example, aligning a local bus schedule to arrive at a railway station within ten minutes of train departures, improving a station's cycle storage and waiting facilities (including charging and Wi-Fi) and/or adding parcel lockers to a community bus stop.

(Image Source[6]: Camden Cyclists)

(Image Source[7]: CoMoUK)

1.8 Alignment with Policy

Objectives and Aims from Local and Regional policies have been reviewed to identify key words associated with sustainable and active travel that implementing Mobility Hubs can support with.

1.9 Development of the Guide

Local and National Policy

- Local Plans and Development Policy Documents
- Safer Essex Roads Partnership Strategy (2019/20)
- ECC Everyone's Essex (2021 - 2025)
- Essex County Council Sustainable Mode of Travel Strategy
- Essex Local Transport Plan (LTP)
- Place and movement Principles
- Movement, Street and Place - Design Guidance for Well Designed Neighbourhoods in Garden Communities and Large New Developments
- National Planning Policy Framework

Active Travel Strategies

- Essex Walking Strategy (2020)
- Well Designed Neighbourhoods
- Essex Cycling Strategy
- Essex Joint Health and Wellbeing Strategy 2018-2022

Essex Wide Relevance

- Encourage walking and cycling trips through behavioural change
- Consideration of place when developing transport systems
  - Improve road safety for non-motorised users
- Aim to meet 400 walking trips per person per year by the year 2025
- Aim to have cycling as the norm, doubling the number of cycling trips in Essex between 2014 and 2025
- Enable physical activity and walking for health
- Making walking the norm for shorter journeys

Mobility Hub Application

- Cycling more accessible for medium length journeys/ more attractive with the implementation of safer parking
- Mobility hub access improvement and maintenance likely improve the road safety
- Mobility hubs with café/ green space likely to increase sense of place

Bus Strategies

- Bus Service Improvement Plan (2021-2026)
- Essex Bus Strategy

Essex Wide Relevance

- Reduce need to travel and address transport policy
- Increase bus patronage on the network
- Form better connections within the county, reducing the reliance on private transport modes
- Promote smarter working and more sustainable forms of transport
- Reduce transport poverty and encourage affordable public transport throughout the county

Mobility Hub Application

- More accessible and inclusive interchange
- Increased patronage resultant from wider catchment area of those able to access buses; cycle and walking parking increasing access

Outcomes

- Reductions of death and serious injury on Essex Roads to Zero
- Aim to enable people with long term conditions and disabilities accessible/ inclusive mobilities
- Reduce CO2 and other emissions with the use of low carbon technology

Mobility Hub Application

- More accessible and inclusive surfaces; lighting, shelters and Wi-Fi/ CCTV likely to increase inclusion
- Consideration to be given in materials used in building

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2. Typologies

2.1 Continuum of Typologies

2.1.1 Introduction to the Mobility Hub/Halt Typologies

- ECC's vision is to create a network of integrated Mobility Hubs/Halts across Essex, which are located at key destinations across all geographies, to provide a consistent level of provision with access to active, shared and public transport modes.
- Hubs/Halts may therefore serve new communities or existing neighbourhoods, be within rural, suburban or urban areas, within business parks, shopping centres or remote tourist destinations.
- Whilst their form and function at each location may vary (dependent on size and demand), the essence of the Hub/Halt would be delivered in a consistent manner across the county so that passengers come to know what to expect.

The following five Hub/Halt typologies have been developed for use across Essex, which would vary according to their location and proposed use:

1
2
3
Halt

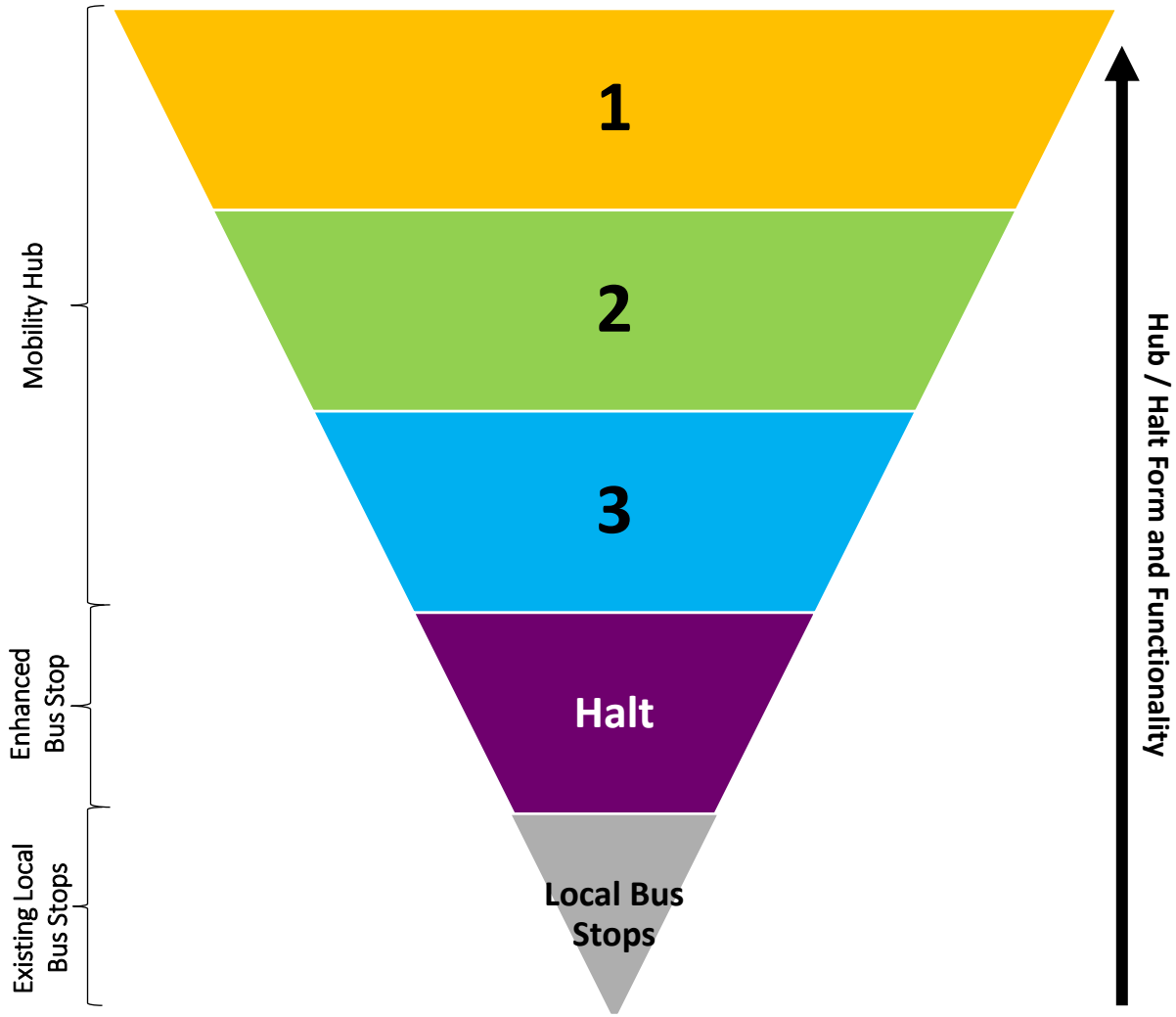
Community Hub

It is recommended that the naming at the 1,2,3 typology levels be determined through a separate branding exercise prior to adoption

- The type of Hub/Halt to be deployed would not be determined solely on geographic site characteristics, with the ability to move up the continuum depending on usage or potential. The suitability of various hub components (such as requirements for a Car Club, e-scooters or parcel lockers etc) can then be understood through this typology approach.

2.1 Continuum of Typologies

2.1.2 Maximising Opportunities: Aspiration to meet the highest category on the continuum for the location



1

Interchanging between increased no. of modes, more extensive shared transport offering, location a destination in its own right. Practical and leisure services chosen to enhance offering.

2

Interchanging between increased no. of modes, strong emphasis on micro mobility, less focus on car clubs. EV charging focused around PT and D-DRT. Practical and leisure services more extensive with a local focus.

3

Interchanging between minimum of two modes with shared transport offer. Facility for car clubs and EV charging. Practical and leisure services chosen through community consultation.

Halt / Enhanced Bus Stop

Stops along RTS or Core Bus Network with distinct branding to highlight high quality routes. Short wait times as served by high frequency services. Limited additional services offered.

Community Hub

No or very low frequency public transport provision (may include D-DRT). Provides local mobility and community function. Choice of convenient practical and leisure services.

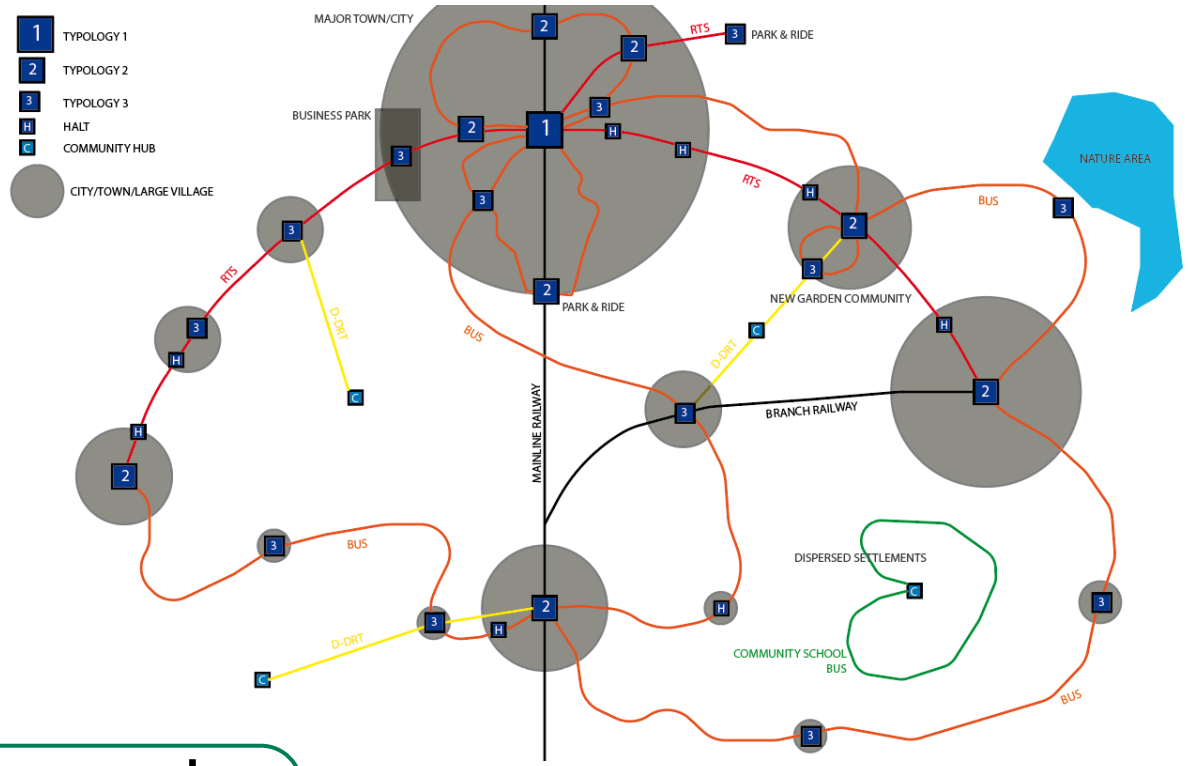
2.1 Continuum of Mobility Hub

2.1.3 Continuum Characteristics

	1	2	3	Halt (4)	Community Hub
Location					
Prominence of location	**High** - *likely to be within a Town/City Centre location*	**Medium** - *likely to be within medium sized town, large village or suburb location*	**Medium** - *likely to be within small town / village or more rural location*	**Low/Medium** – *located on a strategic bus corridor (RTS or core bus corridor).*	**Low/Medium** – *located within a local neighbourhood centre*
Footfall and passenger use	**High –** *very high footfall and passenger usage, multiple high frequency services*	**Medium** – *high footfall and usage, likely to be at least one high frequency service or numerous lower frequency services*	**Low/Medium** – *moderate footfall and usage, likely to be at least one medium or high frequency service*	**Low/Medium** – *access only for high frequency bus or Rapid Transit route or route(s)*	**Medium** *footfall but* **Low** *passenger usage given limited PT options*
Branding	**Distinct & Consistent-** *marking this location as a destination (of the bus!) in its own right.*	**Distinct & Consistent-** *marking this location as a hub in its own right.*	**Distinct & Consistent-** *marking this location as a hub in its own right*	**Distinct & Consistent-** *Recognisable to convey a different type of bus service.*	**Distinct & Consistent-** *Recognisable to convey a focal point for rural mobility*
Form					
Space requirement	**Large scale / Large available space**	**Medium**	**Medium/Low**	**Low**	**Low**
Sustainable transport offer	**High** - *a range of options and facilities for non-car use. Served by Regional or National transport infrastructure*	**Medium** – *options available to encourage non-car use. Strong emphasis on micro mobility. EV charging focused around PT & D-DRT*	**Basic** – *availability of both public and shared transport options as well as high quality active modes interchange*	**Basic** – *availability of high frequency bus or RTS, as well as simple active modes interchange*	**No or limited PT -** *May have D-DRT or be designated as a Low Accessibility Area**
Shared transport offer	**Extensive** – *wide range of on-demand shared mobility solutions, moving into MaaS*	**Developed** – *more than one on-demand shared mobility solutions to meet wider mobility needs*	**Basic –** *likely to only be one form of shared mobility available*	**None**	**Developed/Basic –** *one or multiple forms of shared mobility available, depending on viability and scale*
Function					
Ability to interchange	*Interchanging between a wide range of sustainable modes is possible*	*Interchange between three sustainable modes is possible*	*Interchange available between a minimum of two sustainable modes*	*Primarily to access core bus network or RTS services*	*Interchange between a minimum of two modes (No or limited PT availability)*
Passenger dwell time	**Varied**– *acts as a destination, likely to be other services on offer increasing dwell time despite frequent PT services*	**Varied** – *PT service is likely to be high frequency but other services on offer could increase dwell time*	**Low/Medium** – *short or moderate PT wait times, additional services may increase this*	**Low** –*Short wait times for high frequency PT*	**Medium –** *PT may be infrequent and additional services could encourage greater time spent at location*
Provision of other services	*Recommend incorporation to enhance offer: Café, dry cleaning, Freight consolidation, Enhanced cycle storage*	*Incorporated where possible to enhance offer with a more local focus: Café, dry cleaning, Freight consolidation, Enhanced cycle storage*	*Additional services could be offered if commercially viable*	*Additional services unlikely to be provided*	*Incorporated where possible to enhance offer with a more local focus: Café, dry cleaning, Freight consolidation, cycle facilities*

2.2 Application of Typologies across a Rural & Urban Transport Network

- Given the primary role of mobility hubs is to facilitate safe and convenient access to different modes of transportation, the success of an individual mobility hub is reliant on the provision of a well-considered transport network.
- Across both rural and urban environments, different types of mobility hubs work together to form networks that move people and goods from A to B. An example of an urban/rural mobility hub network is shown to the right.
- Mobility hubs should be structured in a way that meets the needs of local residents, allowing them to fulfil their daily travel requirements through active and public transport modes as quickly and comfortably as possible. Example journeys are shown below.



