Outline Sustainable Travel & Transport Strategy

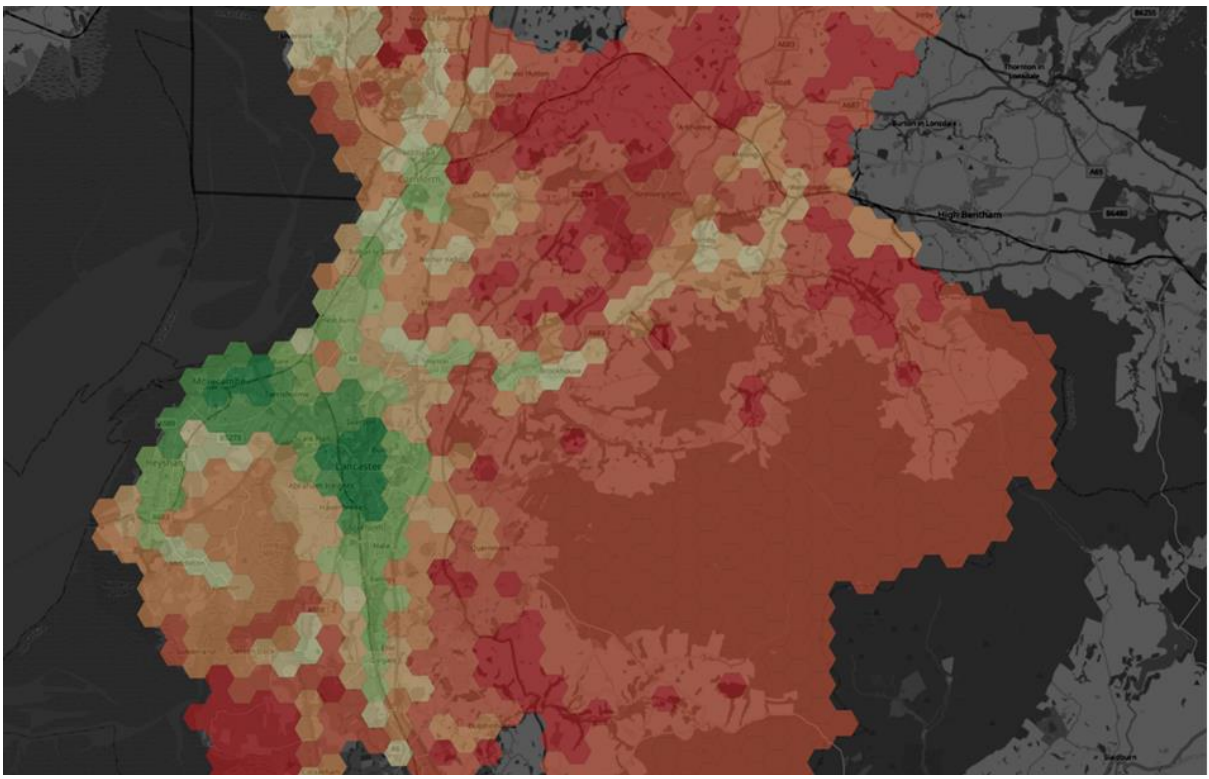
Sustainable Travel & Transport Strategy

Prepared for:
Lancaster City Council

9 June 2025

Prepared by:
Ashley Russell

Project/File:
4138/001



Stantec Fore Limited

Document control sheet

Issued by	**Stantec Fore Limited** Riverside West, Whitehall Road Leeds LS1 4AW UNITED KINGDOM stantec.com	+44 (0) 113 543 1700 hydrock.com
Client	Lancaster City Council	
Project name	Lancaster District Local Plan Review	
Title	Outline Sustainable Travel & Transport Strategy	
Doc ref	4138/001	
Project number	4138	
Status	DRAFT	
Date	9 June 2025	

Document production record

Issue number	1	Name
Prepared by		Project Team
Checked by		Ashley Russell
Approved by		Andrew Bradshaw

Document revision record

Issue number	Status	Date	Revision details
0	DRAFT	19/02/2025	DRAFT for client review & comment
1	Final Draft	25/04/2025	Final Draft for client review & comment
2	Issue	22/05/2025	Final report following client review
3	Issue	09/06/2025	Document title changed

Stantec Fore Limited has prepared this report in accordance with the instructions of the above named client for their sole and specific use. Any third parties who may use the information contained herein do so at their own risk.

Table of Contents

Document control sheet ..... **i**
Executive Summary ..... **i**
1 Introduction **1**
1.1 Local Context 1
1.2 Scope of the Outline Sustainable Travel & Transport Strategy (OSTTS) 3
1.3 Outline Sustainable Travel & Transport Strategy (OSTTS) - The Process 4

2 Spatial Vision, Objectives & Theory of Change Logic Map **6**
2.1 Spatial Vision 6
2.2 Objectives 6
2.3 Theory of Change Logic Map 6

3 Accessibility Model Development **9**
3.1 Introduction 9
3.2 Model Structure 9
3.3 Model Zoning 10
3.4 Networks 11
3.5 Proximity Metrics 12
3.5.1 Catchments 13
3.5.2 Proximity Scores 13
3.6 Route Quality Metrics 14
3.7 Walking/Wheeling and Cycling 15
3.7.1 Walking/Wheeling and Cycling Route Quality Scores 15
3.8 Public Transport Route Quality Scores 15
3.9 Combined Quality Score 15
3.10 Combined Accessibility Score 16
3.11 Validation of the Accessibility Model 18

4 Electric Vehicle (EV) Modelling & Assessment **23**
4.1 Introduction 23
4.2 Community Need Model Inputs 23
4.3 Community Need Multi-Criteria Assessment 24
4.4 Existing Accessibility to Community Need EV Chargers 25
4.5 Commercial/Visitor (Market) Model Inputs 26
4.6 Commercial/Visitor (Market) Scoring 28
4.7 Electrical Infrastructure Assessment 28

5 Assessing Accessibility **31**
5.1 Accessibility Model Outputs (Baseline) 31
5.2 Strategic Accessibility 34
5.3 Local Accessibility 36
5.3.1 Introduction 36
5.3.2 Map Key Destinations & Active Travel Routes 37
5.3.3 Map Healthy Neighbourhood Characteristics 37
5.3.4 Assess Against Core Principles 38
5.3.5 Develop Mitigating Measures 39

6 Appropriate Forms of Development **40**
6.1 Introduction 40
6.2 Urban Infill + Extension 41
6.3 Corridor Concentration 43
6.4 New Settlement 45

6.5 Development Density 46
6.6 Capturing Design Principles 47

7 Development Areas 48
7.1 Level of Intervention Required 48
7.2 Development Constraints 50
7.3 Development Areas 53

8 Intervention Modelling 55
8.1 Introduction 55
8.2 Intervention Identification 55
8.3 Intervention Scenario 56
8.4 Local Facility and Amenity Interventions 56
8.5 Infrastructure Interventions 59
8.6 Combined Accessibility Score 60

9 E-Mobility Interventions 62
9.1 Community Need Interventions 62
9.2 Impact of Grid Capacity on Community Need Interventions 64
9.3 Environmental Impact of Community Need Interventions 66
9.4 Commercial/Visitor (Market Interventions) 69
9.5 E-Mobility Interventions Summary 70

10 Potential Growth Locations 71
10.1 Introduction 71
10.2 Cost of Interventions 73
10.3 Carbon Emissions 73
10.4 Core of Lancaster / Morecambe Urban Area 74
10.5 Edge of Existing Lancaster / Morecambe Urban Area 78
10.6 A6 South Corridor 80
10.7 A6 North Corridor 82
10.8 A589 Caton Road Corridor and Halton 84
10.9 North of Lancaster 86
10.10 A588 Ashton Road Corridor 88
10.11 Next Best Potential Growth Locations 90

11 Summary of Potential Growth Locations 92
11.1 Introduction 92
11.2 Summary of Potential Infrastructure Requirements 93
11.3 Funding Considerations for Sustainable Transport and Associated Highways Infrastructure 97

12 Recommendations & Next Steps 98
12.1 Recommendations 98
12.2 Next Steps 99

1 Literature and Policy Review 2
1.1 Introduction 2
1.2 National Planning Policy Framework (February 2025) 2
1.3 Lancaster District Highways and Transport Masterplan (Lancashire County Council, 2016) ... 3
1.4 Lancashire County Council Highways and Transport Strategy 2023-25 (Lancashire County Council, 2023) 4
1.5 Lancashire 2050 Framework (2022) 5
1.6 Lancaster Local Plan Transport Assessment (WYG, 2018) 6
1.7 Sustainable Travel SPD (Lancaster City Council, 2022) 7

1.8 Lancaster City Centre Movement and Public Realm Strategy (Lancashire County Council, 2020) 7
1.9 Lancaster City Council Plan 2024–2027 (2023) 8
1.10 Lancaster City Centre Car Parking Strategy and Action Plan (Lancaster City Council, 2024) . 8
1.11 Lancashire Bus Service Improvement Plan (Lancashire County Council & Blackburn with Darwen Borough Council 2024) 9
1.12 Gear Change: A Bold Vision for Cycling and Walking (Department for Transport, 2020) 10
1.13 Local Transport Note 1/20: Cycle Infrastructure Design (Department for Transport, 2020) ... 10
1.14 Lancaster Local Cycling & Walking Infrastructure Plan (2024) 11
1.15 Net Zero Strategy: Build Back Greener (HM Government, 2021) 11
1.16 Sixth Carbon Budget (Climate Change Committee, 2020) 11
1.17 Lancashire and Blackburn with Darwen Electric Vehicle Infrastructure Strategy (Atkins, 2023) 13
1.18 Lancaster District Local Climate Engagement (2023)..... 13
1.19 Lancaster District Local Area Energy Plan (October 2024) 14
1.20 The Lancaster District Climate Change People's Jury (2020)..... 14
1.21 Placemaking with Young Adults (2024) 14
1.22 Sustainability in the Lancaster District (2023) 15

List of Appendices

Appendix A Literature & Policy Review
Appendix B Accessibility Model Development Report
Appendix C Hexagon Summary Sheet Guide
Appendix D Hexagon Summary Sheets

List of Tables

Table 1: Existing Lancaster & Morecambe Urban Area | Urban Infill | Low Intervention....74
Table 2: Edge of Existing Lancaster and Morecambe Urban Area | Urban Infill / Extension | Medium Intervention 78
Table 3: A6 South Corridor | Corridor Concentration | Medium Intervention....80
Table 4: A6 North Corridor | Medium Intervention....82
Table 5: A589 Caton Road Corridor and Halton | Medium Intervention....84
Table 6: North of Lancaster | High Intervention 86
Table 7: A588 Ashton Road Corridor | High Intervention....88
Table 8: Next Best Potential Growth Locations | Additional Interventions Required....90
Table 9: Description of Icons for Intervention Requirements 93
Table 10: Summary of Interventions Required 94

List of Figures

Figure 0 – Summary of Potential Growth Locations.... iii
Figure 1: The Outline Sustainable Transport Strategy Process Flow Diagram 4
Figure 2: Theory of Change Logic Map....8
Figure 3: Accessibility Model Zoning....10
Figure 4: Extract from the Network Model 11
Figure 5: Combined Proximity Score....14
Figure 6: Overall Quality Score....16
Figure 7: Combined Accessibility Score 17
Figure 8: 2011 Census Travel to Work Mode Share 18
Figure 9 - Existing Accessibility to Community Need EV Chargers....26
Figure 10 - Commercial and Visitor Sites 27
Figure 11 - Assessment of the existing electrical network capacity (secondary network)....29
Figure 12 - Assessment of the existing electrical network capacity (primary network) 30
Figure 13 - Hexagon Summary Sheet Example....35
Figure 14: Illustration of mapping key destinations & active travel routes 37
Figure 15: Illustration of mapping of healthy neighbourhood characteristics 38
Figure 16: LTN 1/20 Design Principles....38
Figure 17: Urban Infill + Extension Illustrative Example 42
Figure 18: Corridor Concentration Illustrative Example....44
Figure 19: New Settlement Illustrative Example 46
Figure 20: Development Density Illustrative Example....47
Figure 21: Level of Intervention based on Combined Accessibility Score 49
Figure 22: National Landscapes....51
Figure 23: Flood Risk Areas....52
Figure 24: Development Areas....53
Figure 25: Combined Development Areas....54
Figure 26: Recommended Amenity Intervention Areas and Interventions Assumed....57
Figure 27: Recommended Infrastructure Intervention Areas 59
Figure 28: Combined Accessibility Score – Intervention Scenario: Left: Baseline Scenario, Right: Intervention Scenario)....61
Figure 29: Required Community need AC EVCI interventions....63
Figure 30: Required Community need DC EVCI interventions 63
Figure 31: Assessment of existing electrical network capacity vs community need intervention requirements (AC) 65
Figure 32: Assessment of existing electrical network capacity vs community need intervention requirements (DC) 66
Figure 33: Total CO_2 and NO_x offset potential through Community Need interventions by 2040....67
Figure 34: Value of CO_2 and NO_x offset potential through Community Need interventions by 2040....68

Figure 35: Potential EVCI market interventions in the Lancaster District: AC (Green), DC (Blue), mixed (purple), multiple (orange)....69
Figure 36: Combined Accessibility Score ≥ 8 72
Figure 37: Urban Infill and Urban Extension with the Existing Urban Area (Left: Baseline Scenario, Right: Intervention Scenario)....77
Figure 38: Summary of Potential Growth Locations....92

List of Graphs

Graph 1: Car Driver Mode Share vs Combined Accessibility Score....20
Graph 2: Car Driver Mode Share vs Combined Accessibility Score....20
Graph 3: Cycling Mode Share vs Combined Accessibility Score 21
Graph 4: Public Transport Mode Share vs Combined Accessibility Score....21

Executive Summary

Lancaster City Council's Outline Sustainable Travel & Transport Strategy (OSTTS) marks a transformative shift toward sustainable urban and rural mobility across the district, forming a core pillar in the Council's spatial planning and climate action frameworks.