A Regular Commute to Work

Home in a new garden community → 5-minute walk to nearest Halt (H) → 25-minute bus rapid transit to Typology 1 mobility hub in city centre (1) → 5-minute walk to office

An Infrequent Visit to a Friend for Lunch

Home in a rural community → 3-minute cycle to Community Hub (CH) → 15-minute Demand Rapid Transit to local rail station (Typology 2 hub) *scheduled to arrive 5 minutes before train departs* (2) → 20-minute train to neighbouring town (2) → 7-minute hire cycle to friend's flat

2.2 Application of Typologies

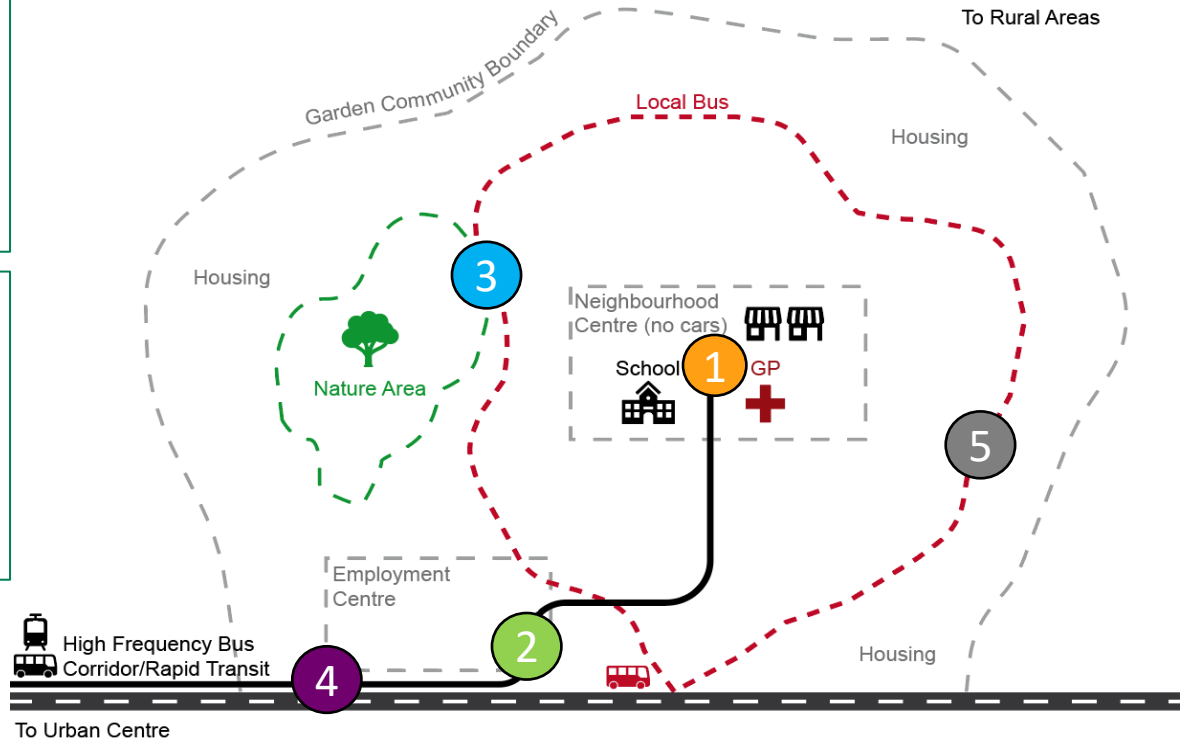
2.2.1 Illustrative Application of the Continuum in New Communities

1 Located at centre of new community with high density local amenities and housing. No cars expected within area (although possibility of Car Club). Served by high frequency local bus/rapid transit. Shared micro-mobility expected for wider new community to access centre, alongside cycles, cargo bikes etc. Opportunity for plaza style development or similar, pedestrian friendly spaces for ease in transferring between different modes. Opportunity for providing local amenity, such as pop-up food vendors, music, as well as daily convenience such as parcel lockers, banking or similar.

2 Located away from new community centre but located close to designated employment area with higher density of jobs and commuting, and also access to housing. Situated along RTS network and local bus route with high level of demand inferred and viability for shared micro-mobility. Location presents need for pedestrian friendly spaces for ease in accessing different transit modes as well as surrounding amenity. Opportunity to provide freight consolidation facility for parcel pick-up from lockers and non-motorised delivery across new community.

3 Located within housing development close to natural and leisure areas. Local bus access away from community centre and high frequency bus route. Shared micro-mobility viable to navigate around community, linking into community micro-mobility network. Location supports higher level of Car Club provision, being on the periphery of the community centre. Pedestrian accessibility is important for access across hub and to ease transition between modes and access to leisure area.

4 Halt — Located on high frequency bus routes/RTS which has limited stops. Strategically located and unlikely to be a single halt without any other hub facility.



5 Local Bus Stop — Likely to be number of local bus stops across new community which are not part of hub set-up. Despite this, given the objective of new communities to be sustainable, local bus stops may need to provide shared micro-mobility provision to support the wider micro-mobility community network, and so have potential to become the lowest level of hub.

2.2 Application of Typologies

2.2.2 Illustrative Application of the Continuum in Existing Communities

1

Located at confluence of local bus routes, Rapid Transit Network and the Railway with high level of mobility demand. Location typically at centre of urban area with high density housing and employment opportunities surrounding it. High commercial viability of shared micro-mobility.

Opportunity for plaza style development or similar, pedestrian friendly spaces and ease of transfer between modes. Opportunities for local amenities such as pop-up food vendors, music, as well as daily convenience services such as parcel lockers, banking or similar.

2

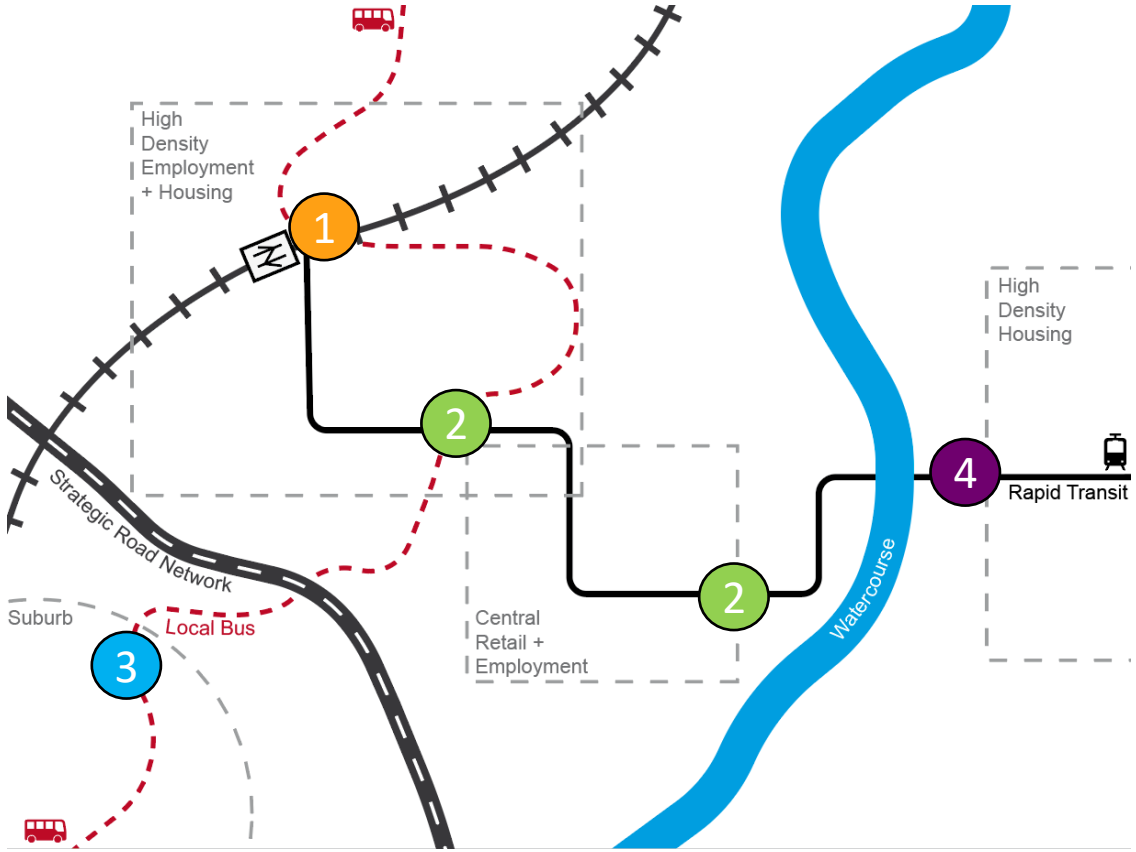
Located in central retail areas with relatively high-density housing and employment, and along the rail or Rapid Transit Network and local bus route. High level of demand inferred with viability for shared micro-mobility.

Location presents need for pedestrian friendly spaces for ease of access to different transit modes and surrounding amenity. Opportunities for parklet offering access to greenspace, and for personal package collection supporting the removal of freight traffic from urban centre.

3

Located throughout major urban areas and at the centre of smaller communities. Ideally along the Rapid Transit Network but at minimum a medium frequency local bus route. Often close to natural attractors and local amenities and demand to support some shared micro-mobility.

Potential to support a higher level of car club provision due to its role facilitating access to more dispersed homes and employment. Pedestrian accessibility is important for access across the hub and for ease of transitioning between modes.



4

Halt

Residential area on urban fringe with access to Rapid Transit Network providing high frequency services to the urban centre. Potential to support local cycle activity and facilitate access onto bus network.

2.2 Application of Typologies

2.2.3 Illustrative Application of the Continuum in Rural Communities

2

Sitting at the centre of a rural community in a village centre, surrounded by compact settlements and along a reasonably frequent bus route with D-DRT operating to aid accessibility. Viability for shared micro-mobility for use within the community and connecting with other smaller communities or dispersed housing close by.

Opportunity to develop this into a community destination, with the parish church, local small businesses and opportunities for freight consolidation, using community hub principles

3

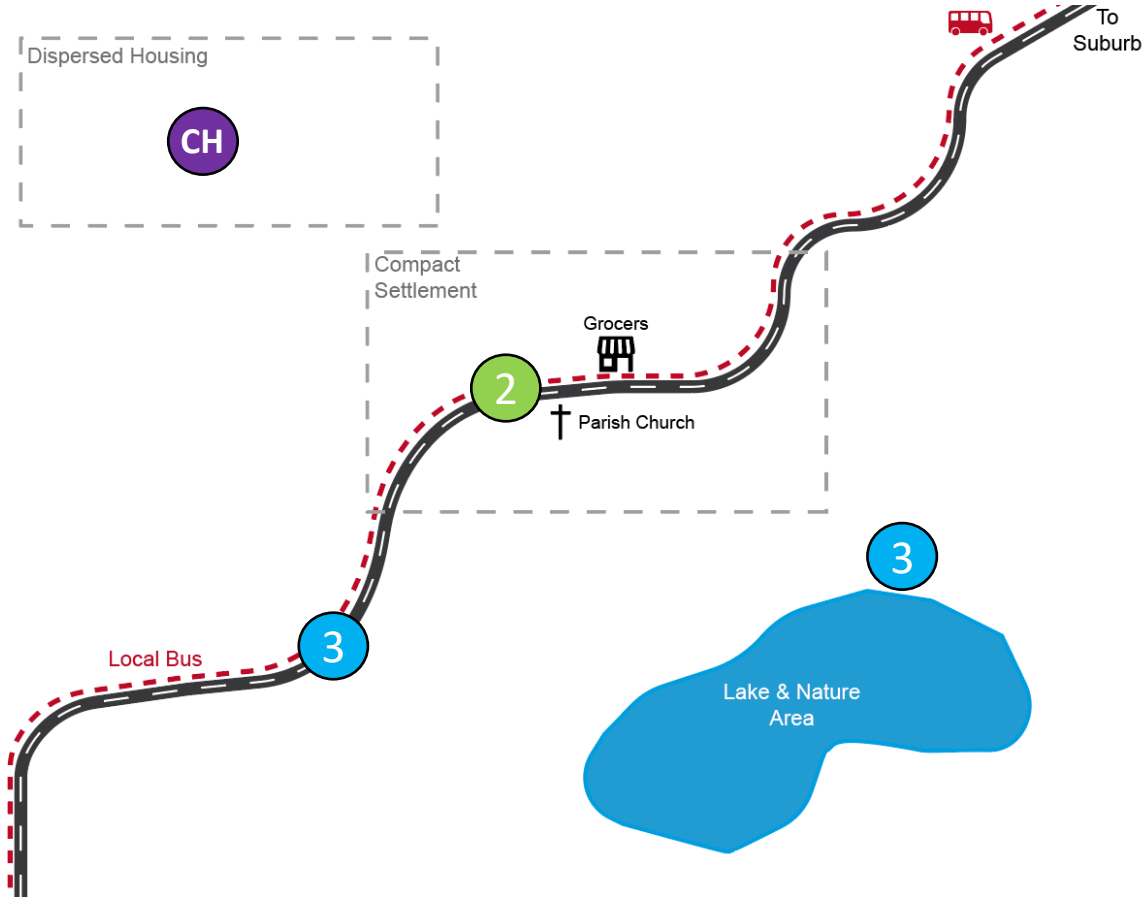
Located within dispersed areas of a rural community or close to natural attractors with access to D-DRT. Also offers shared micro-mobility linking with those provided within the community centre. Likelihood of need for shelter and seating with less frequent public transport, also opportunity for storage lockers to keep footwear suitable for walks down country lanes to access transport services.

4
Halt

High frequency core bus routes and RTS unlikely to serve rural areas across the county given the low commercial viability of doing so. However, where a village lies on a key road link between two larger communities a halt may be viable as an enhanced local bus stop.

CH
Community Hub

Dispersed housing and more remote rural communities are likely to be served by community hubs. More information can be found on the following slide.



2.2 Application of Typologies

2.2.5 Illustrative Application of Community Hubs

- Where rural areas are not viable to fulfil hub specifications on the continuum, it is likely that a community hub focusing on local mobility would be more appropriate. The intention would be to remove reliance on the private car and breaking down barriers to use of shared travel modes and active travel, which in the future could lead to extended connections with other villages and larger towns.
- Community Hubs have the potential to form the centre of the community through offering extended services tailored to the specific community. For example, local allotment owners or farmers might sell their produce at the Hub. A strong focus would be required on what the community requires in terms of active and sustainable travel, alongside what amenities are already in the location which could be supported in order to boost Hub use.
- The Community Hub typology sits outside of the Hub/Halt continuum, so whilst the identified Hub components (see later slides) would not necessarily apply at such locations, the organisation of mobility components to best suit community needs would require consideration.
- An example for Community Hub use would be to support the streamlining of school transport, particularly Home to School transport. The Hub location could provide a safe and convenient pick-up and drop-off location where parents could get their children to access (for example) UgoBus services to get to/from school. The Hub could also provide micro-mobility or storage solutions to support the first and last mile of journeys.
- Another example for Community Hub use could be to utilise or enhance existing Village Hall amenities (toilets and shelter) to support waiting times for D-DRT or similar.

(Image Source[8]: Community 360)

(Image Source[9]: Beryl)

3. Components

3.1 What to provide across Typologies

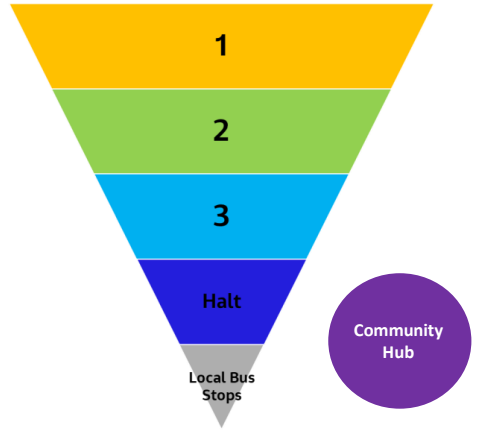
- For each typology, a series of components (i.e. what is necessary to provide on the ground) have been identified which are fundamental to the operation of these areas and how they function as spaces.
- These have been grouped into **Mobility** (what travel modes are provided) and **Place** (the physical infrastructure and services required to meet local needs) components.
- The following sections focus on each of these groups in turn, split between '**essential**', '**desirable**' and '**optional**' considerations at each typology.

E = Essential	D = Desirable	O = Optional

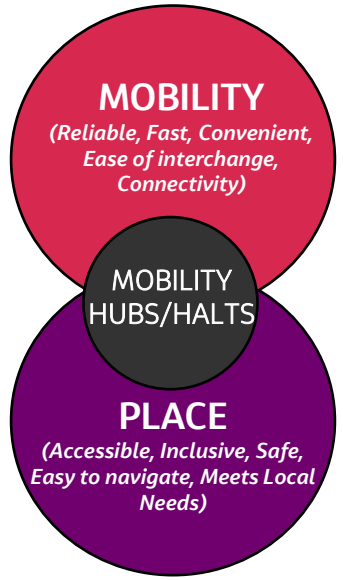
- In order to deploy a certain type of Hub, this helps to identify the type of components that are necessary to achieve:

"Safe and connected places that facilitate convenient access to public, shared and active travel modes"

Typologies



Components



3.2 Mobility Components

3.2.1 Introduction

Mobility components relate to the Public Transport, Micro-mobility and shared transport offer available for users.

Need to establish what mobility services currently exist within close proximity of the Hub/Halt location and which travel modes could be provided and become logically integrated (subject to level of demand for such services).

Mobility Components are incorporated to:

- Provide an interchange with existing or new PT services
- Provide a range of travel options to cost-effectively plug service gaps
- Focus on interchange and connectivity
- Provide first and last mile solutions

Factors to consider:

- ❖ Providing fast, reliable, convenient services
- ❖ Create direct linkages within and between areas to reduce out-of-direction travel and transfers and provide safe, direct routes that minimise conflict with other passengers or vehicles.