It seeks to accelerate the transition to a more sustainable future by considering sustainable transport at the start of the plan making process, maximising sustainable travel opportunities through the spatial distribution of new development. Aligned with the latest National Planning Policy Framework (NPPF), the Sixth Carbon Budget, and relevant local policies such as the Lancaster City Council Plan 2024-2027, this strategy proposes a vision-led, evidence-based model to integrate transport planning into the earliest stages of plan-making, shaping Lancaster as a region where low-carbon, equitable, and accessible travel is the default.

The OSTTS represents a forward-looking, systems-based approach that integrates transport and spatial planning to deliver long-term sustainability, social inclusion, and economic vitality for Lancaster. Through data-driven prioritisation, and considering policy cohesion in the OSTTS, the Council is positioned to lead on climate-resilient urban development and equitable mobility.

Vision and Objectives

The overarching vision for 2043/44 envisions a Lancaster where sustainable travel is "*safe, inclusive, reliable and convenient for all short journeys and unlocks choice for longer journeys*". Key goals include enhancing public health, supporting economic growth, and reducing environmental impact. This vision is supported by specific objectives:

- Increase active mode 15 minute accessibility catchments.
- Increase public transport 30 minute accessibility catchments.
- Increase active travel and public transport mode share.
- Increase electric vehicle mode share as a proportion of private vehicle use.
- Increase availability of electric vehicle charging per 100,000 of population.

These objectives are embedded in a Theory of Change logic map that tracks how inputs and activities translate into measurable outcomes over time.

Accessibility Modelling and Audit Tools

A central component of the OSTTS is the accessibility model, developed to evaluate and score the accessibility of various areas (hexagons) across Lancaster. This is supported by an Electric Vehicle (EV) model to assess the opportunities to increase the sustainability of private car trips.

The objective was to create a tool of genuine value to both developers and, especially, Council Officers to guide and inform future development across the district in a pragmatic and structured way. This model quantifies baseline conditions and predicts improvements through interventions, considering travel time, infrastructure quality, and access to key amenities.

As an output from the accessibility model, a summary sheet has been produced for each hexagon which has been identified as a potential, broad location to explore for future development needs. The Hexagon Summary Sheets enable the local authority(s), developers and other interested parties to quickly understand, at a strategic level, the accessibility and transport related issues of a particular hexagon; and to understand the types of interventions that may help to address some of these issues.

Complementing this is the Local Accessibility Audit process. There is also the need to ensure that local accessibility to sustainable transport networks also reaches certain, minimum criteria. To assist the Council and developers to identify and address potential shortcomings in local accessibility within any given hexagon, this process identifies missing links between strategic infrastructure and local destinations, enabling the creation of more liveable, connected communities.

Strategic Development Forms and Density

Three key types of urban form have been explored for their potential to foster sustainable travel for any given site:

- **Urban Infill & Extensions**: Prioritises development within or adjacent to existing settlements.
- **Corridor Concentration**: Encourages development along well-connected transport routes.
- **New Settlements**: Proposes entirely new, strategically placed communities.

New development should seek to learn from the incremental growth of established urban form rather than rely upon the retrofitting of mitigation and off-setting measures to make-up for any shortcomings. If new development forms isolated suburban estates where land-uses are segregated, or permeability is poor, then the inherent potential of the surrounding sustainable travel networks will be wasted.

Whilst supporting sustainable travel options as a genuine alternative to the private car is necessary to successful place-making, on its own it is not sufficient to provide genuine choice in whether, how and when people travel. Urban form and place-making, the way that streets, spaces and buildings are arranged in the landscape, also plays a crucial role and requires the right urban design inputs at the right time into the planning process.

Each type of urban form must be paired with suitable development density to generate a critical mass for public transport viability, support local amenities, and maintain walkability.

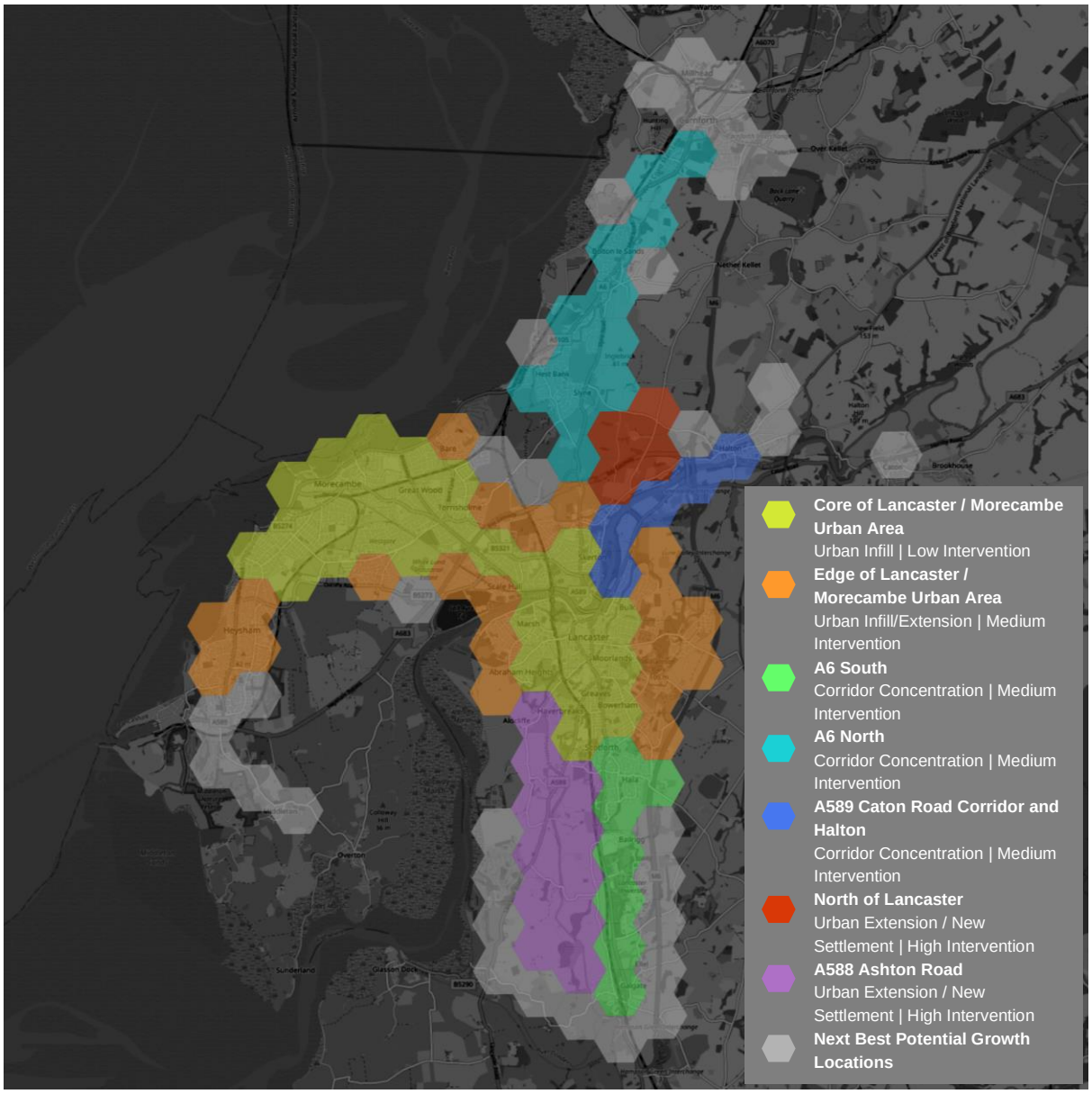
Growth Areas and Intervention Strategy

The OSTTS has identified seven broad areas for potential growth (Figure 0) as part of the local plan, as well as indicative interventions that would be required to achieve high levels of accessibility. Shown on the figure overleaf, the seven areas have been prioritised and are listed below:

- Core of Lancaster and Morecambe urban area (urban infill and urban extension).
- Edge of the existing Lancaster and Morecambe urban area (urban infill and urban extension).
- A6 South Corridor to the south of Lancaster, towards Galgate (corridor concentration)
- A6 North Corridor between Lancaster and Carnforth, including the settlements of Slyne, Hest Bank and Bolton le Sands (corridor concentration).

- A589 Caton Road and Halton. Corridor between Lancaster and M6 Junction 34 and also incorporating Halton (corridor concentration).
- North of Lancaster (urban extension / new settlement).
- A588 Ashton Road Corridor (urban extension / new settlement).

Figure 0 – Summary of Potential Growth Locations



Sites requiring less intervention are seen as more viable, deliverable, and sustainable. High-priority growth areas (e.g., urban infill in Lancaster and Morecambe) are recommended as focal points for development due to their reduced reliance on new infrastructure and higher potential for modal shift.

The intervention scenario tested assumes development is focused in key areas at sufficient density to support services and transport. Spreading growth too thinly risks undermining sustainable travel goals and delivering weaker outcomes. The intervention scenario is based on local facility and amenity interventions as well as sustainable transport infrastructure interventions.

Electric Mobility Infrastructure

A Community Need Model was developed to forecast and plan for future EV demand. This model identifies a substantial shortfall in EV charging infrastructure for residents without access to off-street parking. To meet projected 2040 demand, a combination of low-power AC chargers—either privately owned or provided via on-street solutions (e.g., lamp pOSTTS, cable trays, bollards)—and strategically located DC charging hubs is essential. However, rollout may be constrained by grid capacity, particularly in central Lancaster, where secondary network headroom is currently inadequate.

Environmental modelling shows that enabling EV uptake through these interventions could reduce over 10 tonnes of CO_2 and 4 tonnes of NOx over 15 years. A TAG-style cost-benefit assessment estimates this would deliver over £2.5 million in CO_2-related savings and £26,000 in health-related NOx savings.

To address demand from commercial and visitor destinations, faster DC charging is needed in Lancaster and Morecambe, while slower AC chargers suit other areas. This presents an opportunity to leverage market forces and target investment in key locations for maximum impact.

The strategy also highlights significant gaps in EV charging infrastructure, particularly for residents without off-street parking.

Recommendations

The seven identified growth areas serve as a strategic framework for shortlisting Local Plan sites. However, detailed local accessibility audits are essential during the shortlisting process to tailor interventions. These audits will identify infrastructure, and amenity needs, and assess opportunities for low-car or car-free developments. Once these elements are defined, combined growth scenarios can be tested using the accessibility model to validate expected sustainable travel outcomes and help determine the most appropriate interventions and preferred growth strategy for the Local Plan.

This vision-led approach enables the accessibility model to guide transport assessments, ensuring that sustainable travel is central to development planning. Only residual highway impacts would then need to be assessed, reducing the need for extensive road interventions.

The EV community need model highlights a significant gap in charging provision for residents without off-street parking. To meet demand, a mix of low-power AC chargers (via on-street solutions) and fast DC hubs is required. While some infrastructure may be delivered through market-led initiatives—such as destination charging—this is unlikely to fully address the need. The Council should explore additional locations, such as public car parks, for targeted provision. New developments, especially urban infill and corridor extensions, should be assessed for their impact on EV demand and required to contribute to local charging infrastructure, ensuring equitable access and supporting EV uptake.