(Image Source[10]: Colchester Borough Council)

(Image Source[11] Colchester Borough Council)

3.2 Mobility Components

3.2.2 Checklist

	Minimum Mobility Components *(Reliable, fast, convenient services, ease of interchange, connectivity)*												
	Public Transport						Shared Transport					Active Modes	
	RTS	Bus	Rail	D-DRT	Community Transport	Taxis	Car Clubs	Bike share	Cargo bike share	E-scooters	Shop-mobility	Pedestrian access	Cycle access
1	2 of 3			D	E	O	2 of 5					E	E
2	2 of 4				E	O	2 of 5					E	E
3	1 of 4				E	O	1 of 5					E	E
Halt	1 of 2					O						E	O
Community Hub				D	E	O	D		E			E	D

E = Essential

D = Desirable

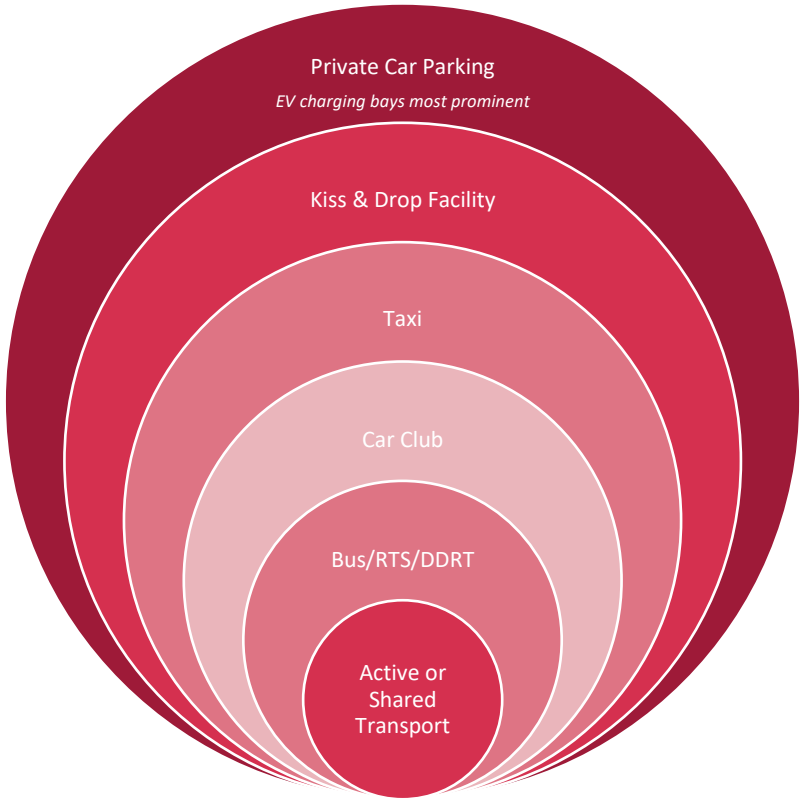
O = Optional

*Example: for a location to become a 'Halt', we are suggesting that it would need to provide access to either a RTS or (Core**) Bus Service as well as pedestrian access. Taxi provision and cycle access would be Optional considerations at the Halt level.*

3.2 Mobility Components

3.2.3 Organisation

- The organisation and prominence of components at Mobility Hubs should encourage the use of sustainable and active travel modes where possible.
- In some locations across Essex which already have components making them credible as mobility hubs, the organisation of these mobility components should be reviewed to align with mobility hub and sustainable travel objectives.
- The circular figure represents each mobility component - indicating the prominence of each with its distance from the Hub. The smaller the circle, the closer it would be located to the centre of the Hub. Active travel (walking and cycling) and Shared Transport should be prioritised over other transport modes.
- Some locations will be limited in space so the hierarchy of prominence may not be possible to directly replicate, however this should be the aim where all mobility hubs are developed.
- Within the mobility hierarchy, taxis are better than private car use however active and sustainable modes are preferred.
- Kiss & Drop refers to a facility which allows for people to be dropped in a location by private car, where the passenger alights, and the driver continues without parking the car



3.2 Mobility Components

3.2.4 Breakdown

*(Alignment with 5.3 Key Design Principles shown in **bold text**)*

Mobility Component	What we mean / include within this	Key factors to consider / Key requirements
RTS	Colchester and Harlow Rapid Transit System (RTS) stop locations – schemes currently under development	The RTS vehicle type, size and capacity will need to be accommodated. **Accessible, Inclusive**: Safe and efficient boarding and alighting, level boarding at all doors and good circulation. **Experiential consistency:** RTS is seen as a new transport form with its Halts forming part of the wider Mobility Hub network. **Integrated:** Other sustainable modes are closely located, and active travel networks are provided at high quality
Bus	Local Bus, UgoBus, Home to School transport	The Assessment Tool factors in the number of bus services that run through the Hub/Halt stop (with reference to core/supporting/local bus) to determine which level it sits at. **Integrated:** Other sustainable modes are closely located, and active travel networks are provided at high quality **Accessible, Inclusive**: Safe and efficient boarding and alighting, level boarding at all doors and good circulation. **Experiential consistency:** all of bus shelter estate always provided to high standard
Rail	National Rail Stations and London Underground Stations	Undertaken in conjunction with Network Rail and TfL **Integrated:** Other modes are closely located, and hierarchy clearly favours sustainable modes **Accessible, Inclusive:** maintaining access for disability focused vehicle access
D-DRT	DRT coverage areas and 'virtual stops'	DRT vehicles require an extra-large dedicated parking bay to park and wait between rides. D-DRT Bay may be shared by CT and Taxi when accessible boarding required Providing access for vehicles and safe and convenient locations for pick up and drop off of passengers. **(Accessible, Inclusive)**
Community Transport (CT)	Key pick-up and drop-off locations for CT services	D-DRT as the main PT mode at Community Hubs so need for high level of amenity for vehicles and drivers. CT: to feed into all typologies with a destination function. CT Design Standards: to allow for space for rear loading of passengers **(Accessible, Inclusive)** **Integrated:** CT/D-DRT can be a first/last mile service at larger hubs

3.2 Mobility Components

3.2.4 Breakdown

*(Alignment with 5.3 Key Design Principles shown in **bold text**)*

Mobility Component	What we mean / include within this	Key factors to consider / Key requirements
Taxis	Taxi ranks	Taxis serve an important function for specific use cases (e.g. those with heavy luggage). Taxis may be located nearby but not within the Hub itself.
Car Clubs	Car Clubs offer a pay-as-you-drive rental arrangement and a realistic alternative to owning a car. Car Clubs are crucial to Mobility Hubs since they provide an alternative to owning a private car for those few trips that do need a car.	Need to identify the level of demand for this service. Car Clubs are particularly popular within more densely populated areas, areas with high demand for parking and/or parking stress. To consider **integration** within a wider Car Club network to offer more opportunities with potential for different pick-up and drop-off points as future network expands. TRO required to re-designate bays for car club use only to include line markings and signage indicating 'Car Club Only' and enforcement may also be required. Visibility and marketing contributes to scheme success. Car Club bays should be EV ready.
Bike Share	Offers flexibility and convenience with town/city wide docking stations and automated self-service. Can be an entry point into cycling more and purchasing a cycle. Helps to change behaviours and perceptions around cycling. Promotes a more active travel approach. Could be located in docks and stations or dockless in the street. Other options include e-bike share as well.	To identify the level of demand for such services. High density of population required. Need for a network of docking stations to be successful. Could consider filtered permeability access to hubs for bike access. Cycle accreditation could ensure quality of cycle provision.

3.2 Mobility Components

3.2.4 Breakdown

*(Alignment with 5.3 Key Design Principles shown in **bold text**)*

Mobility Component	What we mean / include within this	Key factors to consider / Key requirements
Cargo Bike Share	Schemes allowing for rental of one or more cargo bikes. Back to base or free-floating is possible Electric recommended	To enable low-carbon deliveries. Possible partnership with delivery firms (used by their employees to deliver parcels). Access for businesses and individuals too. Private provider required – ownership of assets may be private or council Insurance can take time to sort out Local bike repair organisation with qualification needed for maintenance
E-scooters	See vehicle design: Govt e-Scooter Trial Guidance	Dockless or Docked? Users must have a valid driving license and vehicles must be covered by insurance Note the need for a legal and regulatory framework.
Shopmobility	Provision of powered chairs within a shopping centre or a town. Focused on those with additional mobility needs	Private providers are often charities. Would require engagement to make service **integrated** within TravelEssex/Mobility Hubs and provide **experiential consistency** across different providers Allows for **Inclusive** shared mobility
Pedestrian access	Walking routes within 400m of the hub should be considered, as well as safe crossings and transfer between all components	Hubs should be connected by direct, legible and **integrated** walking and cycling routes which are safe, well lit, overlooked, welcoming, well-maintained, durable and clearly signposted. Desirable for the Hub/Halt to **integrate** with an LCWIP cycle route. **Accessible**: Direct walking routes and wayfinding **Inclusive:** Adequate space for all users to walk, minimising clutter where possible **Consistent** Identify a colour or material pallet consistent across the county
Cycle access	Safe cycle routes within 400m of a hub should be considered, as well as any road crossings	

3.2 Place Components

3.3.1 Introduction

Place components relate to improving the user experience, convenience and confidence to travel as well as meeting demand and needs.

Place Components are incorporated to:

- Provide attractiveness and convenience
- Provide positive user experience and facilitate people's needs and services
- Focus on Safety, Accessibility, Inclusivity, Convenience and Ease of use
- Create a sense of place and act as social meeting points
- Provide opportunities to form effective partnerships

Factors to consider

- ❖ Affordability, durability and maintainability
- ❖ Providing visual and experiential consistency so users know what is being provided / how the space works
- ❖ Highly visible stops so passengers know where to wait / how to access / purchase tickets.
- ❖ Public realm enhancements focusing on safety and attractiveness

(Image Source[12]: TfGM)

(Image Source[13]: Hiemac)

3.3 Place Components

3.3.2 Checklist

	PLACE (Accessible, Inclusive, Safe, Easy to navigate) (subject to demand, convenience, meeting local needs)													
	Cycling					Micro mobility	Bus shelter estate				EV charging infrastructure			
	Cycle parking	Cycle storage (lockers)	Cycle repair tools & pump	Personal storage lockers	Bike seat/ trailer hire	Docking stations	Sheltered waiting area	Bus stop flag, pole and timetable case	Seating	Real time information screen	EV bus charger or battery swap	EV charging - private vehicles*	Car Club EV charging and parking space	D-DRT EV charging
1	E	D	E	D	O	D	E	E	E	E	E			D
2	E	D	D	D	O	D	E	E	E	E	D		D	
3	E	D	D	O	O	D	E	E	E	E			D	
Halt	O	O		O	O		E	E	E	E				
Community Hub	D	O	E	D	O	D	E	E	E	O		E	D	D

	Amenities							Information		Logistics	Community		Private vehicle parking
	Wi-Fi	Phone charging	Toilets	Recycling bins	Water fountain	Lighting	CCTV	Local information board	Digital Pillar**	Parcel lockers	Refreshments / café / vending machine	Other local services / amenities	Limited to P&R, P&C or essential disabled parking provision
1	E	E	E	D	E	E	E	D	O	D	D	D	
2	E	E	D	D	D	E	E	D	O	D	D	D	O
3	D		D	D	D	E	D	D	O	D		D	O
Halt				D	D	E	D	D	O	O		O	
Community Hub			D	D	D	E	E	E	O	D		D	

*If associated with P&R or P&C this would be needed

**Subject to site suitability / advertising potential

3.3 Place Components

3.3.3 Breakdown

*(Alignment with 5.3 Key Design Principles shown in **bold text**)*

Place Components	What we mean / include within this	Key factors to consider
EV Charging Infrastructure	Split EV Charging into for Private vehicles (charging done mainly at home with most having access to off-street EV charging), for Car clubs, for Buses and for Micro-mobility.	▪ D-DRT charging could require a shared charging facility for EVs, e.g. one charger with two cables with capability to charge two vehicles (the DRT minibus plus another private car). ▪ Need to cater for commercial vehicles and minibuses by minimising height restrictions and providing big bays
Cycling	Parking storage, Repair tools and pump	▪ The quality of cycle parking provision may vary depending on local needs / dwell time. For example, high quality secured parking is identified as essential at Hub 1 level, with medium quality at other levels. ▪ Cycle storage / parking important for first and last mile connections and leisure purposes. Community Hubs may require more aesthetic storage such as planter cycle storage, while Halts may integrate cycle hangars with sheltered secure storage throughout the day. Basic hubs may require cycle hoops, while moving up the continuum the amount of storage will increase, alongside levels of security and potential storage for helmets.
Bus Shelter Estate	ECC's Bus Shelter Contract includes the provision of the shelter (which has the option to be either metal framed or wooden) with seating, a Double-Royal timetable frame, the provision of lighting, electrical connection and an integrated roof fixing to enable a bus stop flag to be attached. It will be a consistent colour (black) and have toughened glass panels.	▪ The installation or replacement of bus shelter provision needs to firstly be put through ECC's shelter request process. If the site can be covered by the 'Essex Wide Bus Shelter Replacement Programme', the developer will need to agree with ECC what can be supplied through the ECC contract. ▪ **Timetable Case** – Hard copy transport information: Provides information about existing routes, partial closures or closure of routes and their level of service ▪ Real Time Information Screen to double up to provide income from advertising where possible. The provision of RTPI is dependent on whether it has been integrated, whether it has been paid for, the Real Time Supplier would manage install. ▪ The Essex Wide Bus Shelter Replacement Programme identifies a requirement for shelters to use sustainable technology where there is an existing power source, so every shelter will have to have a light. The branding will be on the Flag and on the Timetable Case which will have the Travel Essex brand. ▪ **Accessible**: Interactive technology and real time information

3.3 Place Components

3.3.3 Breakdown

*(Alignment with 5.3 Key Design Principles shown in **bold text**)*

Place Components	What we mean / include within this	Key factors to consider
Amenities	Wi-Fi and USB phone charging, internet connectivity, recycling bins, lighting, seating, toilets, water fountain, CCTV	▪ **Wi-Fi and USB phone charging** – The Essex Wide Bus Shelter Replacement Programme does not include the provision of Wi-Fi and USB charging points as standard. ▪ **Wi-Fi** is not included as there are other opportunities through digital panels or real time screens and are other projects (5G masts) being looked at. Also, Wi-Fi could be retrofitted. Public Wi-Fi hubs should be in areas with low data plan penetration and near concentrations of low-income users – **inclusivity**. Importance to accuracy of RTPI. ▪ **USB charging** is not deemed practical as it often gets filled with chewing gum – could use inductive (wireless) charging ▪ The future goal is for the Travel Essex App to be able to provide one user platform for all ticket purchases and so if 'Digital Ticket Purchase' becomes the norm, perhaps having Wi-Fi and phone charging would be even more necessary ▪ **Recycling bins** are not part of the Essex Bus Shelter Contract. District Councils are responsible for bins, and they form part of the District networks as they need to be emptied so it is difficult for most bus stops outside of town to have bins. **Visual consistency:** high quality environment. ▪ **Lighting** - The Essex Wide Bus Shelter Replacement Programme identifies a requirement for bus shelters to use sustainable technology where there is no existing power source. All shelters will be provided with a shelter light as standard. Lighting provision across the Hub should be provided to provides a sense of comfort and safety. ▪ **Seating** – good to provide (Inclusive). Street furniture should be carefully sited to avoid clutter and obstruction. Will depend on size of Hub and proximity to other existing seating areas. Seating supports a more comfortable waiting experience, but also provides opportunity to rest, eat, socialize, or even watch live concerts and cultural programming so creating safe and attractive public spaces. Number of available seats should be appropriate to peak hour passenger requirement. Seating should offer weather protection. CCTV supports levels of safety and perception of safety and lower crime rates. ▪ **Toilets** – Support passenger comfort, however they do not need to be directly delivered on the hub, unless identified as an essential component. For those typologies where toilets are desirable, robust signage to nearby public toilets (less than 3min walk ideally), or to local businesses/facilities happy to provide access to support the hub can provide adequate **integration** ▪ **Water fountain** – location of water mains is important. Placed to avoid clutter. ▪ **CCTV** – important to note who is monitoring? Longer term operational cost

3.3 Place Components

3.3.3 Breakdown

*(Alignment with 5.3 Key Design Principles shown in **bold text**)*

Place Components	What we mean / include within this	Key factors to consider
Information	Local information board, Digital Pillar (providing digital information and advertising), Virtual help point Also, wayfinding – linking into physical and virtual wayfinding strategies	Every Hub/Halt location is assessed for Real Time Information suitability by ECC IPTU Team **Local information board:** Printed materials important. Notice board would be community-owned – appropriateness of local information, tourist information, events, etc. depends on location. This would be placed outside of a county-owned bus shelter. Could be a map of the local area and/or a community Notice Board – providing local information, in additional to travel information available through Real Time screens. A 'where to go' type board – i.e. following the passenger journey to show where bus stops are located, where toilets are. In Reading Station there is a braille version of this. **Digital Pillar:** This is the longer-term aspiration. The site's advertising potential would need to be established. Every Hub/Halt location should be assessed for its suitability for Advertising. Any advertising considerations should be referred to james.Hopkins@essex.gov.uk **Virtual help point:** Virtual staff support via help points contributes to levels of safety. **Accessible**: Interactive technology and real time information, Providing a back office for people that do not have the App. A parent to have an account and the child has a token to use on the service. **Inclusive:** Providing the necessary travel information to enable passengers to fulfil their onward journey within the wider travel network. **Consistency**: Need for programme of updating to provide info accurately. Ability to reinforce TravelEssex brand at all points **Operational Soundness**: Effective information and wayfinding improves effectiveness for all modes
Cycling	Personal storage lockers, bike seat, trailer hire This could also be a standalone 'Bike Hub' e.g. SpokeSafe Colchester, closely linked to a mobility hub	Demand would be required - propensity to cycle, nearby cycle paths & general cycle safety Full range of hire options to expand pool of willing cyclists – making cycling **inclusive**

3.3 Place Components

3.3.3 Breakdown

*(Alignment with 5.3 Key Design Principles shown in **bold text**)*

Place Components	What we mean / include within this	Key factors to consider
Logistics	Hubs will form convenient locations for collecting and delivering parcels. Package lockers may be provided by suppliers such as Amazon or DPD. Parcel delivery / collection points / lockers to bring in revenue.	Parcel pick up facilities (e.g. Amazon lockers) need careful planning because they could create car trips by people driving to the Hub to pick up a parcel. Should be well lit at night and **accessible** 24 hours a day – CCTV required or built in. The location of them should be convenient in order to reduce journeys, provide income to support hubs and be commercially focused. Safety and security should create **inclusivity** Lockers are most successful near high-volume stations and dense employment commercial areas.
Community	Refreshments, cafés or vending machines, other local amenities (e.g. post office)	**Integrated** into areas that have no or limited PT provision, can offer flexible space – responding to flexible working patterns and changing work/life patterns and habits, can generate footfall. Dictated by the location and community use of the hub. Could be dry cleaners, a post office, community/events space, shared workspace. The nature of this amenity would come out of location based public consultation and needs to have the flexibility to alter and evolve over time. To support this, during the development of a hub, the provision of electric bases for amenity pop-ups should be considered for future longevity, rather than needing to retrofit spaces.
Private vehicle parking	Park & Ride (P&R), Park & Choose (P&C) or disabled parking provision	Whilst parking provision is not considered essential to achieving a Hub/Halt and the use of private vehicles is generally discouraged, the provision of parking at a P&R or P&C site can generate Hub/Halt demand by providing **integration** with other travel modes (for example a rapid bus service into an urban centre). Disabled parking may also be necessary depending on localised circumstances. This component therefore relates to providing necessary access for **accessibility** and **inclusivity**.