Next Steps

To deliver on the vision outlined in this Sustainable Transport Strategy, Lancaster City Council has identified a series of critical next steps. These actions are designed to ensure that sustainable travel principles are embedded throughout the Local Plan process, and that future development is aligned with the goals of accessibility, equity, and environmental performance.

The Strategy will serve as a foundation for continued collaboration with key partners, including Lancashire County Council and National Highways. This joint approach will guide plan-making and ensure integration of transport and land use planning. The Council will review the priority growth areas identified in the Strategy against other technical evidence and planning constraints, ensuring a balanced assessment of site suitability from both transport and planning perspectives.

A detailed evaluation of call-for-sites submissions will follow, identifying which fall within priority areas and contribute toward housing targets. Additional sites outside priority zones will be assessed using the Hexagon Summary Sheets, with a focus on the interventions required to bring them up to an acceptable level of accessibility.

The Accessibility and EV models will be revisited and refined as development scenarios evolve. These tools will be used to test site applications and inform mitigating measures, ensuring that infrastructure proposals are capable of supporting sustainable travel behaviours. In parallel, the Council will develop outline proposals for key travel corridors and produce a Streets and Public Spaces Design Code to guide the form and function of new development.

Electric vehicle infrastructure planning will continue, with particular emphasis on deploying AC/DC charging hubs on Council-owned land, assessing strategic funding opportunities, and evaluating the feasibility of on-street charging installations. These actions are essential to meet growing EV demand and ensure equitable access to charging for residents without off-street parking.

Together, these next steps will support Lancaster City Council in embedding a transport-first, sustainability-led approach to development, guiding decisions that shape the district's future mobility and growth

1 Introduction

1.1 Local Context

The Council has undertaken significant steps to integrate climate change considerations into its Local Plan, aligning with its declaration of a Climate Emergency in 2019. The partial review of the Local Plan, adopted on 22 January 2025, focuses on enhancing policies to better address climate change mitigation, adaptation, and resilience.

The council has proactively aligned its climate policies with the UK's Sixth Carbon Budget, which mandates a 78% reduction in greenhouse gas emissions by 2035 compared to 1990 levels. Recognising the significant role of surface transport in achieving this target, the Council is implementing policy and strategy to address emissions from this sector.

Following the suspension of the South Lancaster Growth Catalyst project in 2023, the Council resolved to prepare a new comprehensive Local Plan. This plan will reassess development needs across the district, with an emphasis on sustainability and to address the Climate Emergency declaration and climate resilience.

The district faces significant transport challenges, shaped by infrastructure constraints, environmental goals, and evolving development plans that hinder sustainable movement across the city. Chief among these is the city centre’s one-way gyratory system, which is widely regarded as restrictive and detrimental to ease of movement. This infrastructure effectively "throttles" the core of the city, making navigation difficult for all users. In particular, the A6 ring road, which encircles the main shopping district, presents significant access barriers. It creates safety risks for pedestrians and cyclists and limits the permeability of the city centre for walk, wheel and cycle users.

The gyratory system has also disrupted key connections within the urban fabric. It creates severance of natural walk, wheel and cycle routes between key landmarks such as the railway station, Lancaster Castle to the west, and public buildings and the canal to the east. As a result, access from the railway station into the city centre is particularly poor, with limited pedestrian prioritisation.

Furthermore, traffic congestion adversely impacts bus services, making them less reliable and less attractive as a sustainable transport option. These interrelated issues not only reduce the efficiency and sustainability of the city's transport network but also hinder efforts to improve air quality and reduce reliance on private vehicles.

These existing issues and constraints on the transport network were previously captured as part of The Highways and Transport Masterplan (2016), which forms part of the Local Transport Plan. The document was produced by the County Council alongside the development of the Lancaster Local Plan and outlines a transformative strategy designed to guide transport development in the district to 2031 and beyond, aligning with sustainable growth and regeneration priorities. This document has formed an important reference point for this Outline Sustainable Travel & Transport Strategy (OSTTS) and is discussed in more detail in Appendix A.

Through devolved funding agreements, the Lancaster District is likely to see investment in bus service improvements and active travel infrastructure over the new plan period. Public transport infrastructure and bus service improvements will seek to enhance popular routes, protect rural services, and increase bus usage for various purposes, including commuting and social activities. Active travel capital projects (constructing cycling and walking infrastructure) and revenue activities (training and community engagement) are also likely to see investment.

This OSTTS, aligned with other policy documents such as the Lancashire Bus Service Improvement Plan (BSIP) and the Lancaster Local Cycling & Walking Infrastructure Plan (LCWIP), form a cohesive plan for sustainable transport infrastructure linked to planned development in the district.

The council is actively advancing its Electric Vehicle (EV) strategy, aligning with its broader goal of achieving district-wide carbon neutrality by 2030. The council's approach focuses on expanding EV infrastructure, integrating EV considerations into planning policies, and collaborating with partners to enhance accessibility for all residents.

To support the transition to EVs, the Council has adopted a Local Area Energy Plan (LAEP) that recommends deploying up to 1,250 public EV charge points. This initiative addresses the challenge that approximately 45% of households lack the ability to charge at home. The council is collaborating with stakeholders to ensure the necessary infrastructure is in place to meet future demand. Future EV infrastructure needs are considered further as part of this OSTTS.

Through a number of studies and community engagement activities over recent years, key recommendations have called for integrated, affordable, and reliable public transport, improved pedestrian and cycling safety, and services that support multi-modal travel. The findings underline the importance of public trust, consensus-building, and tailoring transport policy to diverse lived experiences across the district. The positive engagement of stakeholders in these processes, and support for sustainable transport enhancements as part of the plan making process, offer a model for participatory planning as the council moves through the plan marking process.

Informed and supported by a policy and literature review (Appendix A - Literature & Policy Review), this OSTTS is part of the first steps in developing a new Local Plan, demonstrating the Council's commitment to integrating climate considerations into local planning, promoting sustainable transport, and enhancing the district's resilience to climate change.

The Council’s approach to the OSTTS is in line with the National Planning Policy Framework (NPPF), the Lancaster City Council Plan 2024-2027, and the Lancashire 2050 Framework. It seeks to accelerate the transition to a more sustainable future by considering sustainable transport at the start of the plan making process.

1.2 Scope of the Outline Sustainable Travel & Transport Strategy (OSTTS)

The latest draft of the National Planning Policy Framework (NPPF) talks about 'a vision led approach to sustainable transport modes' and that 'transport issues should be considered from the earliest stages of plan making and development proposals'. Lancaster City Council whole-heartedly supports this approach, recognising the important role that sustainable travel can play in reducing congestion as well as: creating more socially inclusive communities; contributing to better health and wellbeing; and mitigating against the impacts of Climate Change. Furthermore, reducing the reliance on the private car and enabling sustainable modes of travel are critical in allowing all members, and sections, of the community to access basic services and employment.

"How [can] sustainable travel opportunities…be maximised through the spatial distributions of development?"

Through the plan process Lancaster City Council will be proactive in determining the spatial distribution of new development and the delivery of growth to meet the district's housing and employment needs. They will achieve this by maximising sustainable travel opportunities through the spatial distribution of new development, making use of the strategic direction provided within an OSTTS. This will ensure that they capitalise on the strengths of the district's existing sustainable travel network (including current sustainable travel corridors and transport nodes) as well as seeking opportunities to address identified deficiencies (where new sustainable travel corridors can connect to and enhance the functionality of the existing network).

"[This] Sustainable Travel Strategy represents an initial strategic stage…in the preparation of a robust approach to travel and transport issues."

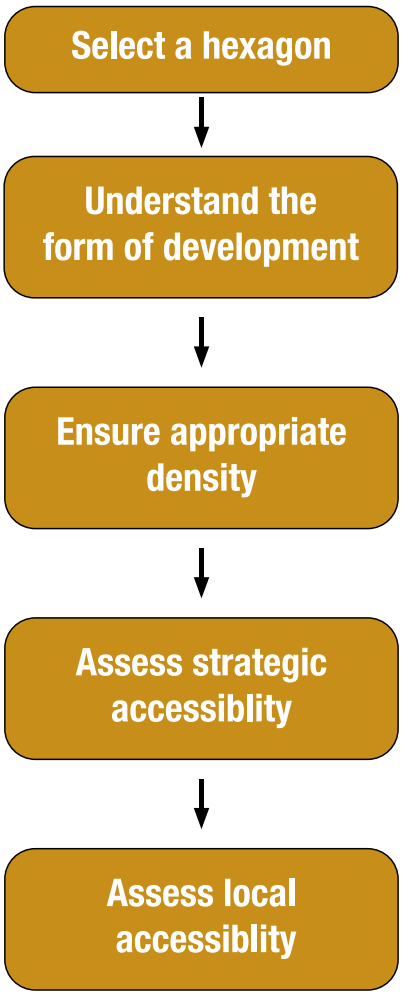
The Council's vision is for all new development in the district to maximise mode shift towards the most sustainable travel choices: a mixture of walking; wheeling; cycling; and public transport (which includes both bus and rail services). This will be achieved through a range of techniques that will include urban infill, corridor concentration and the potential creation of new settlements, all in combination with appropriate densities as well as providing services close to where residents live. This robust approach of 'decide and provide' or 'vision and validate' will maximise the use of sustainable travel opportunities and support the broader positive and ambitious outcomes listed above. The adoption of Zero Emission Vehicles, such as Electric Vehicles (EVs), will be key to increasing the sustainability of the remaining private car trips.

1.3 Outline Sustainable Travel & Transport Strategy (OSTTS) - The Process

From the outset, this piece of work has endeavoured to create a process of genuine value to both developers and, especially, Council Officers. The Accessibility Model tool (see section 3) has been designed to be easy to understand and apply, providing results that can help to guide and inform future development across the district in a pragmatic and structured way.

The tool can be used in a number of ways. Either pro-actively, to help inform Council policy in relation to the preferred locations for new development. Or reactively, in response to a call for sites or the submission of a planning application. Figure 1 shows a simple flow chart of how the process described in this strategy document works. A simple example is walked through below.

Figure 1: The Outline Sustainable Travel & Transport Strategy Process Flow Diagram



To understand how the spatial distribution of development can help to maximise sustainable travel opportunities, the district has been sub-divided in to 400m hexagons (as set out in Section 3.3 and Figure 3). In the case of a planning application, a Council Officer or the developer of a site would first select the hexagon in which the site is located.

Next, the location of this site, relative to existing development and sustainable travel infrastructure, will likely point towards a certain form of development. This could be urban infill or an urban extension, concentration of development along an existing corridor or the creation of a new settlement. In each of these cases, the form of the development can either help or hinder the uptake of sustainable modes of travel.

It is important that the appropriate levels of density are achieved to create the critical mass that is necessary to support the successful operation of high-quality public transport options and the delivery of inclusive walking and cycling infrastructure. Accessibility of the site then needs to be assessed at two different scales; the first is at the strategic level; and the second is at the local level.

For the strategic accessibility, a catalogue of summary sheets (123 in total for this study) has already been produced that summarises the sustainable travel characteristics of the identified potential development areas (see Section 7) within the district. This includes an overview of the current quality of infrastructure for each sustainable travel mode as well as access to key amenities and EV charging infrastructure. Furthermore, these summary sheets also indicate where and how these sustainable travel networks might be improved to help increase the uptake of sustainable modes.

At the local level, an accessibility audit (Section 5.3 - Local Accessibility) has been developed. This seeks to ensure that the vital, local connections between strategic sustainable travel infrastructure and a nearby development site are in place. Thereby building towards a network that provides seamless end to end journeys. This local assessment involves: the mapping of key destinations and active travel routes; the mapping of healthy neighbourhood characteristics; an assessment of key routes using the five core principles outlined in LTN 1/20; and the development of mitigating measures to improve local accessibility and safety.

2 Spatial Vision, Objectives & Theory of Change Logic Map

2.1 Spatial Vision

To support the development of the OSTTS, at the outset of the study it was important to define a Sustainable Transport Strategy Vision aligned with the next plan period. Through engagement in a shared visioning exercise with Lancaster City Council and relevant stakeholders including Lancashire County Council and National Highways, the vision was agreed:

In 2043/44 Lancaster is a district where sustainable travel is safe, inclusive, reliable and convenient for all short journeys and unlocks choice for longer journeys.

Sustainable travel will support healthy and vibrant communities, a prosperous local economy and environmental goals by normalising use of these modes for all residents through planning policy and transport infrastructure investment.

Planning policy and transport investment will be guided by the principles of equity of access and inclusive design as well public health and environmental goals.

The vision captures the underpinning principles of the Council's plan for a sustainable district. The vision is in place to guide the study and assist in identifying and assessing scenarios for accommodating growth.

2.2 Objectives

The vision is supported by a number of specific objectives. These relate to a desire that people can move around the district easily, whatever journeys they are looking to take with a greater emphasis on making those journeys by low carbon, affordable forms of travel:

- Increase active mode 15 minute accessibility catchments
- Increase public transport 30 minute accessibility catchments
- Increase active travel and public transport mode share
- Increase electric vehicle mode share as a proportion of private vehicle use
- Increase availability of electric vehicle charging per 100,000 of population

2.3 Theory of Change Logic Map

A Theory of Change (ToC) Logic Map is a visual tool that helps explain how a project or program plans to bring about change. In simple terms, it shows the steps that need to happen for a goal to be achieved and how different actions are connected.

Imagine it like a roadmap that outlines:

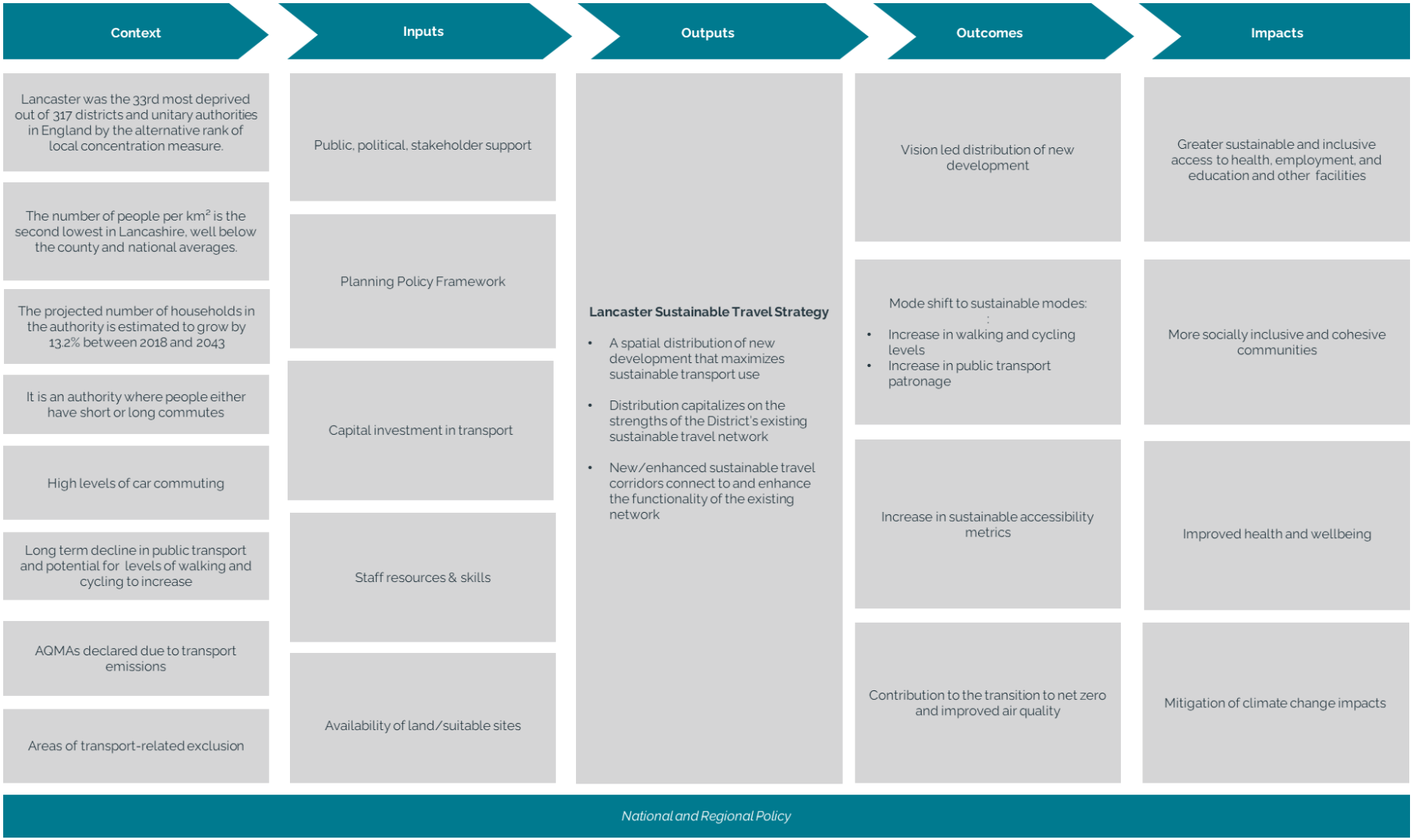
- Where you start (your current situation)
- The actions you'll take (things you'll do)
- The results that are expected along the way
- The final outcome or goal you want to reach

The logic map helps everyone understand how the things you do are supposed to lead to the change you're hoping for. It's a way to make sure the plan is clear and that you're on track to achieve what you want to accomplish.

This, Figure 2, Theory of Change (ToC) logic map serves as a guiding framework to articulate the desired long-term outcomes of the OSTTS and the steps needed to achieve them.

By identifying key inputs, activities, outputs, outcomes, and the broader vision of sustainable travel, the ToC will guide decision-making, track progress, and ensure that interventions are impactful, measurable, and aligned with the region's sustainability goals.

Figure 2: Theory of Change Logic Map



3 Accessibility Model Development

3.1 Introduction

Understanding the existing accessibility of the district in terms of access to jobs and services by sustainable modes of transport is a key prerequisite to the development of the OSTTS.

To achieve this, an accessibility model has been developed that is able to quantify the existing accessibility by sustainable modes across the district as well as to predict changes in accessibility moving forward. The model has been developed to be used as a tool to support both plan-making and decision-taking within Lancaster district to ensure that the most sustainable transport outcomes are achieved.

The approach to preparing the accessibility model for Lancaster District is set out in detail in the separate Accessibility Model Development Report[1] provided as Appendix B, and as summarised in the sections below.

3.2 Model Structure

The model comprises four elements which work together as the overall accessibility model:

- A **network model** built using transport modelling software (Aimsun Next) that can be used for the calculation of journey times and journey quality between each area
- An **accessibility model** built in Microsoft Excel that is used to determine accessibility scores for a range of different metrics using journey time and journey quality data from the Aimsun model
- A **QGIS digital mapping project** used for the presentation and analysis of outputs from the accessibility model and to enable sharing of outputs
- An **EV model** used to determine the demand for EV charging infrastructure, built in Excel and QGIS digital mapping

The model takes a residential-led approach, considering accessibility from residential development (as the primary source of trips) to destinations such as work, education, shops and services, healthcare and green space. However, in doing so, it ensures that new employment and commercial developments are also located in sustainable locations.

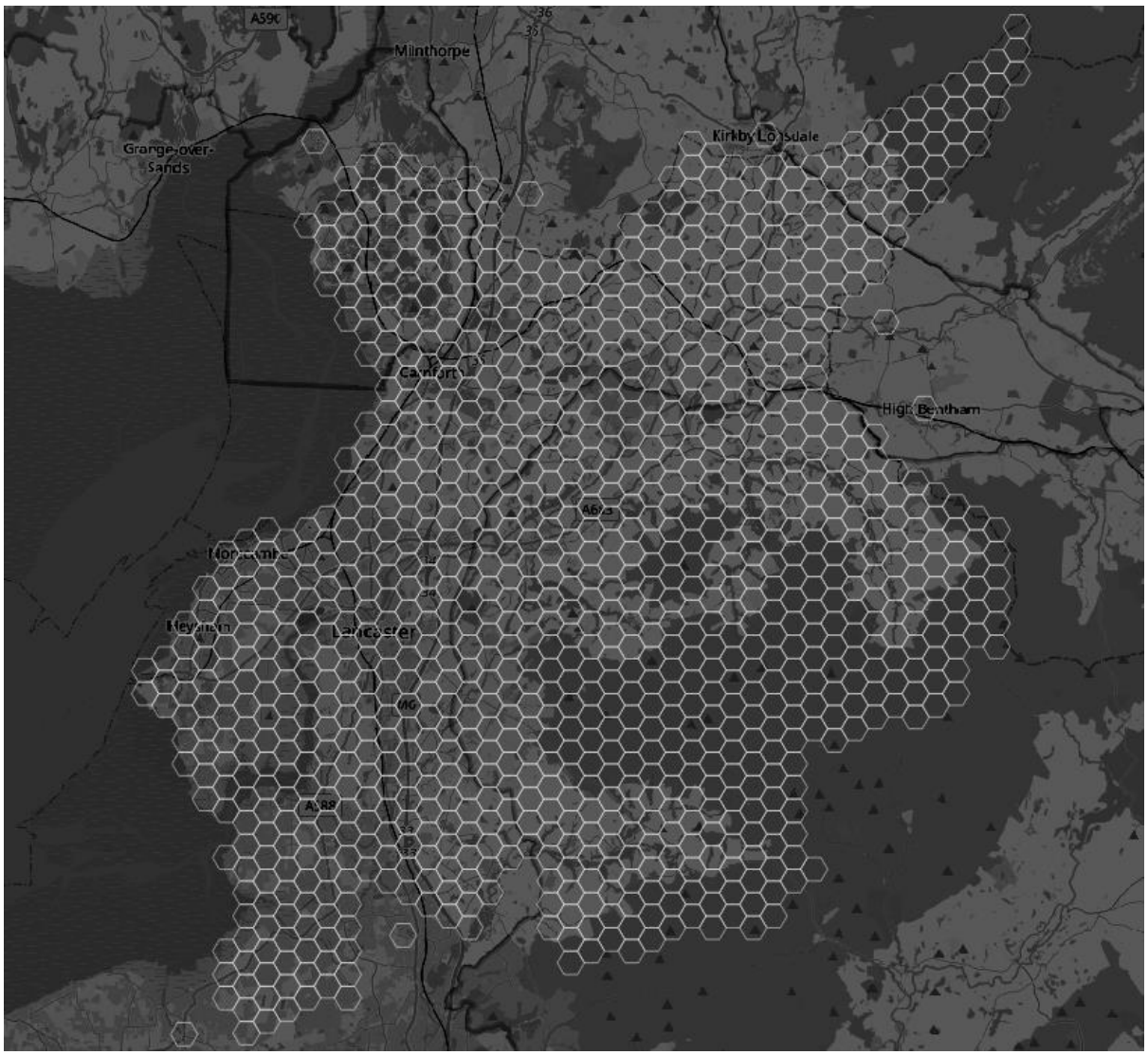
[1] *Lancaster District Local Plan Accessibility Model Development Report, Hydrock Fore, February 2025*

3.3 Model Zoning

This study does not aim to identify individual sites to meet future development needs. It aims to identify the broader locations that have the potential to accommodate sustainable development in the context of supporting sustainable travel. It also aims to identify the interventions that would be required to facilitate sustainable development. The model study area has therefore been split into a grid of 1,044 hexagons covering the Lancaster District, as shown in Figure 3.

A hexagon radius of 400m was chosen as this represents a typical maximum walking distance to a bus stop and therefore provides an appropriate scale for a strategic study of this nature. In addition to the hexagons covering Lancaster District, a further seven hexagons are included in the zone structure to account for the nearby settlements of Arnside, Burton-in-Kendal, Kirkby Lonsdale, Burton in Lonsdale, High Bentham, Forton and Stake Pool. This allows for local facilities in these settlements to be taken into account in the accessibility analysis and thereby minimising edge effects in the model.

Figure 3: Accessibility Model Zoning



3.4 Networks

A transport network model has been developed using Aimsun Next traffic modelling software. This network model contains roads, cycleways and footpaths and defines the transport network on which trips by any mode can be made within Lancaster.

This model is used to determine the routes travelled between each hexagon by each mode and provides information on journey lengths, times and quality.

A single integrated network that can be used for walking, cycling and public transport assignment has been imported from OpenStreetMap (OSM). Figure 4 below shows an extract from the network model.

Figure 4: Extract from the Network Model

The network model has the following key features which set out a series of assumptions which underpin the Accessibility Model:

- A LIDAR Digital Terrain Model (DTM)[2] has been used to determine the elevation of each point on the network allowing changes in elevation to be considered.
- Pedestrians are modelled assuming an average walk speed of 4.8 km/h and take actual routes following footpaths, shared-use cycleways and roads. Pedestrian travel times are modified to consider the effects of changes in elevation.
- The cycle network includes signed cycle routes, cycleways and cycle lanes in addition to the road network. Cyclists follow actual routes assuming an average cycling speed of 16km/h, modified to consider the effects of changes in elevation.
- Public transport data has been imported into the model using General Transit Feed Specification (GTFS) data[3]. This provides information on stop locations, routes and timetables ensuring a comprehensive representation of public transport in the model. This includes all weekday bus services as well as local rail services.
- All bus stops and rail stations are modelled. Bus stop catchments are 400m and rail station catchments are 1.0km. Interchange is possible between public transport at bus stations and rail stations.
- Trips by public transport are assigned based on timetable data and therefore consider the actual journey time, including any interchange time.