3.3 Place Components

3.3.3 Additional Elements for Consideration

The previous slides identified the **Mobility** and **Place** components that are considered fundamental to achieving a Hub/Halt entity. The following aspects are considered more site-specific 'extras' that could be added to a Hub/Halt as part of wider initiatives and are dependent on localised circumstances or objectives.

Improvements to Public Realm

- A pocket park or parklet
- Planting considerations
- Multi-use landscaping
- Green roofs (e.g. a flower box on top of a bus shelter)
- Solar canopies / panels
- High-quality paving treatments
- Bees!
- Sustainable Drainage
- Solar Panels
- Public Art

Relevant Design Guidance:

Essex Design Guide: Successful Criteria for Public Open Spaces
Healthy Streets – Whole Street approach
Network Rail Public Realm Guidance
Manual for Streets

Public Realm refers to ***"…the 'space between buildings' which is freely and publicly accessible including streets, squares, forecourts, parks and open spaces. This is primarily comprised of public land although it can also include publicly accessible privately owned and managed land."***[1]

When implementing a Hub/Halt, improvements to the Public Realm are implicit in terms of ensuring the location is fully accessible and through inclusive design. The use of **consistent, high-quality and easily maintainable** design materials will also contribute to an improved sense of place and quality and help to create safe and attractive public spaces. Additional opportunities to improve the Public Realm *(such as those listed to the left here)* could be explored to further encourage use of / enjoyment of the Hub/Halt. Such measures would be dependent on the level of commitment and funding allocated towards its implementation along with the maintenance / stewardship opportunities in place to look after it.

Other elements to improve the public realm may be considered that address specific road safety objectives, such as paving design or bollards to segregate active travel modes from the road/area for bus manoeuvre or ways to support modal filters.

3.3 Place Components

3.3.3 Additional Elements for Consideration

Logistics

- Freight consolidation
- Kerbside management
- Ways to provide commercial viability / income to support hubs

- Logistics opportunities could be explored to support local economies and help to provide commercial viability of a Hub/Halt by attracting revenue streams. Freight consolidation refers to having central control over deliveries in an area and developing ways to support last mile deliveries.
- According to CoMoUK, there are no cross-operator (multi-party) consolidation centres that have really taken off / worked commercially yet in the UK. Kerbside management could also be considered where commercial vehicle operators can book a slot (e.g. via an App) to load or unload perhaps in time-restricted kerbside locations. Management of this process could help to ensure efficiency of deliveries, causing minimal disruption on other Hub/Halt users whilst maximising the value of under-utilised kerb space.

Community

- Health centres/gyms
- Flexible working space
- Cycle accreditation
- Space for community-led initiatives, such as a Book Library
- 4G/5G technology

- Additional opportunities to support community use (such as those listed to the left here) could be explored further based on meeting local needs.
- Whilst the 'Community Hub' standard specifies how a Hub could develop in a location with no or limited PT provision, these community additions relate to potential opportunities to co-locate complementary functions such as health centres and gyms at a Hub/Halt site. Such elements are likely to be very context dependent and be community-led / grassroots driven. When located within new or existing communities, such facilities can act to support a vibrant social community by creating meeting places and generating additional footfall.

4. Planning & Commercial Feasibility

4.1 Coordination Strategy: District Hubs

This guide recommends that **District Champions** should be nominated for each local authority. The Hub/Halt Lead Coordinator at ECC will work collaboratively with district champions to implement Hubs/Halts throughout Essex.

District Hub Champions Responsibilities

- Ensuring consistent level of provision is delivered
- Providing advice
- Taking ownership of the Tool
- Quarterly meetings to share best practice?
- Integration with planning teams
- Engagement with developers
- Working with partners in the development of their local plans and strategies to ensure that these align with the Hubs/Halts proposals for the county.

4.2 Development & Ownership

Ownership of the Hub/Halt and relevant parties responsible for it may reflect its typology:

Typology	Possible Operator / Delivery Partners / Stakeholders					
	Local Authority	Transport service operator	Relevant private interest	Third Party Manager	Community Operator	Housing Developer or Association
1	✓	✓			✓	✓
2	✓	✓				✓
3	✓	✓	✓	✓		✓
Halt	✓			✓	✓	✓
Community Hub	✓			✓	✓	✓

To meet the ambition of providing Hubs / Halts as a connected network, the Operators / Delivery Partners / Stakeholders must work cohesively.

Local authorities: ECC and District/Parish Councils likely to be delivery partners at all typology levels with involvement in planning/policy/delivery discussions. Including associated with the Bus Shelter contract.
Transport service operators: Rail/Bus/P&R operators likely to be key partners at transport interchange sites.
Private interest: Supporting access to business parks (e.g. PHE in Harlow), petrol stations or tourist/leisure sites likely to be site dependent. There is growing private sector interest, particularly over EV charging
Third Party: Service-sector (medical, health or education)
Community Operator: Community Centres, Shops, Community Interest Groups
Housing Developer or Association: Residential developments, Garden Town Communities. There is interest in developing hubs to support new residential developments (e.g. RTS and Garden Town Communities)

4.3 Planning Considerations

Permitted Development Rights allow for many of the proposed Hub / Halt components to be provided without the need to seek formal planning permission from the Local Planning Authority provided the components remain within certain size / capacity limits and do not include advertisements.

The table below outlines the common components being considered for the Hubs / Halts and highlights the need to meet certain criteria to be provided under PD rights, and which components require planning permission regardless of size or capacity limitations.

A Pre-Application planning meeting with the relevant planning authority would be recommended when developing any mobility hub to ensure alignment with local and national planning policies.

Component	Planning considerations
Bike share facility	Permitted development unless advertisements are present on the bike share facility
Car Clubs	TRO requirement to re-designate parking spaces
Cycle parking and repair tools with pump	Permitted development unless the hub has a capacity greater than 200m^3 or is over 4m in height.
Docking stations	Permitted development (if design is similar to that of Sheffield Stands)
Sheltered waiting area and seating	Only if the shelter is higher than 4m (including green roof / solar panels). Seating is permitted development.
Bus stop flagpole and timetable case	Permitted development
RTPI screens	Permitted development unless advertisements are present on screen
EV chargers	Planning permission required
Local information board	Permitted development unless advertisements are present on the board
Parcel Lockers	Although size is within PD specifications, the commercial nature will likely require planning permission

For detail on mobility hubs within the context of new development planning controls and Section 106 agreements see section 4.8.2

4.4 Potential Partnerships

Essex Highways

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Support Functions

Essex County Council

CoMoUK supporting shared transport

District / Parish Councils

Key Delivery Partners

TCB

NetworkRail

Housing Companies

HGGT HARLOW & GILSTON GARDEN TOWN

Research and Insight

University of Essex

Public Health England

ENGLAND'S ECONOMIC HEARTLAND

TRANSPORTEAST

Mobility Service Providers

enterprise CarClub

digigo on demand

SPOKESAFE

Local Bus Operators

TIER

ugobus

cycle colchester

Branding

Travel Essex

Services

a

EVRi delivery made for you

InPost out of the box

Behaviour Change Initiatives

Essex pedal Power

STREET TAG

ECC Initiatives:
Liveable Neighbourhoods
School Streets

BetterPoints

Think Safe Home Safe

Essex Climate Action Commission
Powering positive change

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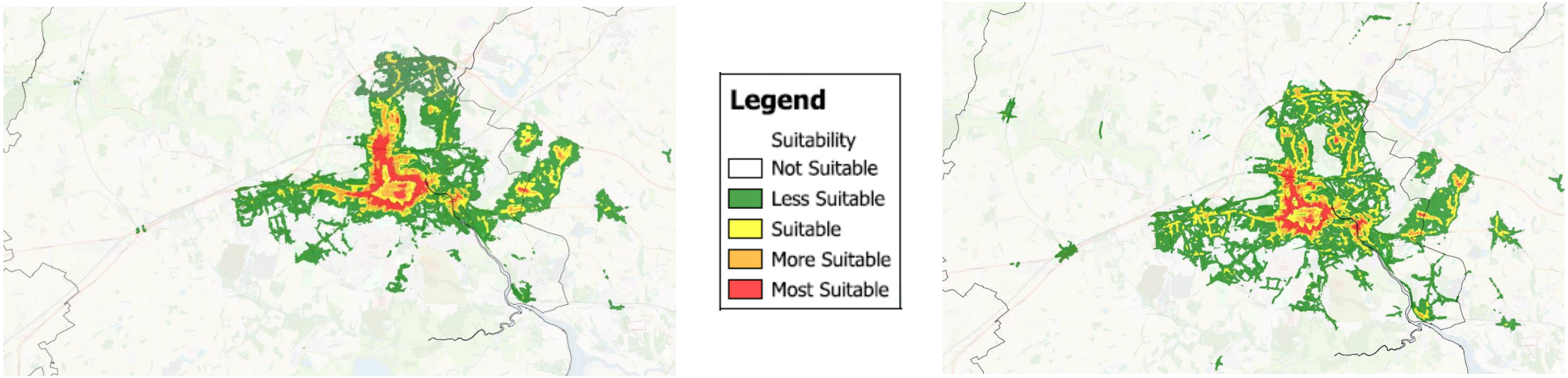
4.5 Identifying Hub Locations

4.5.1 A Network Perspective

Heat map analysis, which considers input data such as typical trip generators or attractors including train stations and large employment sites, has been undertaken to define areas around Colchester from most to least suitable for a mobility hub. Examples of the heatmap outputs are shown below to reflect an equally weighted assessment and an increasing weighting for rural areas assessment.



The outputs of this analysis, in addition to other factors such as how people travel in, out and around Colchester, areas with poor transport connectivity, potential RTS stop locations, are being used to define a long list of mobility hub locations.

The ECC Assessment Tool can be used for each short list site to gain a better understanding of the components required to enhance the transport offering and make the most of a mobility hub in that location.

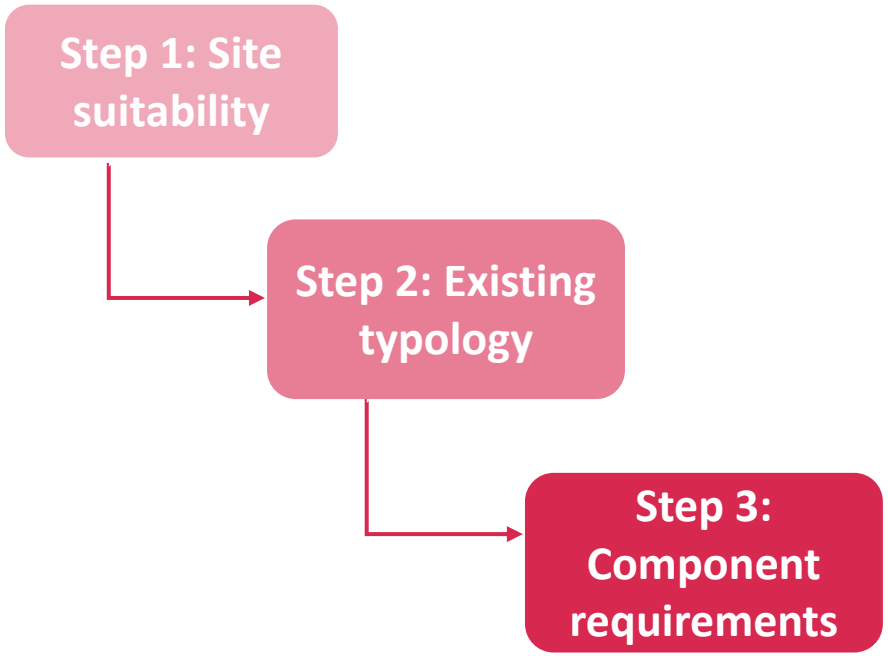
Finally, further sifting can take place based on the Assessment Tool results to create a priority short list of mobility hubs based on the locations which create the most appropriate and cohesive network for Colchester.

This approach can be replicated in all boroughs to understand the suitability of borough and countywide hub networks

4.6 Assessment Tool

4.6.1 Introduction

- Jacobs developed a spreadsheet-based Assessment Tool to help determine the optimum location for a Hub/Halt, to determine the most suitable type of Hub/Halt to deploy and to identify a list of expected components. The tool will be overseen by the District Champions but has potential to be used by transport consultants and developers in preparation for conversations with ECC planning and urban realm teams.
- It uses a simple step-by-step process with the ability to plug in site details and basic information. Relevant data sets are then drawn upon and each location is 'scored' for its potential Hub/Halt suitability and deployment.
- It uses a RAG (Red-Amber-Green) scoring system with weightings used to assess the maximum typology that could be achieved. The quality level of each component can also be scored and assessed to help provide visual and experiential consistency.
- The Tool can be used to help decide whether the Hub/Halt could be optimised by its location or choice of components and help determine whether investment is worthwhile.
- It has been designed to be adaptable to complement other assessment tools used by public transport and active travel planners



4.6 Assessment Tool

4.6.2 Instructions

Steps to follow when running the Tool:

Choose **location** to run → 1 → Input demand, mobility and place **elements** in order to assess the suitability of the location for development of a hub (inputs come from given data sources online) → 2 → Input current demand, mobility and place **components** (inputs come from planning documents, google maps, site visits or provided from the relevant district) → 3 → Input **quality** of current demand, mobility and place components (inputs come from planning documents, google maps, site visits or provided from the relevant district)

Two Essex locations have been run through the Tool:

1) **Chelmsford Bus Station** – Chosen due to its city centre location with interchange links across Essex and the rest of the UK, where people want to get to/from
2) **Barnston Village** – Chosen due to its rural/village location with minor transport links

4.6 Assessment Tool

4.6.3 Site Suitability Inputs

Mobility	Measurement
Bus Provision	Bus Network Corridor Classification (District Bus Network Review) Available on Project Mapper (Transport Networks/Bus Network/ Categorised Corridors)
RT Provision	RT Stop at location
Rail Provision	Rail station & service frequency available by clicking station on Google Maps
D-DRT Provision	Site covered by a D-DRT area
Existing shared mobility provision	Availability of a shared mobility form at or close to the site
Cyclability (Cycle Comfort)	Cyclability Score (Essex ST Monitoring) AND Qualitative Assessment of cycle access to the site
Walking Connectivity	Walkability Score (Essex ST Monitoring) AND Qualitative Assessment of pedestrian access to the site
EV Charging Viability	Existing Charge Points AND Qualitative Assessment of nearby space
Parking spaces (High value reduces scoring)	Number of nearby parking spaces (within 250m)

Place	Measurement
Employment	Provision of employment within 400m Search site postcode to find Lower Super Output Area (LSOA), link to BRES Datasheet within Tool
Nearby Key Attractors (university, local shops, tourism sites, hospitals)	What key attractors generating trips are within 400m? Using Countywide Accessibility Study 'Key Attractor Locations' available on Project Mapper
Population Density	Average persons per sq. km (2011) (of LSOAs within 400m). Project Mapper (Demographic)
Potential Propensity to Cycle	PCT Tool Online - Essex Govt Target - Equality (5.1% average)
Cycle Mode Share (2011)	PCT Tool Online - Census 2011 (Commute)
Walk Mode Share	Percentage of people who walk to work (Average of OAs within 400m) Travel to Work Variables 2011
Public Transport Mode Share	Percentage who use Public Transport to get to work (OAs within 400 metres) OAC Variables - Variable 42 (2011)

Place	Measurement
Sensitivity to Transport Provision	Measurement combining IMD Scoring and household car ownership
Community Support	Qualitative - have local community groups and stakeholders been engaged on the scheme? Is there local buy-in and support?
Air Quality	Air quality Index
Land Availability (Accessibility)	Potential space that features can be provided without impediment to any users with additional accessibility requirements
Prominence and Visibility	How prominent is the location to local residents and visitors
Commercial Viability	How much revenue could the site generate?