The network model is used to derived travel times by each mode between every hexagon in the study area as well as determining metrics relating the quality of the journeys.

3.5 Proximity Metrics

Proximity metrics seek to determine accessibility by sustainable modes having regard to how close a particular area is to employment, education and other local facilities by the actual travel distance by roads, footpaths and cycleways. Proximity is not the only factor affecting accessibility, and the quality of the routes is also considered (see Section 3.6).

[2] *https://environment.data.gov.uk/dataset/13787b9a-26a4-4775-8523-806d13af58fc*

[3] *https://data.bus-data.dft.gov.uk/timetable/download/ (Note: registered account required)*

3.5.1 Catchments

The accessibility model allows different journey time catchments to be defined for each mode, with the following assumptions being adopted for this study:

- Walking / Wheeling – 20 minutes
- Cycling - 20 minutes
- Public transport – 40 minutes

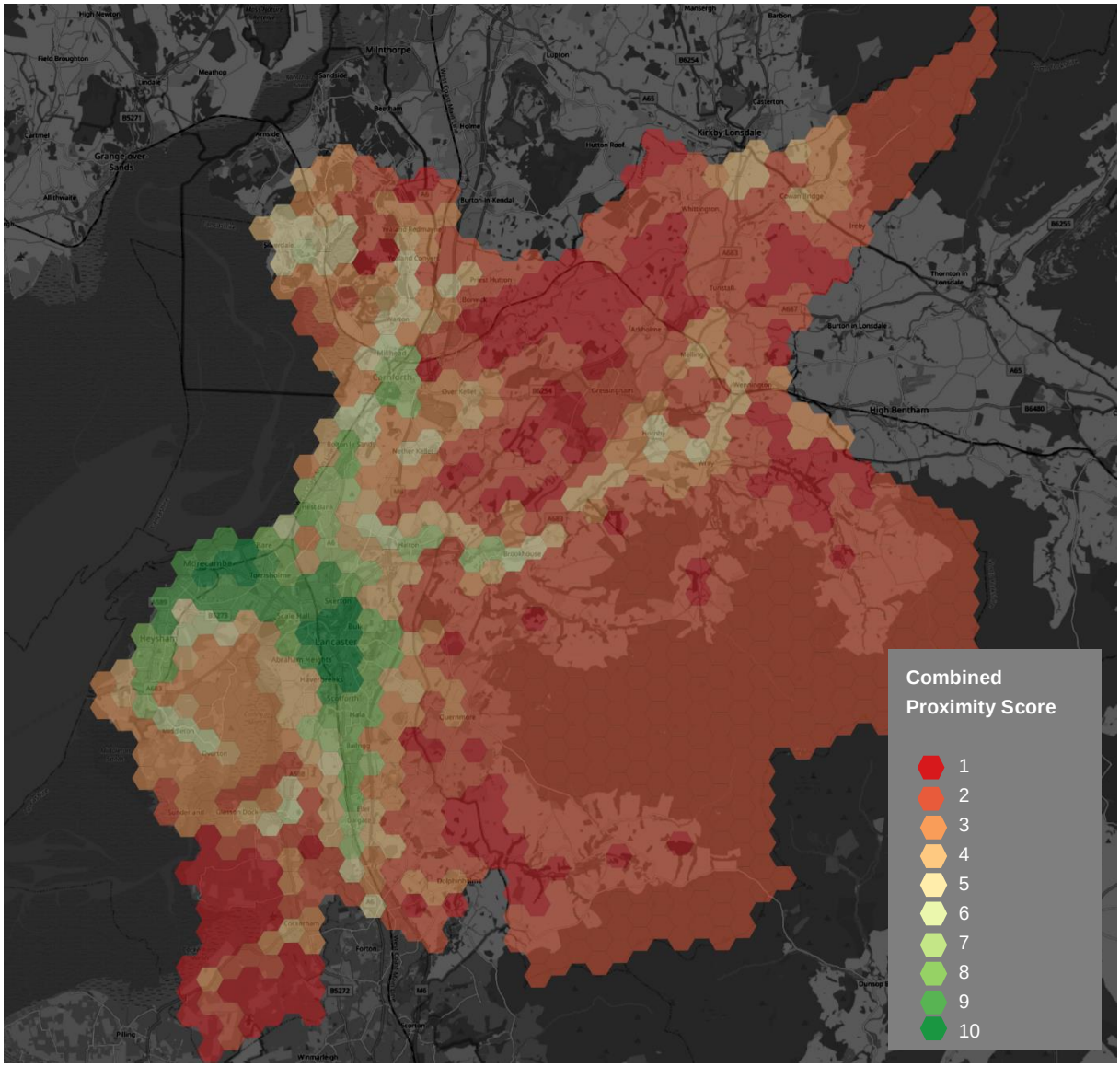
These catchments have been chosen to represent typical maximum acceptable journey times by each mode rather than being definitions of high accessibility. As explained more fully below, higher levels of accessibility are captured through the scoring that is applied. The catchments are based on actual travel times on the walking / wheeling, cycling and public transport networks.

3.5.2 Proximity Scores

Scores of between 0 and 10 have been derived for each hexagon for each of the following proximity metrics:

- **Access to Employment:** The number of jobs within the catchment for each mode
- **Access to Education:** Travel time to the nearest primary, secondary and tertiary education facility within the catchment for each mode
- **Access to Shops and Services:** Number of retail centres, weighted by the retail hierarchy within the catchment for each mode
- **Access to Healthcare:** Number of health centres, dentists and hospitals within the catchment for each mode
- **Access to Green Space:** Travel time to the nearest green space that is accessible to the general public

Figure 5: Combined Proximity Score



The scores determined for each hexagon for each of the above accessibility metrics identified have been combined to give a combined proximity score, as shown in Figure 5. This shows that hexagons within central Lancaster and Morecambe score highest for proximity to local facilities with reasonably high scores within the main urban areas.

3.6 Route Quality Metrics

Route quality metrics assess the accessibility by sustainable modes by considering the quality of routes between each of the hexagons. These metrics therefore consider the attractiveness of a route for each mode of transport. It is important to recognise that these quality metrics are applied at a high level and that more detailed consideration will need to be given to the quality of routes serving any individual development.

3.7 Walking/Wheeling and Cycling

As set out in Section 5.3.4 later in this document, LTN1/20 sets out core design principles for people wishing to travel by cycle or by walking/wheeling.

These core design principles have therefore been used as inspiration and proxy for determining the attractiveness of walking and cycling routes between each hexagon but adopting a more simplified and strategic approach. This is not intended to be a full audit of LTN1/20 compliance and more detailed analysis would need to be undertaken at a local level, as discussed later in Section 5.3 - Local Accessibility.

3.7.1 Walking/Wheeling and Cycling Route Quality Scores

Scores of between 0 and 10 have been derived for each hexagon for walking/wheeling and cycling based on the following route quality metrics:

- **Coherence**: The proportion of the route used by dedicated cycle infrastructure. No coherence metric is derived for walking/wheeling since the model does not contain sufficient detail due to its strategic nature.
- **Directness**: The actual route length compared to the straight-line distance.
- **Safety**: The number of pedestrian or cycle accidents per kilometre encountered along the route.
- **Comfort**: The cumulative height climbed along the route. Other aspects of comfort are captured within the metrics for attractiveness.
- **Attractiveness**: The attractiveness of the route having regard to the speed of the route and whether the route has dedicated off-road infrastructure.

3.8 Public Transport Route Quality Scores

The attractiveness of public transport for each route is based on the frequency of services available for the route.

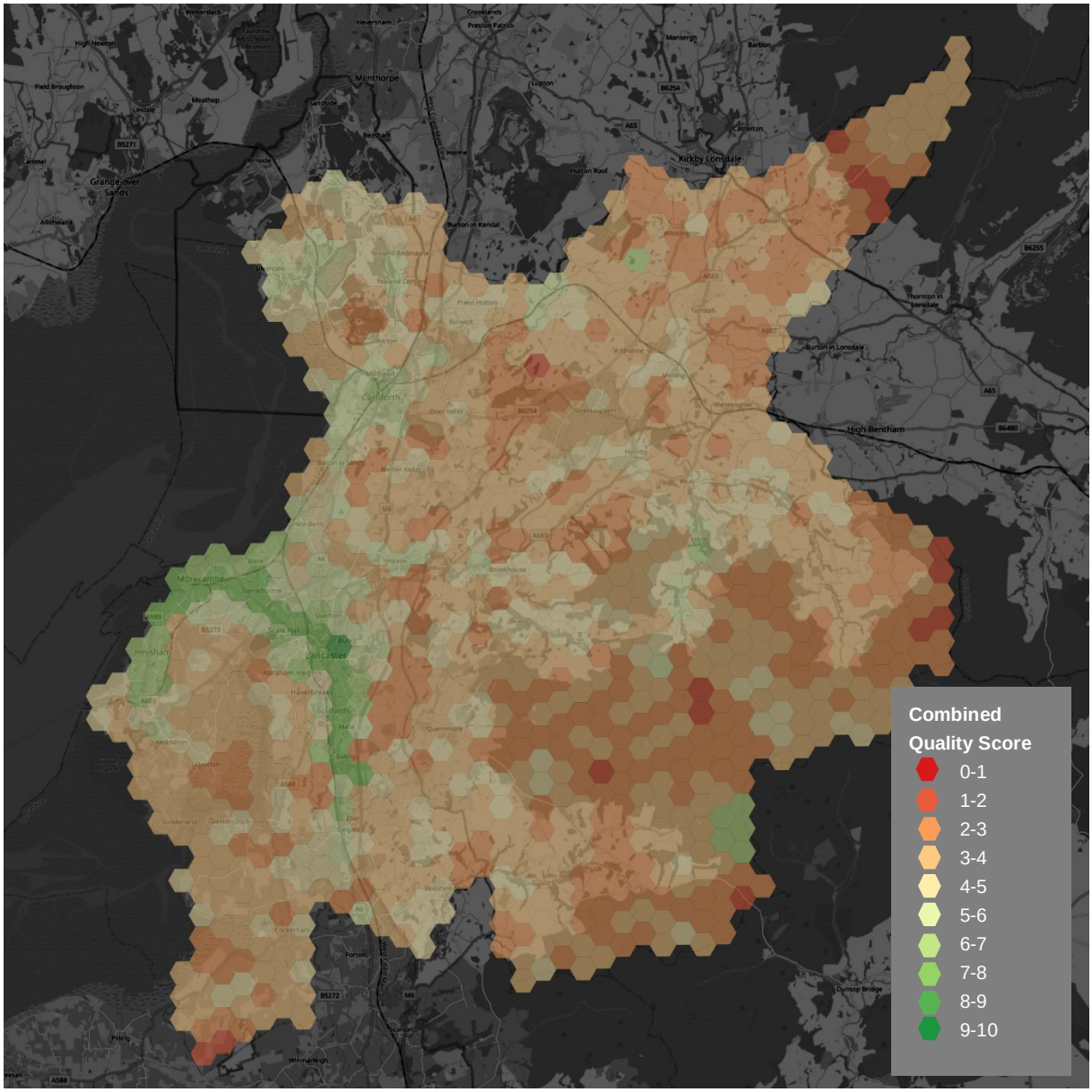
The analysis considers services during the peak hours, during the daytime and in evenings (but not weekends). In this way, frequent services would score high for attractiveness whereas for routes where there is no public transport provision would score zero.

3.9 Combined Quality Score

The quality scores for the individual components are then combined to give an overall quality score for each hexagon, as shown on Figure 6.

This quality score reflects the average quality of routes between the hexagon and all other hexagons within the mode catchments. This shows that no hexagons score the highest scores for route quality, suggesting that there is scope to increase the quality of all routes across the district.