4.6 Assessment Tool

4.6.4 Case Studies

Two Essex locations have been run through the Tool:

1) **Chelmsford Bus Station** – Chosen due to its city centre location with interchange links across Essex and the rest of the UK
2) **Barnston Village** – Chosen due to its rural/village location with minor transport links

All inputs of the assessment tool are summarised into one output sheet with the name: *Component Development Plan* as shown below for each location

Site Name	Chelmsford Bus Station
Current Typology	Local Bus Stop, or No Feature

Expected Minimum Typology	2
Potential Maximum Typology	1

INPUT BELOW

Typology chosen to produce Component Development Guide for:	2

You must provide:	Quality or integration must be improved for:	Consider adding:	You could improve the quality or	Currently the site provides:	These features or components are high quality:
	No Features Requiring Quality Improvement	Community Transport	Cycle access	Bus	Bus
Requires 2 Shared Mobility Features		EV bus charging/battery swap	Sheltered waiting area	Rail	Rail
Cycle parking		EV charging - car clubs (and parking space)	Seating	Pedestrian access	Taxis
Real time information screen		Docking stations	Recycling bins	Cycle access	Pedestrian access
Wifi		Toilets		Sheltered waiting area	Bus stop flag pole and timetable case
Phone charging		Water fountain		Bus stop flag pole and timetable case	Lighting
		Local information board		Seating	CCTV
		Digital Pillar		Lighting	
		Virtual Help Point		CCTV	
		Personal storage lockers			
		Cycle repair tools & pump			
		Bike seat & trailer hire			
		Package lockers			
		Refreshments/ café / vending machine			
		Other local services / amenities (e.g. Post Office, Banking, Dry Cleaners)			
		Parking			

1) Users input details on site/area characteristics and components. They chose whether it is an existing site or new development location.

2) The tool confirms the current typology of the site, as well as suggesting the expected typology given existing mobility and place components, and the maximum that might be achievable given the site's demand

3) The tool then suggests the existing, required and recommended components that should be developed, as well as recommendations on quality, for a desired typology *(In this example for a Type 2 at Chelmsford Bus Station & a Community Hub at Barnston Village)*

Site Name	Barnston Village
Current Typology	Local Bus Stop, or No Feature

Expected Minimum Typology	Site Unsuitable / Local Bus Stop Only
Potential Maximum Typology	Community Hub

INPUT BELOW

Typology chosen to produce Component Development Guide for:	Community Hub

You must provide:	Quality or integration must be improved for:	Consider adding:	You could improve the quality or integration	Currently the site provides:	These features or components are high quality:
	No Features Requiring Quality Improvement	D-DRT	Cycle access	Pedestrian access	Pedestrian access
Requires 1 Shared Mobility Features		Taxis	Sheltered waiting area	Sheltered waiting area	
Community Transport		EV charging - car clubs (and parking space)	Bus stop flag pole and timetable case	Seating	
EV charging private vehicle		D-DRT charging	Seating	Lighting	
CCTV		Cycle parking	Recycling bins		
Local information board		Docking stations	Lighting		
		Real time information screen			
		Toilets			
		Water fountain			
		Digital Pillar			
		Virtual Help Point			
		Personal storage lockers			
		Cycle repair tools & pump			
		Bike seat & trailer hire			
		Package lockers			
		Other local services / amenities (e.g. Post Office, Banking, Dry Cleaners)			

4.6 Assessment Tool

4.6.5 Application in Barnston Village – Community Hub

digi go

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Essex County Council
Home to School Transport
Pick Up Point

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4.7 Costs

4.7.1 Introduction

The costs outlined across the next two slides are **derived from 2023/24 market figures** and **<u>are provided as a guide only.</u>** Site specific costs will need to be collected by the relevant project delivery body.
In the future, the costs will be subject to inflation and uplift in line with **Index: AFI (Civil Engineering) Series 2. (BIS).**

- The indicative component costs listed in the tables that follow are high-level costs only.
- Planning, design/survey, groundworks, contractor fees, utilities connectivity, public realm additions and VAT costs are all excluded and would need to be considered when accurately costing the components in the future.
- Costing will be dependent upon inflation, material market price, material availability and skilled labour cost.
- An additional cost consideration is possible OPEX costs could be incurred during the lifecycle of a hub once complete. These include Local Authority charges, staffing, maintenance and upkeep of components, cleaning, CCTV monitoring, amongst others. There is an opportunity to recoup some of these costs, which will be outlined on the following pages.
- <u>Recommendation</u>: Conduct a complete procurement review of essential hub components to derive consistency and pricing reliability

4.7 Costs

4.7.2 Indicative Components Cost Ranges

Component	Indicative Costs
Parking Space line marking for D-DRT, Community Transport, Taxi's, Car Clubs & Micro-mobility	Vehicle spaces - £1,500 Micro-mobility parking infrastructure - £8,000 (Meristem Design)
Cycle Parking and Storage	Sheffield Stands - ~£160 each (10no. £1600) 10no. bike shelter - ~£5,000 Bike compound for 20no. bikes - ~£20,000 Cycle Hangar- ~£7,500 Wave scooter rack - £1,950 (https://www.lockit-safe.co.uk/)
Cycle Repair	Stand with tools - ~£4,860, (Meristem Design)
Personal Storage Lockers	£500
Electrical supply point for: *cycle docking stations, phone charging, parcel lockers, refreshments /hospitality*	£2,260
Sheltered waiting area	Bench and shelter ~£98,550 dependent on specification, size and style
Bus Stop flag, pole and timetable case	~£19,100 *(consult with ECC Bus Stop Contract)*
Seating	Bench - ~£5000
Local Information Board	~£3,500 (Meristem Design) dependent on style
Wayfinding	Fingerpost ~£2,090 per post Totem ~6,000 per totem (Meristem Design)
Defibrillator	~£4,660

Component	Indicative Costs
EV Bus charger / battery swap	Phantograph only ~£50,000
EV Charging Point (private vehicles, car clubs and D-DRT)	~£6,000 (cost of fast charger TfL benchmark 2019)
Wi-Fi	~£11,730
Recycling Bins	~£100 - £700 dependent on size and style, (Source: https://uk.glasdon.com/)
Water Fountain	~£13,390 (Meristem Design)
Lighting	~£8.855 per column (Meristem Design)
CCTV	~£10,000 per column (Meristem Design)
Digital Pillar	~£8,860
Real Time Information	~£11,500 for pole-mounted RTPI screens *(consult with ECC Bus Stop Contract)*
Pocket Park	~£10,000 dependent on size and style, (Meristem Design)
Planting	~£3,500 (1m x 1m x 1m steel planter) (Meristem Design)
Green Roofs	~£1,000 per sq metre
Solar Canopies	~£60,000
Sustainable Drainage	~£29,450 dependent on size and style, (Meristem Design)
Public Art	~£10,000
Outdoor Gym Equipment	~£6,000

4.7 Costs

4.7.3 Typology Cost Estimates

Following an internal cost assessment exercise based on only the indicative costs of 'essential' mobility hub components, an estimate cost for each of the typologies was produced. The component cost estimates were collated from online research into potential suppliers and from the sources identified on the previous page. Many of the component costs will be finalised through procurement carried out by ECC before hub / halt implementation.

An overview of the typology cost estimates is outlined below, based upon which components are considered essential, desirable and optional for each typology. **It is important to remember that at this stage, the estimated typology costs only include the proposed components and do not cover additional costs such as design fees or operation and maintenance costs. In many hub locations, some essential components will already exist and so these indicative costs can be reduced.**

Typology	Estimated cost		
	Essential	Desirable	Optional
Typology 1	£352,325.00	£119,320.00	£10,360.00
Typology 2	£266,575.00	£279,330.00	£11,360.00
Typology 3	£207,825.00	£202,800.00	£71,860.00
Halt	£180,325.00	£118,190.00	£20,620.00
Local Stop	£174,545.00	£37,690.00	£74,860.00
Community Hub	£177,895.00	£186,160.00	£106,360.00

4.7 Costs

4.7.4 Procurement

- It is recommended that market engagement for procurement takes place at an early stage of mobility hub development.
- For the services that require funding, a procurement model will be needed if direct control is not possible for Essex County Council (the lead body), i.e., delivering the hubs solely in-house.
- Procurement of services could take place through a third party which would manage the hub based on ECC's guidance and the core elements of their business model, or Essex may adopt a hands-off approach whereby ECC provides permission only and allows the third-party provider to operate with minimum standards to follow.
  - The illustrations below outline these options.

Procurement of facilities & services

For shared transport services, street furniture, non-mobility services

- **Direct control**: in-house operation
- **Service contract**: tightly specify service delivered by a third party
- **Procured operator:** some elements specified, and others left for the operator to control
- **Permission to operate**: third party operation with minimum standards (concession agreement, permits, etc)

Example: ECC Bus Shelter Contract

- **Owner:** Essex County Council
- **Supplier:** Single Supplier
- **Aspects:** Bus Shelter Estate including the bus shelter, flag and pole, real time passenger information screens, seating, advertisements

4.8 Management

4.8.1 Introduction

Responsibilities for Management and Maintenance of the Hub/Halt would need to be agreed on a **case-by-case basis** to identify whether components can be included within **existing maintenance regimes**, whether they are **adopted by third parties, outsourced to management companies** or run in **partnerships**.

- Each component will have different management regimes and ownership considerations so will need to be reviewed to understand who will own and manage once the component is in place.
- This is particularly relevant for locations outside of the public highway but will need to be established no matter the location of the components.
- Recommendation: produce an Asset Management Plan when developing scheme designs to ensure complete clarity over ownership, maintenance and management responsibilities.

4.8 Management

4.8.2 Component Considerations

Component	Management/Maintenance Considerations
Car Club	External providers generally offer management and maintenance within their contracts – but requires management from an ECC or borough perspective as these are commercially driven
Bike / Scooter Share	External providers generally offer management and maintenance within their contracts – but requires management from an ECC or borough perspective as these are commercially driven Potential to build on existing contracts within the county, to provide consistency between boroughs/districts Subsidy often required for these, where does this come from

Component	Management/Maintenance Considerations
Personal Lockers	Management of membership or access to these. Who is responsible for emptying and maintaining the facilities?
Package Lockers	External providers generally offer management and maintenance within their contracts – but requires management from an ECC or borough perspective as these are commercially driven
Pop – up refreshment	Who is providing and maintaining the power supply? Are there costs to access the power point?

Component	Management/Maintenance Considerations
Bus Shelter	Falls within ECC Bus Shelter contract terms of maintenance
Secure Cycle Storage	Management of access to membership for fobs, apps or similar to access facilities
CCTV	Monitoring of footage and maintenance of infrastructure
Real Time Information	Falls within ECC Bus Shelter contract terms of maintenance
Wi-Fi / Phone Charging	Community Wi-Fi Scheme (CIF Grant) could be utilised to get buy in for service provisions. Consideration of phone charging on information boards
Toilets	If existing facility will already fall under existing maintenance regimes. If new, can it be accommodated within existing regimes?
Digital Information Boards	Management of background data and front-end usability to be considered
Bins / Recycling	Currently managed by ECC – potential to outsource
Water Fountain	Refill Campaign – saw Colchester Borough Council roll out three drinking water fountains . Potential similar buy in / models from other districts

4.8 Management

4.8.3 Best-Practice Network Management

Maximising the benefits of mobility hubs and ensuring accessibility for all will require hubs to be properly resourced.

In many cases, contracts with mobility providers include asset management and customer support capabilities however, ECC will need to ensure their asset management plan provides for dedicated staff and clearly sets out which responsibilities lie with ECC versus mobility providers and outsourced management companies.

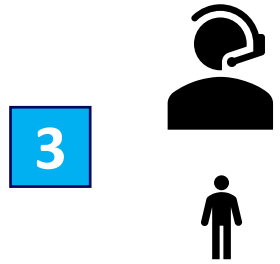
ECC Management Team
(Oversee hub network inception, strategic vision and ECC contracts with mobility providers)

Potential for outsourcing if franchised (see 4.9.4)

- Commercial Team (Manage hub advertising & leasing etc)
- Facility Support Staff
- Help Point Call Staff
- Bus Companies
- Rail Companies
- Micro-mobility providers
- Car share providers

Type 1 & 2 hubs will likely require dedicated facility staff to support interchange between the different modes, provide assistance to travellers with different mobility needs, initiate an immediate response to any incidents and ensure facility is clean and well maintained.

Type 2 hubs may only require staffing at peak times (noting that may be weekday commuter peaks and/or all-day weekends depending on the hub's location). Help points also available.



Given that Type 3 hubs have fewer modes of interchange and therefore options should be apparent, these will be predominately supported by help points that connect users to a central facility which can support them remotely.

Some Type 3 hubs in new areas may benefit from a member of staff during the initial launch period to guide local residents as they adapt to using the different components.

Halts will be supported by help points, these may be run by bus companies where applicable as queries will likely be related to bus times and accessibility requirements.

Community Hubs will ideally be maintained by local volunteers with ECC support to ensure that the facility meets local transport requirements. Help points may be used where appropriate.

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4.9 Funding & Revenue

4.9.1 Introduction

The aim is for Hubs/Halts to be at a minimum financially self-sustaining. To achieve this, they need to be built and operated with consideration to funding opportunities.

1. Mobility Hub Design & Construction
(Capital Expenditures)

The initial cost to fund the initial design and construction of a mobility hub. Including land acquisition where necessary, this is typically a significant but one-off cost.

Funding Opportunities include:

- Section 106 planning conditions and Community Infrastructure Levies on new developments (see 4.9.2);
- Embedding mobility hubs into mixed use developments, either through Sec 106s or a Public-Private Partnership (PPP) model (see 4.9.3);
- Grants – National and regional government regeneration funds and transportation funds; Local Enterprise; charities.

2. Mobility Hub Operations & Maintenance
(Operational Expenditures)

The ongoing costs to fund the day-to-day running and sustainable long-term management of a mobility hub. This includes cleaning and repair, utilities, central coordination and facility staffing where necessary in typology 1 & 2 hubs.

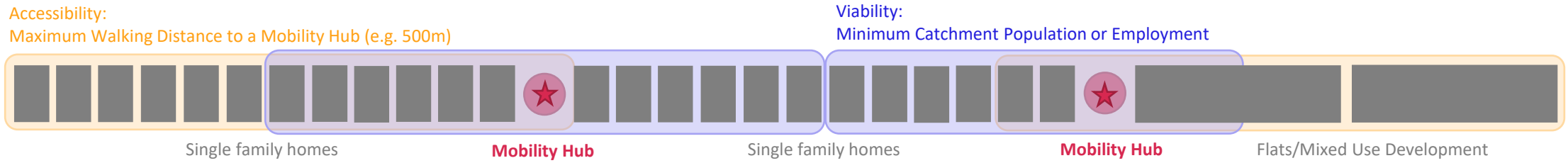
Funding Opportunities include:

- Advertisements including the sponsorship of a hub or collection of hubs;
- Service charges to transport operators;
- Rent for commercial ventures within the mobility hubs;
- User charges – subscriptions or levies either within a local catchment area or to regular users;
- Income-Generating Assets (IGAs) such as solar panels that can sell electricity back to the grid.