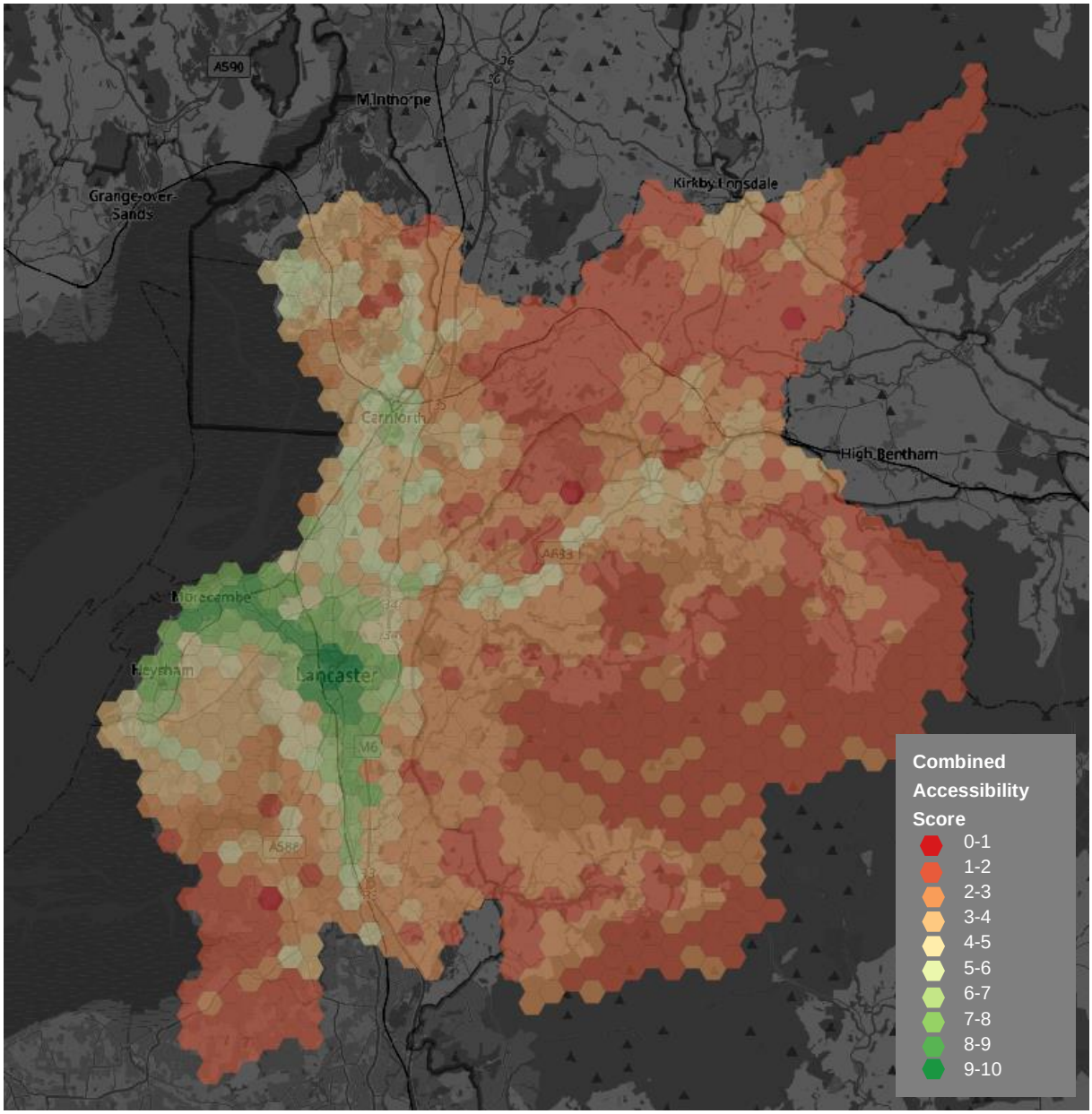
Figure 6: Overall Quality Score



3.10 Combined Accessibility Score

The combined proximity score and combined route quality score have been collated together to give a combined accessibility score, with a weighting of 75% and 25% to proximity and route quality, respectively. The combined accessibility score is shown in Figure 7 of this report.

Figure 7: Combined Accessibility Score



This shows that the areas with highest accessibility are within Lancaster and Morecambe and also along the corridor between those two areas. Reasonable levels of accessibility are also shown along the A6 corridor south towards the University and Galgate. The settlements of Bolton le Sands, Carnforth and Halton, Caton also show higher levels of accessibility relative to most of the district, but these settlements are less accessible than Lancaster and Morecambe.

3.11 Validation of the Accessibility Model

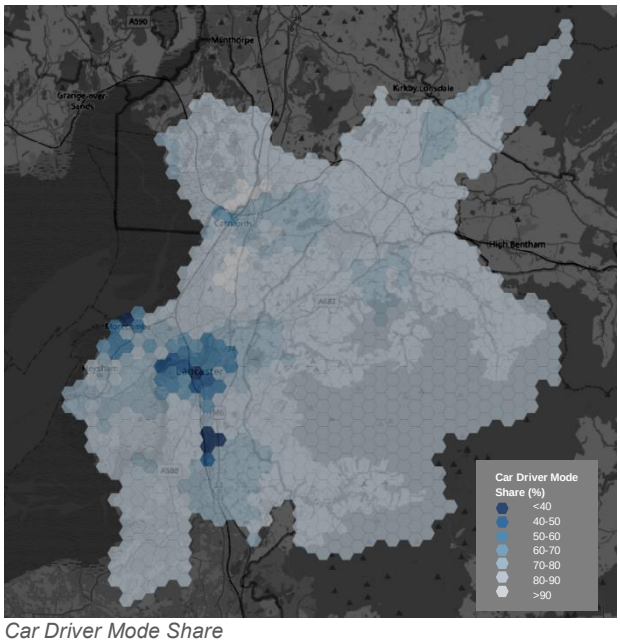
In order to validate the outcomes of combined accessibility score, the Strategy has made use of the 2011 Census travel to work mode share data for each output area which has been digitally mapped onto the hexagon zone system.

Whilst the 2011 Census data is dated, it is considered that this will provide a more accurate representation of mode share than the 2021 data, which was collected whilst COVID-19 restrictions were in place.

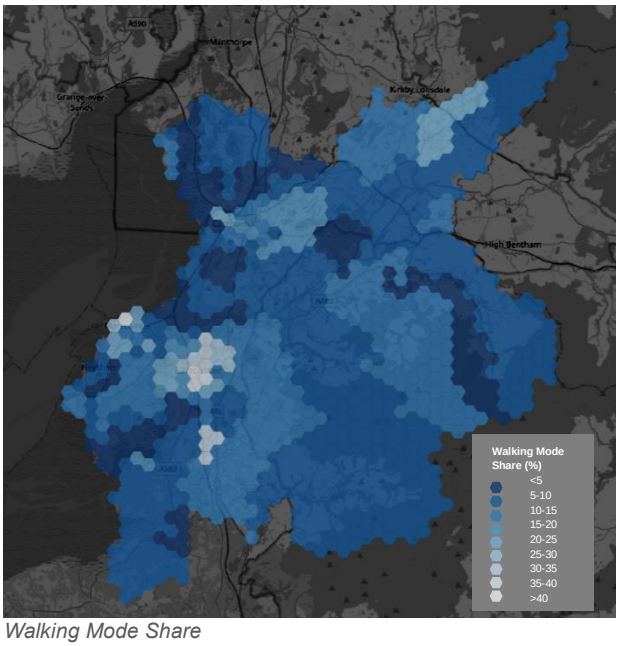
The data used within the model, both in terms of input and validation data, can be easily updated, enabling the model to be refreshed as new data becomes available.

The 2011 Census data is plotted in, Figure 8 below.

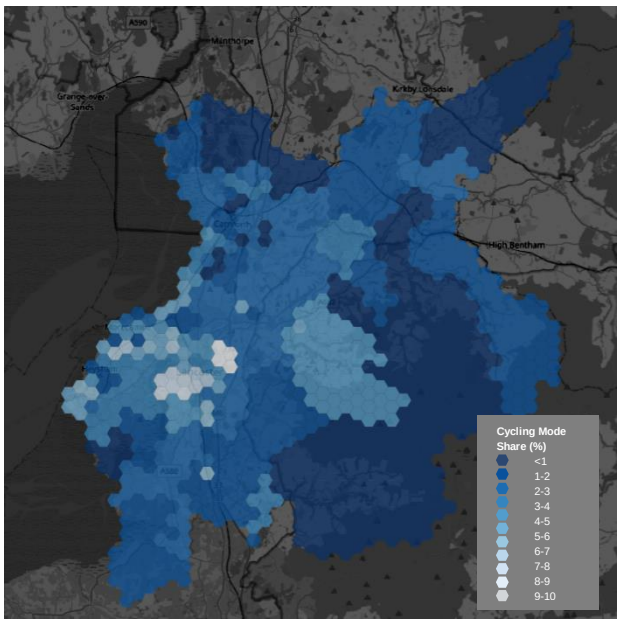
Figure 8: 2011 Census Travel to Work Mode Share



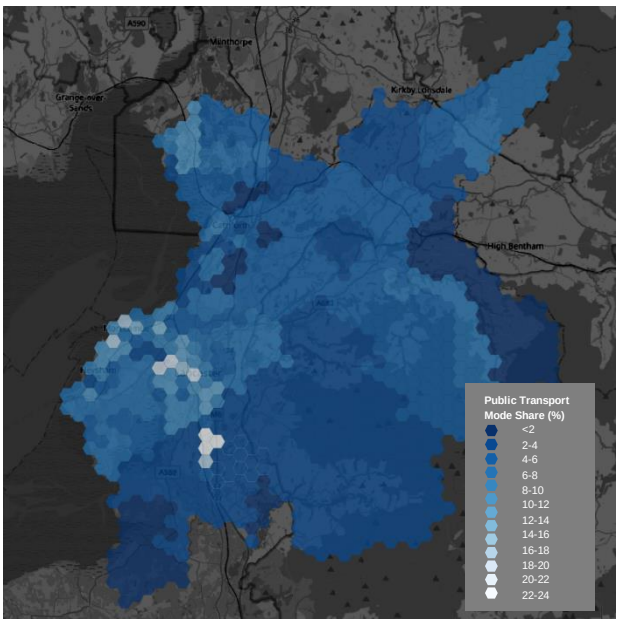
Car Driver Mode Share



Walking Mode Share



Cycling Mode Share



Public Transport Mode Share

Figure 8 shows that car driver mode share is generally lowest within central Lancaster, around the Lancaster University campus and within Morecambe. Similar patterns are seen for walking and cycling and public transport mode shares, with these being higher where car driver mode share is lower.

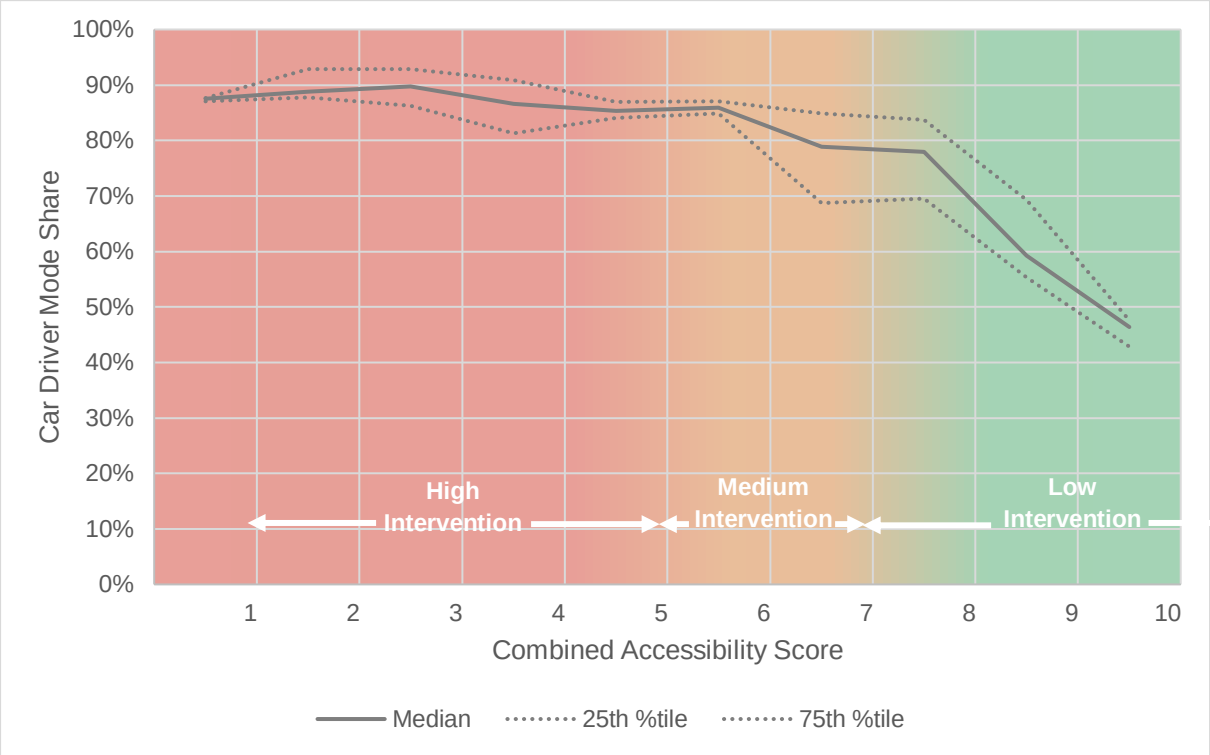
These travel patterns broadly reflect the combined accessibility score set out in Figure 7; however, a perfect match would not be expected for the following reasons:

- The Census data dates from 2011 and there will have been subsequent changes to the configuration of the local transport network.
- The Census data only covers travel to work trips whereas the combined accessibility score considers travel for a wide range of purposes including work, health, education and leisure.
- Since output areas represent areas of broadly equal population, these can be small in urban areas where population is dense but quite large in more rural areas. This means, for example, that the lower car mode share of a village could be lost when averaged across a large area containing more remote areas.

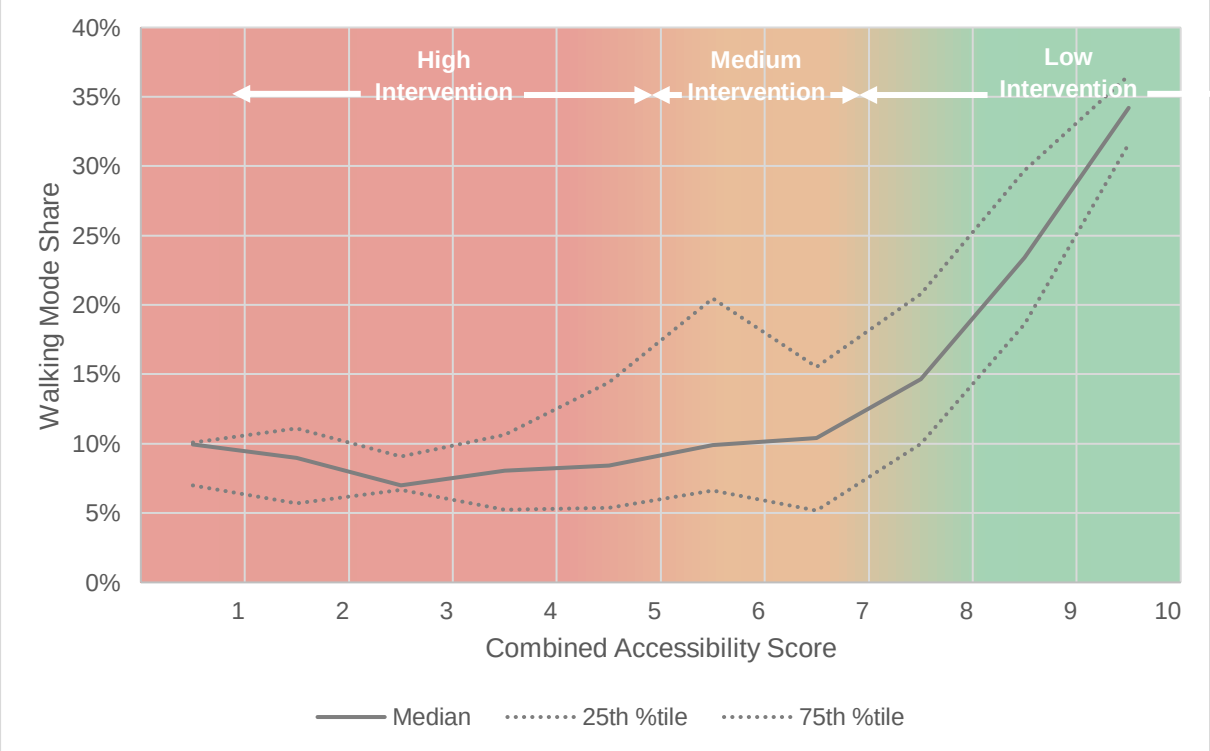
Notwithstanding the variations described above, an exercise has been undertaken to explore whether the combined accessibility score set out in Figure 7 can be used as a baseline to better understand travel mode share.

This exercise has been done by calculating the median, 25th percentile and 75th percentile mode share for each accessibility score and plotting these as shown in Graph 1 to Graph 4.

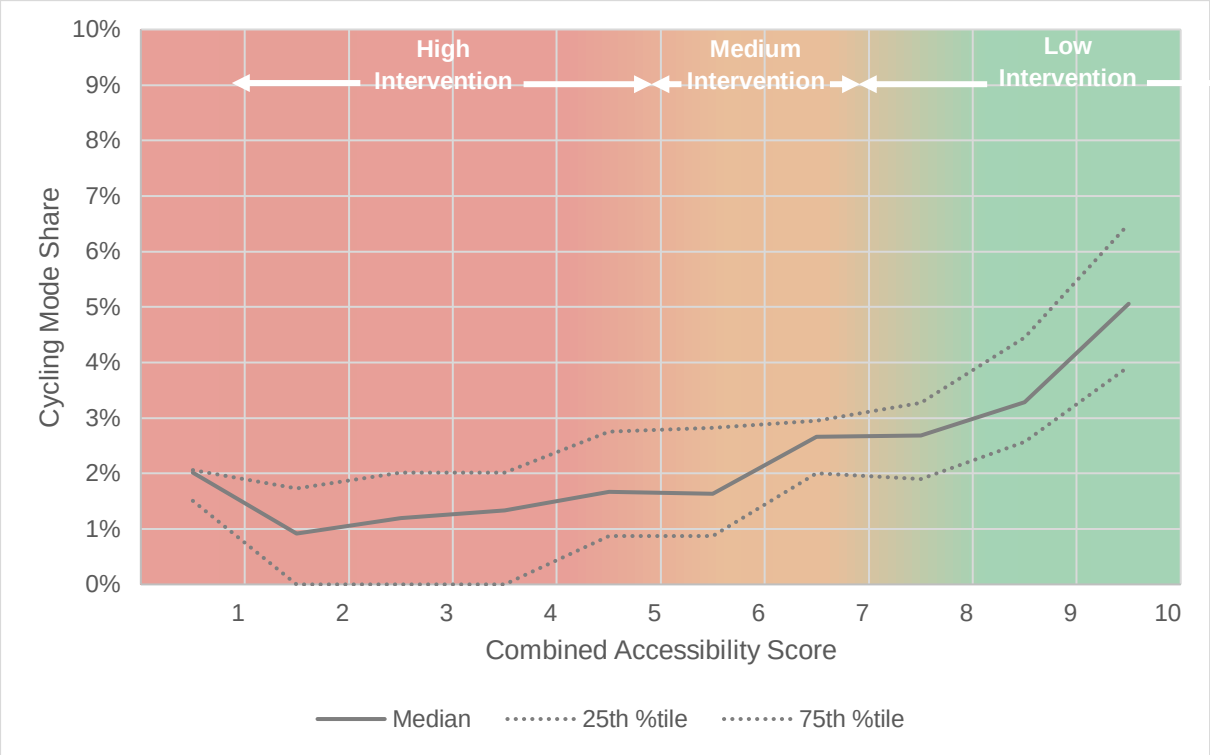
Graph 1: Car Driver Mode Share vs Combined Accessibility Score



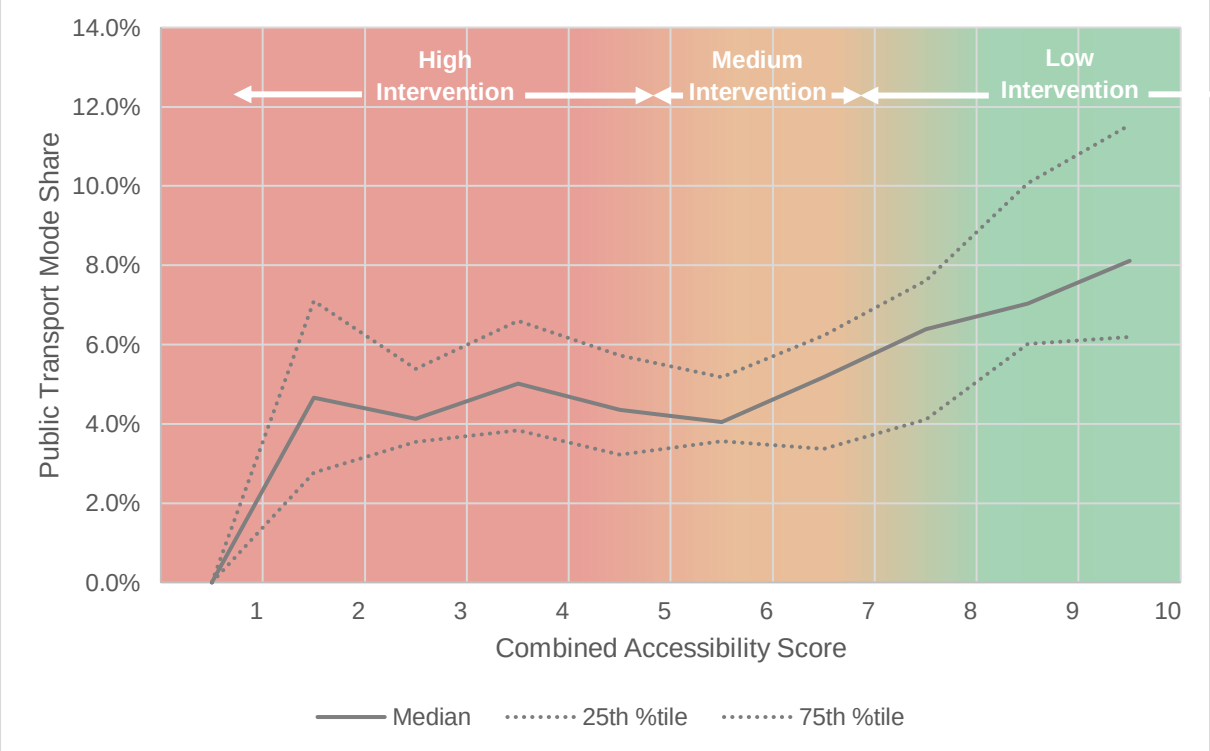
Graph 2: Car Driver Mode Share vs Combined Accessibility Score



Graph 3: Cycling Mode Share vs Combined Accessibility Score



Graph 4: Public Transport Mode Share vs Combined Accessibility Score



Graph 1 to Graph 4 show a clear correspondence between the combined accessibility score and the mode share across the different modes. In particular:

- For values of the combined accessibility score of eight or more, the car driver mode share is relatively low with higher levels of walking/wheeling, cycling and public transport use. Small changes in accessibility can drive meaningful changes in mode share. For areas with these scores, a low level of intervention could result in a significant increase in accessibility.
- For values of the combined accessibility score of between six and seven, the mode share starts to change, with increases in walking/wheeling, cycling and public transport use and reductions in the car driver mode share. A medium level of intervention is likely to be required to increase the combined accessibility score to eight and above and result in reductions in car driver mode share.
- For values of the combined accessibility score of less than six, there is very little change in mode share as a function of the combined accessibility score.

For the other modes, the graphs show some variation, for the reasons set out in relation to the 2011 Census mode share data. This suggests that for areas with a combined accessibility of score of less than six, a high level of intervention is likely to be required to achieve high levels of accessibility and low car driver mode shares.

4 Electric Vehicle (EV) Modelling & Assessment

4.1 Introduction

Sustainable transport interventions can be broadly split into two main streams. The first is on increasing the active and sustainable mode share as a percentage of all trips throughout the district. This is broadly the focus of the accessibility model described previously in Section 3. Whilst the impact of increasing active and sustainable mode share is positive from an environmental, social, and economic perspective, there is little evidence to suggest this correlates with a decrease in private vehicle ownership.

As such, the second stream is about increasing the sustainability of the remaining private vehicle trips. This can be achieved through the adoption of Zero Emission Vehicles, such as Electric Vehicles (EVs).

The EV model builds upon the outputs of the Lancashire and Blackburn with Darwen Electric Vehicle Infrastructure (EVI) Strategy, which separates the district into four key typologies: public (hereafter referred to as community), visitor, commercial, off-street, and minimum need.

To meet the anticipated demand for EV Charging Infrastructure (EVCI), the strategy sets out the required prioritisation, which focuses on providing 'primary' EVCI to local residents without access to off-street parking (community need areas).