4.9 Funding & Revenue

4.9.2 New Developments & Section 106 Agreements

- Section 106 (s106) agreements are legal obligations placed on a developer by a local planning authority that mitigate the impacts of new developments through the direct construction of or contribution to local infrastructure.
- To comply with the Town and Country Planning Act (1990) s106 agreements must be:
  - Directly related and fair and reasonable in proportion to the size and scale of development; and
  - Deemed necessary to ensure the development is acceptable in the context of wider planning aims and strategies.
- ECC has recently updated Transport Assessment and Travel Plan guidance for large-scale development and garden communities (over 1,000 homes and/or 250+ employees). Within the scoping element (Phase 1) of preparing a Transport Assessment, developers are required to submit a report containing a high-level overview of the site and proposed sustainable travel mitigation measures. This is then reviewed by ECC to ensure acceptability before it is published in the complete Transport Assessment, confirmed as s106 agreements and then monitored through opening years of the development.
- The sustainable travel opportunities presented by mobility hubs require their consideration within the s106 process for these major developments and developers should research and present initial mobility hub ideas within Phase 1 of the Transport Assessment process. The exact number and typology of hub(s) will depend on factors such as density and land-use, ensuring a balance between accessibility and viability. To maximise opportunities to encourage modal shifts, some form of mobility hub provision should be available from first occupation. Designated land may be left available for additional hubs as the development grows.



4.9 Funding & Revenue

4.9.3 Mixed Use Developments

- Land acquisition and building construction are the primary costs for mobility hubs and can be a significant barrier to their development, particularly for typology 1 and 2 hubs which require significant space to facilitate interchange between modes;
- The integration of transport facilities and commercial property development has been utilised as a significant infrastructure funding generator for decades in Asia and North America, and the model has seen adoption within the UK over the last 15 years;
- In the UK, the primary approach involves prospective developers getting the rights to construct commercial developments, often in high-land value locations, under the s106 planning condition that they also build pre-specified transport facilities, such as mobility hubs, that serve the wider community. Upon completion, the transport facilities are handed to local transport providers for management and operation;
- A secondary approach is the creation of Public-Private Partnerships (PPPs), through which local authorities can identify a key site for a mixed-use development and mobility hub and then partner with a private company that provides the upfront financing, construction and initial operation. The private company generates a long-term revenue stream through commercial operations (i.e. retail or housing rent, advertisements) and/or public sector payments. At the end of contract, the building is still owned by the local authority.
- Whilst ensuring mixed use developments are sensitive to the character of existing or new environments, the model has long term benefits for both the transport network and local community. It ensures that new mobility hubs are directly connected to trip attractors whilst greatly improving land utilisation by combining residential, commercial and transportation land uses.

(Image Source[14]: Wikimedia)

Derby Bus Station; Derby, UK

(Image Source[15]: New London Architects)

Twickenham Railway Station; London, UK

(Image Source[16]: TfGM)

Stockport Bus Interchange; Stockport, UK

(Image Source[17]: Dialogue Design)

University of British Columbia Bus Exchange; Vancouver, Canada

4.9 Funding & Revenue

4.9.4 Franchising and Income Generation

Ensuring the long term financial sustainability of mobility hubs is crucial to ensuring they becoming embedded in community transport decisions and maximum benefits are realised. There are multiple opportunities to generate the income necessary to ensure mobility hubs remain well-maintained and fully operational:

- **Community Infrastructure Levies (CIL):** These are charges set by local authorities on residents of new developments to support critical infrastructure development. This can include transport facilities, such as mobility hubs in addition structures such as parks, flood defences, schools and digital connectivity. Levies are charged based on area of property, details can be found in the Government CIL manual.
- **Property Rental:** Creating spaces within mobility hub structures that can be leased out for business opportunities represents an ideal way to generate a strong income stream whilst also adding additional place components to attract people to mobility hubs. Transport for London, for example, generates approximately £60 million per year from property revenue that includes over 3,000 leases across its portfolio. Small scale rental is also possible, consider a food truck or stand on a mobility hub property.
- **Income Generating Assets (IGAs):** These are components of a mobility hub that can generate revenue through their operation, often passively. For example solar panels on the roof of a hub or installing parcel lockers, which charge a fee for users to access.

(Image Source[18]: CoMoUK)

If appropriate, it is possible that ECC could franchise the management and maintenance of mobility hub facilities to an external management company. Commonly under such an agreement the company would assume responsibility for day-to-day operations, such as providing facility staff, cleaning and repairs, in exchange for the revenue brought in through advertising and commercial leases. ECC would retain control of the strategic network decisions, however it's likely the external company would also provide recommendations based on operational data.

4.10 Business Case Development

4.10.1 Introduction

- Given the recency of their emergence in the UK as a transport solution, there are currently relatively few examples of mobility hub business cases to draw from;
- In response to this, England's Economic Heartland (EEH) has produced a mobility hubs business case guidance document, designed to adapt best-practice business case approaches from similar infrastructure such as Park and Rides (P&Rs) to the specific contexts of mobility hubs;
- Emphasised in the guidance is the fact that different scales of mobility hubs will require considerably different degrees of planning permission, upfront cost and ongoing resource, and therefore business cases should be adjusted to the context of the scheme;

- For example, a type 3 hub formed of a bus stop and cycle hire docking point will require a high-level business case and funding strategy, whereas a type 1 hub with interchange between rail, rapid bus and several micro-mobility modes would require a full business case, including alignment with DfT Green Book and TAG;
- EEH guidance notes that a challenge with early mobility hub development is that the full benefits are often cumulative, as each additional hub in a network improves the connectivity of all previous hubs. In response, business cases should consider both the immediate impact and role of the hub within a future network, ensuring major hubs are future-proofed to enable additional future components at minimum cost (for example by preparing the electricals for e-bike charging and providing fibre connectivity for future digital components);
- The DfT have recently released a new postcode-based connectivity tool to analyse sustainable transport options and potential across the country. The aim is to have the tool used in business cases to encourage local authorities to promote and invest in schemes (like mobility hubs) that maximise multi-modal connectivity, instead of designing schemes that replicate existing primarily private-vehicle based travel patterns.

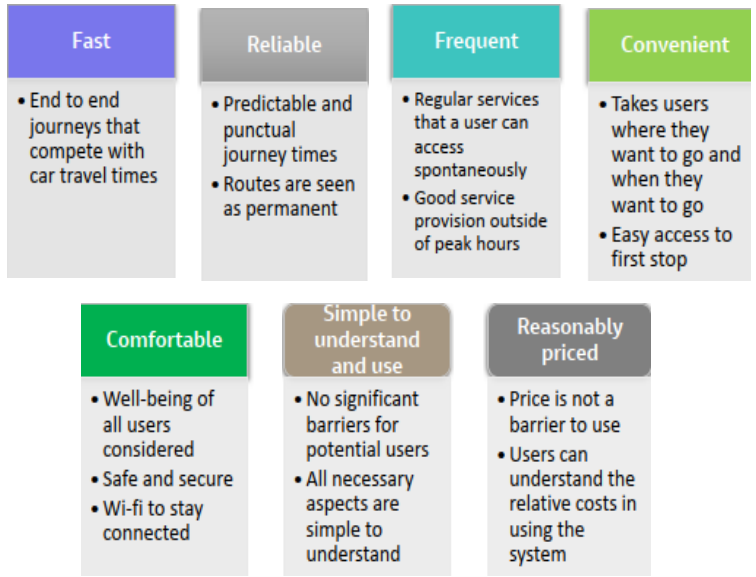
4.10 Business Case Development

	Business Case Element	Key Questions	Example	Section of Guide
SOC Strategic Outline Case	**Strategic Case**	What are the existing transport challenges the mobility hub will solve? How will it solve these challenges? How does it align with policy objectives?	*A mobility hub within a new community will increase the active and public transport mode share, reducing the impact of the community on the road network.*	**1. Introduction** **5. Design Guidance**
	Economic Case	How does the mobility hub solution represent good value for money? What are the environmental, social and economic impacts of the hub?	*The cost of implementing a new mobility hub and shifting a percentage of drivers to active and public transport modes is lower than reducing congestion through new road infrastructure and will lead to significant time cost savings.*	**1. Introduction** **4. Planning & Commercial Feasibility**
OBC Outline Business Case	**Financial Case**	Can the initial capital cost of the hub be funded through alternative means? How will the ongoing costs of the mobility hub be funded?	*The mobility hub can be part-funded through new development section 106 contributions. Long-term revenue will be brought in through a commercial lease, solar power generation and advertising.*	**4. Planning & Commercial Feasibility**
	Optioneering	Is the chosen mobility hub typology appropriate for the location and transport connectivity objectives? How does this hub fit within the wider network? Have local stakeholders been engaged?	*The typology has been chosen with the ECC mobility hub assessment tool and therefore is appropriate to the population density of the area and level of connectivity needed to meet expected demand.*	**2. Typologies** **4. Planning & Commercial Feasibility**
FBC Full Business Case	**Logic Mapping**	How do the inputs lead to the outcomes? How will the design and choice of components address the transport needs and challenges, and serve the wide community?	*An existing community challenge is postal deliveries, the hub will include parcel lockers. The community lacks green space, the hub will incorporate a pocket-park.*	**3. Components** **5. Design Guidance**

5. Design Guidance

5.1 Key Design Principles for Mobility Hubs & Halts

ECC is planning to introduce a rubber-tyred Rapid Transit System (RTS) initially in Colchester and Harlow, but with an intent to build up a consistent branded service in other locations across Essex. The RTS services would be grounded in the needs of potential customers and seek to deliver these service standards:



These fundamental design principles* underpin the development of hub/halt design and will help to provide a high-quality standard and achieve consistency of user experience:

- Integrated Providing connectivity with other transport options with sustainable travel modes given prominence. Tying into surrounding infrastructure with ease of access onto local pedestrian and cycle routes. Consideration given to modal separation if deemed appropriate (conflict of interest / safety) and thinking of Hubs/Halts forming part of a network.
- Accessible Optimising access to ensure ease of use and convenience. If we expect passengers to interchange, need to consider design and accessibility between modes to make journey seamless in terms of physical accessibility.
- Inclusive: Taking into account user diversity, providing safety and security, comfort and shelter.
- Visual and experiential consistency: Positively contribute to the passenger experience to give an immediate sense of what is provided, how to use it and to know that their experience will be the same level as elsewhere . To embed a visual identity that is consistent with the TravelEssex brand which is easily recognised and use of consistent design materials.
- Operational soundness: Facilitating vehicular movements to support frequency of services.
- Financially realistic: Ensuring that management and maintenance is affordable and matched to income streams for the long term

** These have been developed in line with the RTS Design Principles and HQPT criteria*

5.2 Essex Design Guidance

5.2.1 Well Designed Neighbourhoods

Movement, Street and Place - Design Guidance for Well Designed Neighbourhoods in Garden Communities and Large New Developments

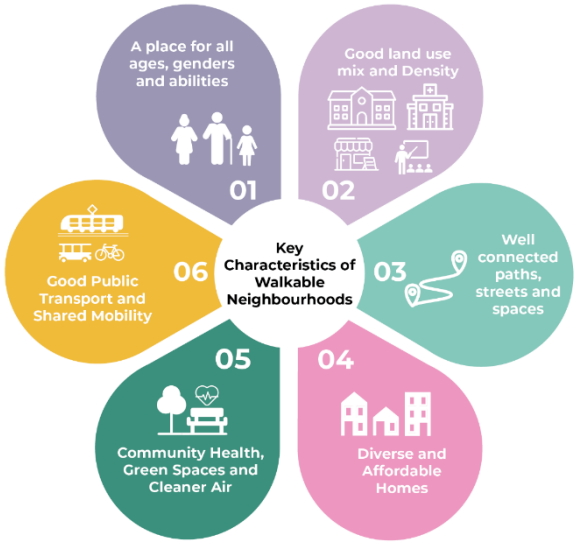
ECC is creating design guidance for Garden Communities and other new development, ensuring sustainable movement and placemaking as a focus. This study links to the Essex Place and Movement Network (as detailed on next slide).

This will be a strategic design guidance document drawing upon national and regional best practice

- Vision to create inviting places to live for all genders, ages and abilities to choose sustainable movement choices including walking, cycling, wheeling, PT and shared mobility options in high-quality environments. Key characteristics of Well Designed Neighborhoods in adjoining image.
- Placemaking focused design guidance to enhance perception of safety, accessibility and inclusion
- Good access to public transport and active travel corridors for journeys to key locations and facilities.

Mobility Hubs

- Directly links with Key Characteristic number 6
- Offering interchange points within walkable neighbourhoods – Key Characteristic number 3
- Feasibility of higher hub typologies increase in higher density areas - Key Characteristic number 2
- Offering facilities which enable and make more attractive active travel and in so reducing transport related pollution - Key Characteristic number 5.



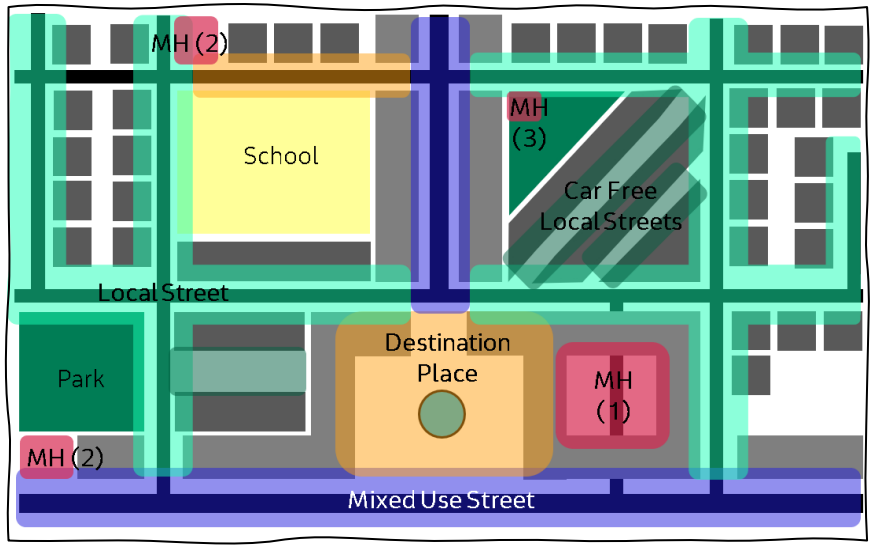


Diagram provides example locations. Not all would be pursued in such a small area.

5.2 Essex Design Guidance

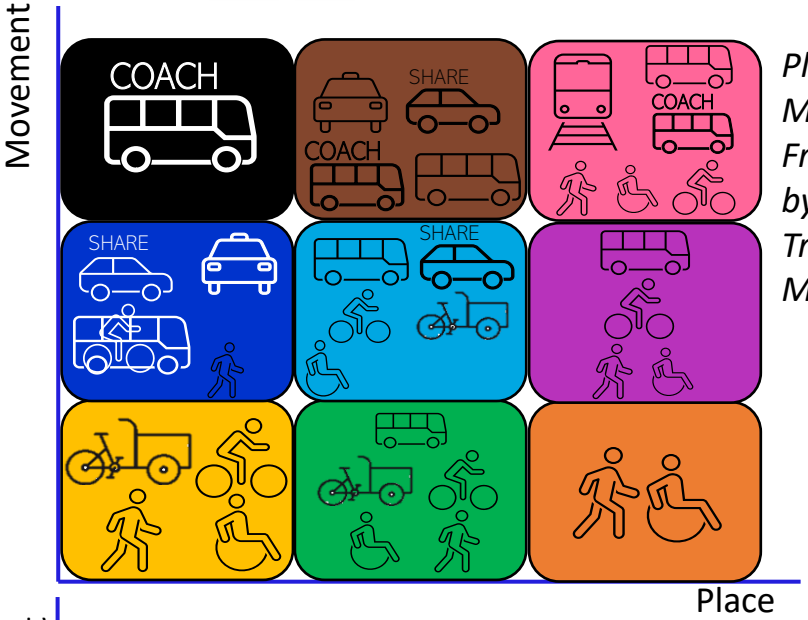
5.2.2 Street Design to Typology

Well Designed Neighbourhoods Street Type (directly connected to the Essex Place and Movement Framework)	Key Characteristics	Likely Mobility Typography
Destination Place	Highest priority locations, that attract significant numbers of people to retail, leisure and other services. Typically car free with high quality public amenities.	Type 1/2 mobility hubs.
Mixed Use Street	Both “places” and “movement corridors” that serve multiple functions i.e. high streets and local distributor roads	Type 2/3 mobility hubs
Local Street	Provide access to end-point destinations for specific purposes. Primarily residential but can be industrial or business focused.	Type 3 (Urban) & Community Hubs (Rural)
Car Free Local Street	A new street type (not currently in the Essex P&M Framework), representing local streets, primarily in residential areas where private car trips are not permitted and active modes are prioritised	Bike parking i.e. cycle storage room (ideally shared bike/car facilities);

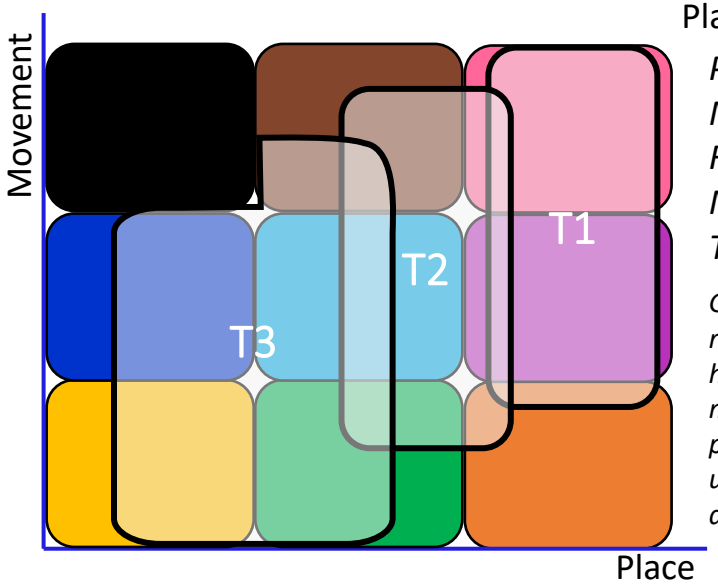
5.2 Essex Design Guidance

5.2.3 Place & Movement Framework

ECC has worked on re-classifying the road network based on Place and Movement principles



Place and Movement Framework by Key Transport Modes



Place and Movement Framework by Mobility Hub Typography

Given strategic roads facilitate high-speed movement between places there is unlikely to be hubs along these roads.

The Framework aims to act as a functional route hierarchy and provide direction and support decisions on how to manage, design and improve the network

Consideration of place when developing Transport Schemes

- Streets should be a destination in their own right
- Aiming to manage, design and improve the network
- Essex historic approach has treated roads as inflexible

Mobility Hubs

- Mobility hubs create sense of place and form connections reducing the reliance of private vehicle, resulting in a safer environment

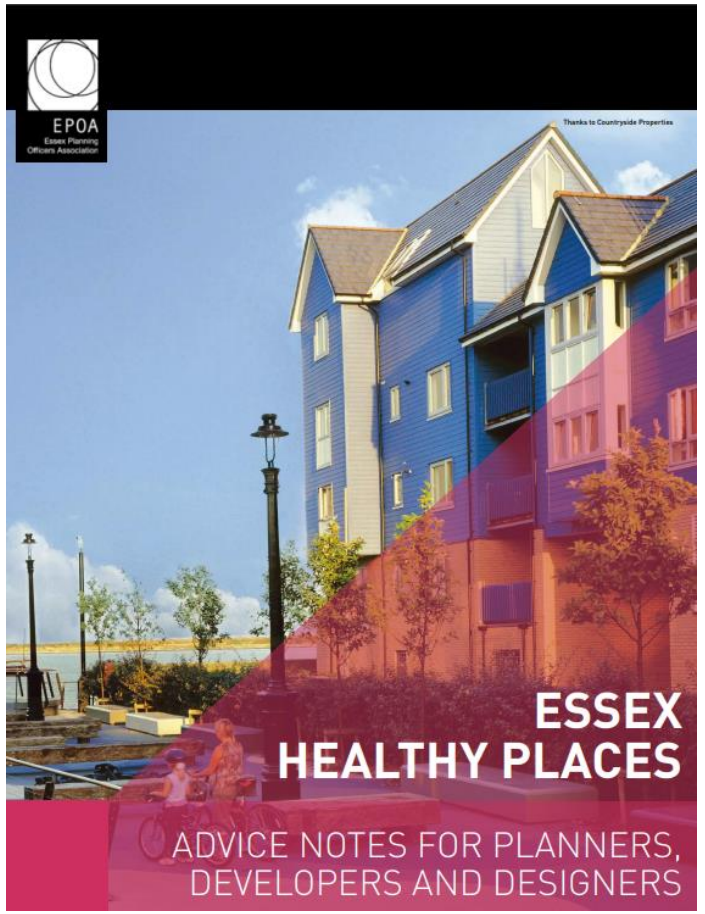
5.2 Essex Design Guidance

5.2.4 Healthy Places Guidance (2023)

Active and sustainable environments / travel checklist

This work supports the *Essex Design Guide* and has been developed to align with and help implementation of the *Essex Livewell Development Accreditation System*

- Best referred to at the outset of scheme to help with design proposals to a higher standard.
  - Aims to provide non-motorised routes in wider place making
  - Promote legible, integrated, direct and safe network of walking and cycling routes
  - Integration with existing transport infrastructure
- Mobility Hubs
  - Form connections with the existing transport infrastructure in a multimodal sense
  - Wayfinding standards

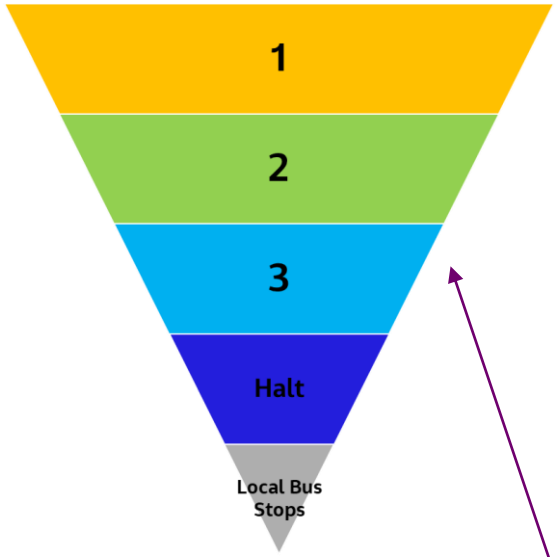


5.3 Branding & Marketing

5.3.1 Introduction

- The roll out of Mobility Hubs/Halts across Essex will require **consistent, prominent and relatable signage and branding** to provide users with an immediate sense of what is being provided and how to use it.
- Branding is relevant to increasing public usage, both from existing users and through modal shift, as it is a high visible public symbol of the service, and it reassures the passenger of the quality of the service.

Typologies



Recommended branding locations

- Individual stops (totems) at a bus station
- Bus shelters
- Travel information stands
- Vinyl on the floors of stations – i.e., rail / bus station to aid integration with other travel modes

Aligns with Design Principles 1 (Accessible) and 4 (Visual and experiential consistency)

We highly recommend that a Marketing approach is adopted to make these '1,2,3' typology terms most relatable to the public

Travel Essex Journey Planning Made Simple

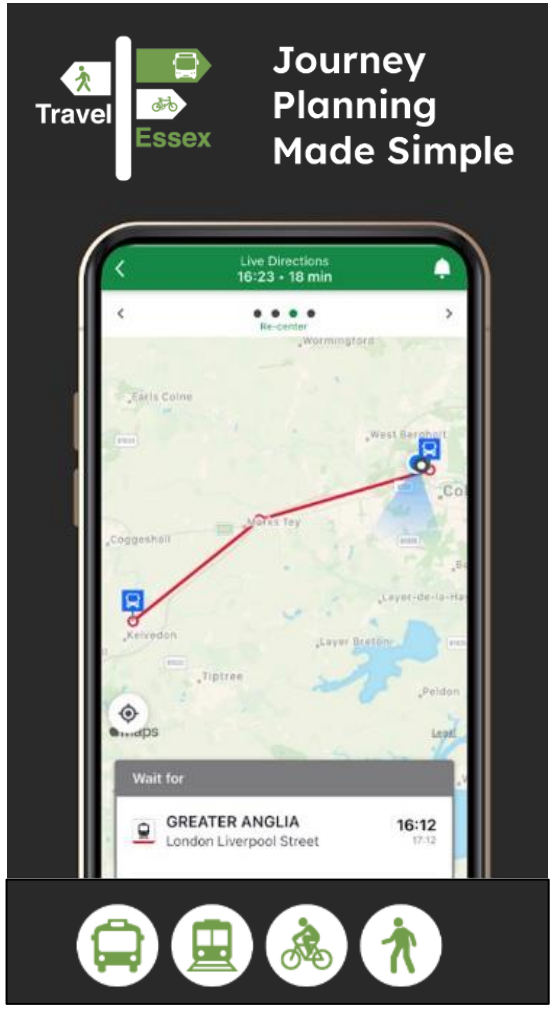
(Image Source[19]: CoMoUK)

(Image Source[20]: Bristol City Council)

5.3 Branding & Marketing

5.3.2 TravelEssex App

- All Hubs/Halts will use the over-arching **TravelEssex** brand with its associated multi-modal journey planning App which is the one-stop shop platform providing travel information for all modes. The App has the potential to show people how to use Hubs/Halts and where to find them. It can also incorporate the e-bikes, e-scooters, as well as DigiGo networks so that it becomes more integrated and will provide one central portal to report any damage or issues.
- Use of the TravelEssex App will align with the following Design Principles:
  - **Accessible**: The branding and format of the App has been designed to be accessible, from considering the font/colours used, including options to select disabled seats in the journey planner, to ensuring the App is available to a wide range of phones/devices
  - **Visual and experiential consistency:** Use of the brand will embed a cohesive visual identity that is easily recognisable to passengers so they will be reassured of the quality-of-service provision. This aligns with ECC's Bus Service Improvement Plan (BSIP) aims for easier to understand and commonly recognisable brands and styles across all elements of PT provision.
- The TravelEssex App should start to show us over time what journeys people are searching for and which journeys people complete.



5.3 Branding & Marketing

5.3.3 Ticketing & Single Ticket Schemes

Drawing upon Bus Ticketing Paper – ECC IPTU, 2022

- 'Competition Law has previously discouraged different operators from working together on joint ticketing schemes, but new powers in the Bus Service Act 2017 allow the establishment of multi-operator and multi-modal ticketing schemes called 'Advanced Ticketing Schemes'. Local authorities can specify, among other things, the technology to be accepted.'
- 'Competition and Markets Authority (CMA) regulations make it difficult for bus operators to work together to improve integration, even where they might choose to do so, despite the 'block exemption' from regulations given for some forms of multi operator tickets. All but the simplest shared ticketing schemes incur administration costs from recording and allocating revenue received from the scheme between the operators'
- 'Because some multi-operator schemes necessarily require different operators to get together to agree the terms of the tickets offered under those schemes – including for example prices for Multi-operator Travel Cards – a block exemption was introduced to make it easier for operators and LTAs to introduce multi-operator tickets. This block exemption means that the following types of tickets will, in most cases, be permitted under UK competition law.
  - Multi-operator travelcards (MTC), which entitle ticket holders to make three or more journeys on three or more different operators' services operating on three or more different routes, provided those routes and services are not substantially the same. Bus zonal tickets and travelcards are likely to be eligible for this exemption; 31
  - Through tickets, which entitle ticket holders to make a particular journey using two or more services run by different operators, where those operators do not compete with one another over a substantial part of the route covered by the ticket in question;
  - Multi-operator individual tickets (MIT), where two or more different operators provide services which can be used to make a particular journey, and ticket holders can choose whichever service they like to make part or all of that journey;
  - Short distance add-ons, which allow passengers to purchase a multi-operator travelcard as an extension to a ticket on an individual local route; and
  - Long distance add-ons, which allow passengers to purchase a single-operator local service ticket, a through ticket, or a multi-operator travelcard as an extension to a ticket on an individual long-distance route.'
- The aim of a MaaS App in Essex will be to make public transport more accessible, both in terms of transport information and physical access, to encourage people to use their cars less. The MaaS app will become a 'one-stop shop' for everything about public transport (incl. DDRT) and micro mobility. This comes in the form of the evolving Travel Essex App as discussed in the previous pages on branding.
- Ticketing would also be expected to co-ordinate with plans being developed under ECC rapid transit operational planning guidance

5.3 Branding & Marketing

5.3.4 E-Bike Hubs

- Within Colchester, a standalone ‘e-Bike Hub’ is being developed. It will provide various types of Electric Bikes for hire which will be bookable via the SpokeSafe App.
- However, for this location to become a ‘**Mobility Hub’** and form part of the wider Hub/Halt network, it would need to include (or provide connectivity to/from) other Active and PT modes so that the interchange opportunity with such modes was available to its users.
- Running the e-Bike Hub through the Assessment Tool suggests that for it to become a Mobility Hub, it would need to provide X components or Y distance/integration to/with those components.
- It is recommended that the concept of an e-Bike Hub is considered as part of the Hub/Halt Branding and Marketing.

Raleigh e-Bike

Riese & Muller e-Multicharger

Riese and Muller Packster 60 e-Cargo bike

Bakfiet Long e-Cargo bike

Where possible, TravelEssex branding will be used to ensure a consistent method of registration and payment. Ideally, this will allow for members of TravelEssex active travel schemes elsewhere to use all schemes, no matter which scheme they initially registered with.

5.3 Branding & Marketing

5.3.5 CoMoUK Accreditation

To ensure quality of Hub/Halt provision, CoMoUK has developed a cohesive set of standards for assessing mobility hubs. This guide has been developed in alignment with CoMoUK accreditation standards and so by following this guidance accreditation should be achievable in majority of cases.

There are a range of **pros** and **cons** associated with the accreditation process

1. There is only one accredited hub in England which means by having a network of accredited hubs, Essex could become a showcase of good practice
   - Could drive future funding to strengthen the network
2. Ensures alignment with what would be expected national standard
3. Accreditation can help support the planning process to achieve a level of consistency
4. Advertisement on the CoMoUK website with accreditation badge for use in promotion of the hub

1. Some locations may not strictly fit the definitions set by CoMoUK or unable to fulfil all required components – making accreditation restrictive in these locations
2. Accreditation is for 24 months only, so will need to be a programme of upkeep and monitoring to ensure longevity

These standards include six factors:

- **Visibility and accessibility**: Hubs need to be part of the clearly identifiable transport network with services which are easily accessible by all.
- **Choice of sustainable modes:** These should include public and shared modes as well as consideration of pedestrians.
- **Ease of switching between modes:** This applies in both physical and digital terms, linking the use of different modes.
- **Safety:** The design and facilities should ensure traveller safety is a key factor.
- **Practical facilities:** Clever design will consider what non transport practical additions can be included.
- **Visual, social, and community appeal:** A successful mobility hub will enhance the area visually and provide a contribution to the social and community fabric.

5.3 Branding & Marketing

5.3.6 Cycle Accreditation

Cycling UK's **Cycle Friendly Employer Accreditation** is the international benchmark for active travel culture and infrastructure in the workplace. Businesses are awarded Gold, Silver or Bronze accreditation based on their level of cycle provision and support such as secure bike storage, lockers, showers, company bikes, maintenance facilities and a place to clean and dry clothes. Accredited businesses receive a wall plaque, access to marketing and publicity support and connections with other cycle friendly employers.

Cycling UK's new **Cycle Friendly Places** programme is an innovative tourism project currently being piloted in Kent, Cornwall and Norfolk. The Accreditation officially recognises small or medium businesses as 'cycle friendly' which helps to attract more year-round tourist and leisure cyclists by ensuring the quality of cycle provision is meeting the needs of visitors who travel by bike.

Essex's **The Cake Escape** initiative acts as an Accreditation system where cafés are asked as part of sign up to demonstrate they are a 'destination that actively encourages cyclists' by providing some of the essentials. These destinations could draw upon Community Hub principles.

- Cycle Accreditation will ensure a high quality of cycle provisions at Hubs/Halts
- There is potential to roll out 'Cycle Friendly Accreditation' as part of Hubs/Halts across Essex.
- Local businesses that benefit from the Hubs/Halts by signing up for Accreditation as part of ECC's Smarter Travel for Essex Network (STEN).

Contact: Helen Akpabio (ECC): Active Travel Manager

Useful links

- The Cake Escape
- Cycling UK

5.4 Design Guidance: Mobility

5.4.1 Component Breakdown

Mobility Component	Relevant Design Guidance / Examples
RTS	Operational Design Standards for RTS (Institute for Transportation & Development Policy) **Operationally sound:** Design considerations for bus stops are appropriate, as shown below
Bus	Essex Design Guide, Refer to Maps identifying frequency of bus corridor provision prepared as part of 2022 Bus Network Review for Essex districts, Contact: Richard Gravatt. ECC, IPTU DfT Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure **Operationally sound:** Design considerations for bus stops/termini, sourced from Essex Design Guide: ▪ Approach to bus stop to be kept permanently clear of parked vehicles – which may necessitate the introduction of a bus-stop clear-way road-marking. ▪ Associated infrastructure incorporated as development progresses to include; Bus clearway, Wider footways, Passenger shelters (at boarding points), Disability Discrimination Act (DDA)-compliant 160mm raised kerbs of 3m in length with transition ramps at either end, shelters and RTI, Real-time passenger information, a pedestrian crossing-point in the vicinity of the bus stop. ▪ Bus stops located within overall limits of carriageway where traffic speed is 30mph or less. ▪ A full-size bus requires a turning circle 26m in diameter - should be designed to avoid the need for buses to make reversing manoeuvres
Rail	Network Rail Parking and Mobility Design Guide Numerous topics including mobility hubs and space planning for a range of modes **Operational soundness:** understanding of pedestrian movements between modes at stations
D-DRT	Network Rail Parking and Mobility Design Guide Ch2.1.3 ▪ Clearly visible from and in close proximity to the station entrance/ exit and marked for the use of DDRT services ▪ In rural and semi-urban areas with infrequent bus services, pick-up and drop-off areas for DDRT could be shared with traditional buses ▪ Bay design should include sufficient space to accommodate wheelchair ramps

5.4 Design Guidance: Mobility

5.4.1 Component Breakdown

Mobility Component	Relevant Design Guidance / Examples
Community Transport (CT)	Design standards outlined for bus, such as raised kerbs and footway widths
Taxis	Network Rail Parking and Mobility Design Guide Ch3.2.10 https://www.networkrail.co.uk/wp-content/uploads/2022/03/NR_GN_CIV_200_11-Parking-and-Mobility-in-Stations.pdf
Car Clubs	▪ The UK Gov Car Clubs LA Toolkit identifies >100 homes as being the viable economic threshold for car clubs. ▪ Network Rail Parking and Mobility Design ▪ In Colchester, the first Electric Car Club car space will be located in Priory Street Car Park with the second to follow in another town centre location. Members will have 24/7 access to the car club vehicles (part of an intended future network of Car Clubs).

5.4 Design Guidance: Mobility

5.4.1 Component Breakdown

Mobility Component	Relevant Design Guidance / Examples
Bike Share	▪ Network Rail Parking and Mobility Design Guide Ch3.2.4 – 3.2.9 ▪ Colchester e-Cargo Bike Library (longer-term loans) has been rolled out. (Information and lessons learned here). ▪ Ensure adequate storage / parking space and security is available for locking. ▪ Spin / TIER operate the e-scooter trials in Essex, with fleets deployed in **Basildon, Chelmsford, Colchester and Clacton** ▪ **Govt e-Scooter Trial Guidance**
Cargo Bike Share	
E-scooters	
Shopmobility	https://www.shopmobilityuk.org/find-a-centre/ note that some providers are not accredited and not included on this site
Pedestrian access	BS 8300-1 and BS 8300-2: Design for an accessible and inclusive built environment. Cycle infrastructure design (LTN 1/20) DfT Gear Change - A bold vision for cycling and walking
Cycle access	

5.5 Design Guidance: Place

5.5.1 Component Breakdown

Place Components	Relevant Design Guidance / Relevant Examples
EV Charging Infrastructure	Electric vehicles – Accessible charging Specification (BSI) provides standards for specifications of accessible public charge points for electric vehicles. Essex Electric Charging Policy - 'Rapid chargepoints can provide up to 80% power in about 30 minutes, and are best suited for transport hubs (for example, airports, taxi ranks etc.), electric vehicle (EV) charging hubs and along the strategic highway network, where a quick charge is essential.' (Essex Design Guide) "Building Regulations 2022 (PART 9B Infrastructure for the charging of electric vehicles) requires that 10% of spaces should have electric vehicle charge points and that cable routes should be provided for 20% of the remaining parking spaces. " Network Rail Design Manual NR/GN/CIV/200/11 Network Rail Parking and Mobility Design Guide
Cycling	Network Rail Parking and Mobility Design Guide ▪ Current National Rail stations recommended minimum cycle parking standard is 1 space for everyone 200 passengers. With 5% of all cycle parking accessible to all. ▪ Good cycle design outcomes: Safety, directness, comfort, coherence, attractiveness, adaptability ▪ Smart Cycle Parking Systems / Smart Parking Systems ▪ Cycle hub sensors to understand how the hub is being used and streamline the experience of cyclists looking for somewhere to securely park their bike. https://www.cyclepods.co.uk/leyton-cycle-hub/ ▪ Leicester Case Study has cycle valet parking in the town centre for £1 per day: https://www.choosehowyoumove.co.uk/cycling/cycle-parking/ ▪ SpokeSafe (https://www.spokesafe.com/) provides access to a network of secure places to park, facility open on Sir Isaac's Walk. Users can sign up to a bespoke App to access a building and pay to be able to (securely) park there. Spokesafe also help to design, install, manage and monetise mobility hubs, and manufacture a series of modular outdoor cycle lockers which can store bikes, cargo bikes and scooters and be installed virtually anywhere at street level.

(Image Sources[21]: Cyclehoop)

Cyclehoop: Planter Rack

(Image Sources[22]: Spokesafe)

Spokesafe Waterloo

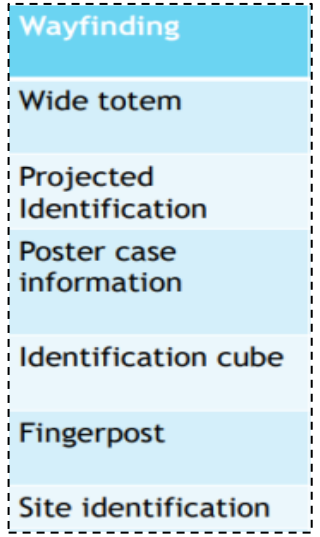
Spokesafe London Bridge

5.5 Design Guidance: Place

5.5.1 Component Breakdown

Place Components	Relevant Design Guidance / Relevant Examples
Bus Shelter Estate	▪ The Essex-wide Bus Shelter contract is seeking to establish a long-term contract (10-year minimum) to create a better bus shelter estate across Essex. This will include all maintenance, cleaning, replacement and supply of all shelters in-scope. It will be paid for by the generation of income from the new supplier through advertising. ▪ The project hopes to deliver a sustainable and quality bus infrastructure network that provides consistency of experience and is commercially focussed. ECC expect to build approximately 50 new bus shelters each year from a variety of funding, e.g. through S106 agreements with property developers. The contract will be led by a single supplier and as the contract owner, ECC would own all bus shelter assets and be the single point of contact. ▪ The aim is to be 'Digital by default – where it makes commercial sense to do so'. Approximately 1,279 shelters are currently in scope. New shelters will be added on an ad-hoc basis during the lifetime of the contract. A fortnightly shelter cleaning regime will be required with a deep clean every six months.
Information	Network Rail Parking and Mobility Design Guide Maintain clear sightlines along pedestrian routes connecting with public transport, cycle facilities, micromobility hubs and parking facilities to promote intuitive wayfinding and avoid reliance on wayfinding signage – specific routing through colours/ paths, increased sense of space Wayfinding Principles work on the four following: 1. Consistent and predictable placement: consistent between first mention and destination 2. Appropriate spacing between signs: stand out from environment and in established order 3. Clear sight lines for signs: perpendicular to main movement 4. Clean layout: follow standard layouts and spacing DfT Announcement for consideration to give for the government's commitment to improve disabled people's experience on transport system and build stronger communities, through Inclusive Transport Strategy, which aims to create accessibly equality on the network by 2030.

(Image Sources[23]: ECC IPTU)



5.5 Design Guidance: Place

5.5.1 Component Breakdown

Place Components	Relevant Design Guidance / Relevant examples
Amenities	The Essex Design Guide provides the following considerations for street lighting: should be designed to achieve sufficient illumination to enable safe movement by pedestrians and cyclists, reducing opportunities for crime and enabling drivers to see hazards on the street. Should also aim to illuminate the built environment in an attractive way. Columns should typically be located at the rear of the footway or, in the case of a shared-surface area, at the rear of an adopted recess 1m deep x 1m wide. The type of lantern should be agreed in accordance with the Essex Highways 'Development Management Street Lighting Specification'. Post-top amenity lanterns should be considered for squares, footpaths, cycleways and so on, where they should be accessible by maintenance vehicles. Lighting columns should not be located within 1m of an access point to a private drive. Network Rail Parking and Mobility Design Guide 3.4 Lighting "Feature lighting should be considered where appropriate to enhance sense of place" Common goals when considering lighting → Increasing visibility, safety and sense of security → Minimising light pollution → Identifying hazards → Avoiding energy waste → Minimising visual clutter → Creating a positive customer experience → Considering impact on wildlife **Design considerations for toilets:** ▪ Changing Places toilets: the practical guide - Toilet Map Guide ▪ Public Toilets in Managed Stations Design Manual (Network Rail) - Network Rail - Public Toilets ▪ Female Friendly public and community toilets: a guide for planners and decision makers (WaterAid) - Wash Matters - WaterAid: Female-friendly public and community toilets ▪ Summary of best practice in 'away from home' toilet provision (British Toilet Association) Water Fountains: See Refill London project CCTV is associated with a long-term operational cost, though the initial roll out could be enough for behavioural change.

5.5 Design Guidance: Place

5.5.1 Component Breakdown

Place Components	Relevant Design Guidance / Relevant examples
Cycling	Wheels for Wellbeing, The Guide To Inclusive Cycling, https://wheelsforwellbeing.org.uk/campaigning/guide/
Logistics	Design would be led by private providers
Community	Network Rail Parking and Mobility Design Guide ▪ The need to provide access to the facility for third parties outside of station operating hours ▪ Any special management or operational considerations, as well as general servicing requirements for deliveries and refuse collections ▪ Supply of power and water for kiosks and carts, and water for community gardens ▪ In the case of kiosks and food carts, there may be a need for additional storage space within the station area
Private vehicle parking	Inclusive Mobility. A Guide to Best Practice (Chapter 8) (DfT)

6. Next Steps

6.1 Key Recommendations

This guide introduces mobility hubs to Essex, setting out what they are, why they are effective and how they could be adopted across the county based on existing best-practice. Future work to expand on this guide is recommended:

Components

- Develop best-practice guide to effectively consulting local residents and businesses on components of local mobility hubs.

Planning & Commercial Feasibility

- Engage local authorities and recruit mobility hub champions at a District level;
- Continue work to map ideal mobility hub network locations;
- Conduct a complete procurement review of essential hub components to derive consistency and pricing reliability;
- Develop a wider Operation and Delivery Plan to better understand the opportunities and challenges within partnerships, outsourcing and digital integration of mobility hubs;
- Publish clear guidance outlining the expectation for the developers of new communities to submit hub development plans within their Transport Assessments/Travel Plans.

Design Guidance

- Develop a full branding strategy for the mobility hub network;
- Study single ticket scheme viability across the Essex transport network;
- Review mobility hub accreditation requirements and ease of annual of renewal.

Next Steps

- Through a phased delivery approach, pilot mobility hubs and halts in new communities and alongside new transport infrastructure (see next slide).

6.2 Phased Delivery

In the long-term the ambition is that mobility hubs will become ubiquitous with Essex transport, and a widespread, consistently branded network of hubs and halts will be within convenient reach of all Essex residents and businesses. However, the deployment of such a large network will require a significant capital investment and take considerable time to appropriately plan, construct and manage.

Therefore, a phased delivery of mobility hubs is recommended, capitalising on upcoming opportunities within the provision of both major housing and transport infrastructure across the county to pilot mobility hub schemes.

Transport Infrastructure

- Essex Highways is currently developing new bus rapid transit schemes in Colchester and Harlow. The schemes will significantly improve journey times into the town centres and will tie into new development on the outskirts of town.
- These frequent, direct services represent a significant opportunity to roll-out mobility hubs and halts within these two areas, ensuring that the new transport options are embedded within local active travel networks and provide seamless interchange to short and long distance sustainable travel modes.

New Housing Delivery

- As discussed within section 4, the delivery of new housing and employment sites across Essex will generate significant opportunities to fund the creation of new mobility hubs through Section 106 commitments, community infrastructure levies and mixed-use developments.
- Large and garden communities in particular, present ideal circumstances to adjust new residents to prioritising active and public options within their day-to-day travel choices. This can only be achieved if convenient and safe modes are available from the outset therefore it is recommended that all new communities at this scale incorporate mobility hubs into their masterplan designs and early development stages.

7. Definitions, Potential Suppliers and Sources

7.1 Definitions of Common Terms

Common Terms	Definitions
Car Clubs	Short-term pay as you go car rental services that allow members to access locally parked cars and pay for use by time period. Offers an alternative to owning a private vehicle.
Car Share	Agreement between two or more people to travel together in one car who make the same journey in order to share the costs of driving. Cars are privately owned vehicles which have been enrolled to a Car Share scheme / App.
DRT	Shared public transport service which offers pre-bookable travel without a fixed route or timetable. These services usually use small vehicles and need to be requested and pre-booked via telephone or email.
D-DRT	Shared and flexible public transport service which utilises smaller vehicles such as minibuses, that can be booked to travel on-demand (when you need it quickly) or pre-booked to travel at a specified time. D-DRT is similar to DRT but with the addition of digital tools (app and/or website) to help manage the service and vehicle fleet, take payments and provide real-time updates.
Halt	At the lower end of the Mobility Hub/Continuum. Typically, an enhanced bus stop where a Rapid Transit Service stops and/or is located on the Core bus network.
Mobility as a Service (MaaS)	The integration of various forms of transport and transport-related services into a single, comprehensive, and on-demand mobility service. It offers end-users the added value of accessing mobility through a single application and a single payment channel, instead of multiple ticketing and payment operations[1].
Mobility Hub/Halt	Safe and connected places that facilitate convenient access to public, shared and active travel modes.
Micro-mobility	Short distance, lightweight shared transport solutions which are typically single-person vehicles such as bicycles and scooters.
Shared transport	Vehicle-sharing arrangement in which travellers privately rent a vehicle or vehicles over time (e.g. car clubs, e-scooter hire or bike sharing), thereby creating a hybrid between private vehicle use and mass or public transport.

[1] *https://maas-alliance.eu/homepage/what-is-maas/*

7.2 Useful Links/Suppliers

- **Car Club** *(website link)*
  - Enterprise Car Club is the official car club provider in Colchester with one electric Car Club vehicle available in the Priory Street Car Park *(https://www.colchester.gov.uk/car-club/)* and a second to follow in another town centre location. The ambition is for a growing network of Car Clubs to be rolled out across Colchester over the next few years (https://www.colchester.gov.uk/sustainability/green-shared-travel-hubs/).

- **Cycle Storage** *(https://www.spokesafe.com/)*
  - Colchester using Spoke Safe App for cycle storage

- **D-DRT / DigiGo contact** *(website link)*

- **E-Scooters** *(https://www.tier.app/en/tierinessex)*
  - Micro mobility operator Tier has been operating e-scooter trials across in Essex in partnership with ECC as part of the DfT's nationwide trials. On-street trials have been taking place in defined areas of Basildon, Chelmsford and Colchester whereas in Braintree and Brentwood, e-scooters for long-term hire have been trialled.
  - Over 600,000 e-scooter journeys were made in 2021 with the average journey distance being 1.8 miles (23 mins).
  - The trials concluded in November 2022 and the Government will be responsible for any final decisions on the results of the trials.

7.2 Useful Links/Suppliers

- **E-bikes**
  - E-bike suppliers already in Essex
  - 25 electric cargo (e-Cargo) bikes and 5 electric trailers are being used throughout Colchester as part of the Colchester e-Cargo bike project. Six e-Cargo bikes are available for local businesses and organisations to loan.

- **Green Shared Travel Hubs** *(https://www.colchester.gov.uk/sustainability/green-shared-travel-hubs/)*
  - Colchester are planning a future network of Hubs to provide Electric Car Club vehicles as well as Pay As You Go electric bikes and electric cargo bikes. It is recommended that their roll out aligns with the approach to typologies and components as set out within this Guide.

7.3 Image References

[1]Belfast Rapid Transit – used in Essex RTS work

[2]Essex Highways (2022), *Safer, Greener, Healthier,* https://www.essexhighways.org/safer-greener-healthier

[3]Eltis (2023), *The urban mobility observatory*, https://www.eltis.org/

[4]CoMoUK (2019/20) ,*UK Mobility Hub Guidance,* https://uploads-ssl.webflow.com/6102564995f71c83fba14d54/618d29b3d06c81de72c38fdc_CoMoUK%20Mobility%20hub%20guidance%20_Oct%202019.pdf

[5]Essex Highways (2022), *Harlow STC rapid transit update, ECC*

[6]Camden Cyclists (2014), *Press Release: Camden Bikehangar,* Press Release: Camden Bikehangar (camdencyclists.org.uk)

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[8]Community 360, *Community Transport*, Community Transport - Community 360

[9]Beryl Mobility

[10]Colchester Borough Council (2021), *Green Shared Travel Hubs*, https://www.colchester.gov.uk/sustainability/green-shared-travel-hubs/

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[12] Transport for Greater Manchester

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[14] Wikimedia, *Derby Bus Station*, Derby bus station - Wikipedia

[15] New London Architects, *Twickenham Station*, Twickenham Station - New London Architecture (nla.london)

[16]Transport for Greater Manchester, *Stockport Bus Exchange*

[17]Dialogue Design, *Exchange Residence and UBC Bus Exchange,* Exchange Residence and UBC Bus Exchange | DIALOG (dialogdesign.ca)

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[20]Bristol City Council, *Metrobus Points*

[21]Cyclehoop, *Planter Rack*

[22]Spokesafe, *Spoke Safe*, https://www.spokesafe.com/

[23]ECC Integrated Passenger Transport Unit, Digital Billboard

7.4 Copyright Notice

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