Primary EV chargers relate to locations whose sole purpose is to provide EV charging. Commercial and visitor locations are prioritised to a lesser extent, with limited EVCI interventions outlined for off-street and minimum need areas.

The EV model within this study separates the community need and commercial/visitor (market) locations. This is due to the modelling methodology that underpins the requirements for EVCI being very different between the two.

4.2 Community Need Model Inputs

To understand the requirements for EVCI in community need areas (i.e., residential areas without access to off-street charging), the community need model uses the following modelling inputs:

- **EV Uptake:** Four alternative EV uptake scenarios are used to help predict the number of EVs within the Lancaster District, between 2025-2050. Whilst the EVI Strategy uses a modelling year of 2030, our EV model uses 2040 as this represents a larger mode share of EVs on the network and aligns with the LAEP.
- **Community Need Households:** The number of Community Need households in each hexagon.
- **Private vehicle ownership:** The average number of vehicles per household throughout the district. This was determined to be 1.2 vehicles/household.

- **Desired access to an AC EV Charger:** This is set to 80% in this analysis as not all users will require accessibility to a 'home' charger. For example, some will charge at workplaces or will 'top up charge' throughout the week.
- **EV Chargepoint Utilisation:** A combination of the energy- and time-based utilisation of residential EV chargers.

The community need EV model uses the metrics above to determine the required number of AC EV chargers per hexagon to meet the community need (2040) demand. The EV chargepoint utilisation subsequently allows for the conversion between an AC to DC equivalent charger, to meet the same level of demand.

The four alternative EV uptake scenarios are: Leading the Way (LTW), Steady Progression (SP), Holistic Transition (HT), and Combined Industry Projections (CIP):

- **Leading the Way (LTW):** A forecast based on NESO 2023 Future Energy Scenarios' 'Leading the Way' forecast. This sees a rapid uptake of electric vehicles to 2035, before tapering off under the assumption that future fuel technologies and alternative modes of travel reduce demand beyond this date.
- **Steady Progression (SP):** A forecast based on NESO 2023 Future Energy Scenarios' 'Falling Short' forecast. This is the scenario that sees the slowest rate of EV uptake up to 2040.
- **Holistic Transition (HT):** A forecast based on NESO 2024 Future Energy Scenarios' 'Holistic Transition' pathway. This scenario represents a forecast that aligns with the zero-emission vehicle (ZEV) mandate for the percentage of battery electric vehicle sales in the car and van sectors. This forecast broadly follows the previous Consumer Transformation (CT) uptake scenario used within the LAEP.
- **Combined Industry Projections (CIP):** A Hydrock, now Stantec, derived forecast from third-party data (SMMT & OBR) on current and forecast EVs on the road, offering a mid-range EV uptake forecast.

4.3 Community Need Multi-Criteria Assessment

The community need model uses the following scoring to refine the required number of slower AC (7kW) and/or faster DC (50+kW) EV chargers to meet the community need EV demand. These are:

- **Proximity to multi-modal transport:** Including scoring for multi-modal transport links within 500m and 1000m.
- **Active Mode Share:** Transport mode share for walking and cycling per hexagon.
- **Proximity to existing long duration AC (7kW) EV chargers:** Including scoring for existing EV chargers within 500m and 1000m.
- **Community Need usage of Existing EV Chargers:** Utilisation of existing 7kW EV chargers to serve the community need demand. A 20% desired amount has been set for this analysis.

Increased access to multi-modal transport and active mode share would likely reduce the frequency to which EVs in an area would need charge. This, therefore, reduces the amount of rapid (DC) chargers required to meet the community need demand.

This, however, would not necessarily impact the number of AC chargers that are required, as this is dependent on the desired accessibility to an AC EV charger (80% of all EVs). The number of AC EV chargers required is instead refined by the community need usage of existing EV chargers.

The results of the community need multi-criteria assessment are presented in the E-Mobility Interventions Section of this report (Section 9).

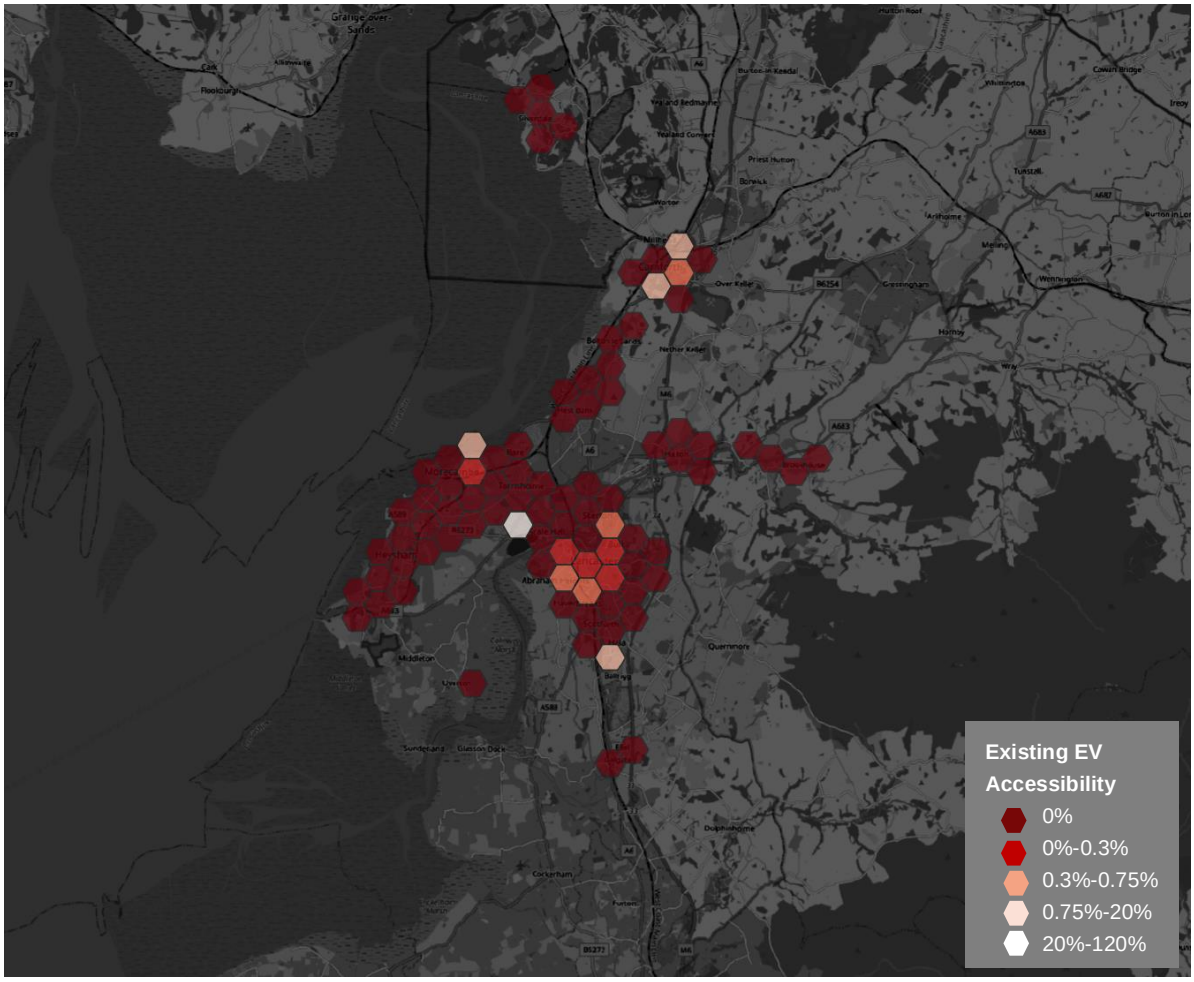
4.4 Existing Accessibility to Community Need EV Chargers

The resulting refined number of EV chargers is used to both visualise the spatial distribution of EV chargers required and to analyse the existing accessibility to community need EVCI, should no additional interventions take place before 2040.

The results, presented in Figure 9, demonstrate poor levels of existing accessibility to slow EVCI, with only limited existing provision in urban centres, with all but one hex scoring below 20% in the accessibility score. The one hexagon with a score of 120%, when comparing existing against desired, is within the business park area where there is moderate existing EV infrastructure, and a very low community need population

This highlights a lack of focus on providing EVCI, capable of meeting the demands of residents without access to off-street parking, with on average 1 EV in every 254 having the desired level of EV charging provision by 2040.

Figure 9 - Existing Accessibility to Community Need EV Chargers



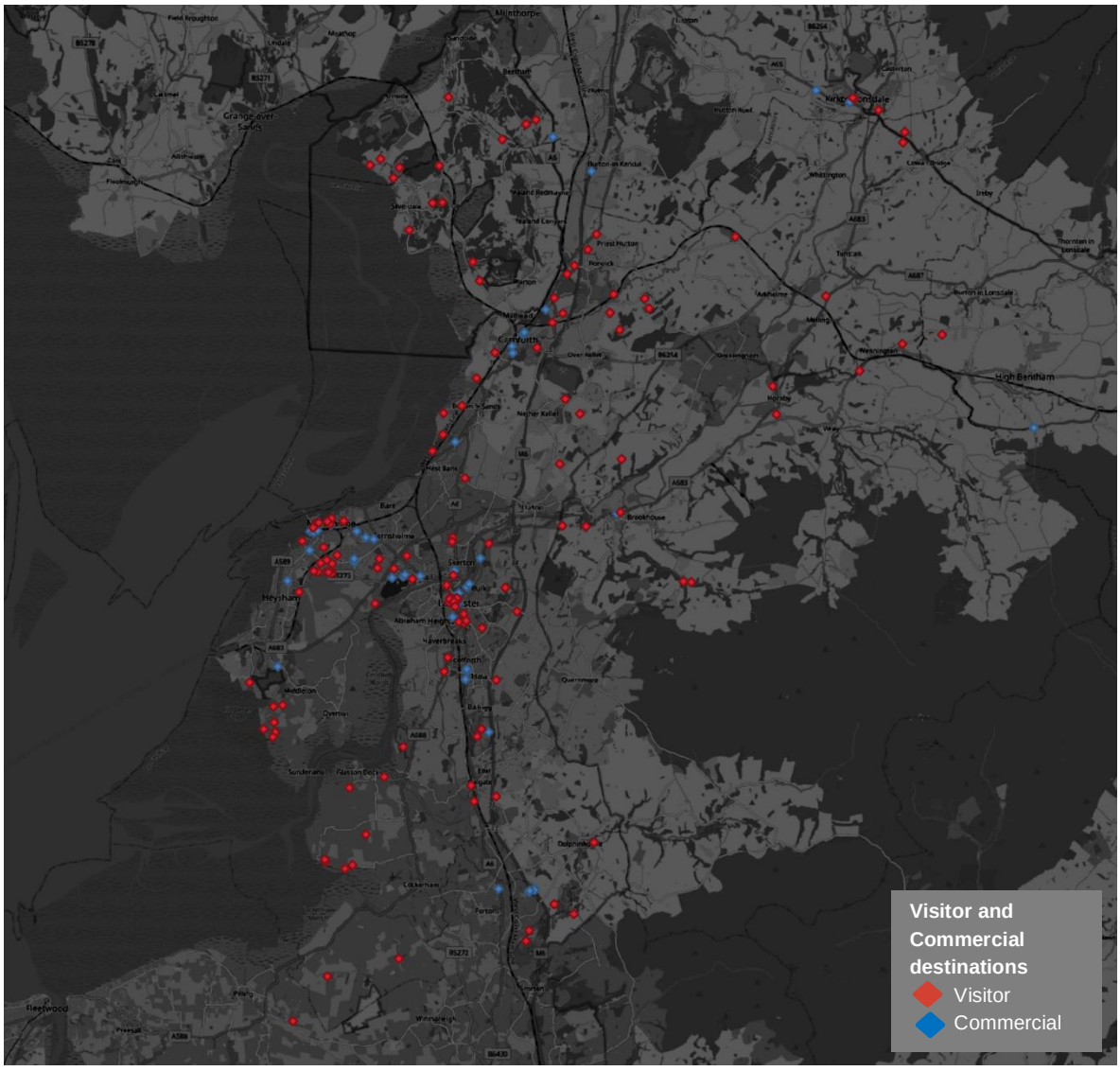
4.5 Commercial/Visitor (Market) Model Inputs

The Commercial/Visitor model determines the type of EV charging suitable, where applicable, for each commercial or visitor destination in the district. The distribution of commercial (blue) and visitor (red) sites throughout the district is presented on Figure 10. The outputs of the model represent the likely EVCI interventions that would be provided through market forces should no community need interventions be made.

The following metrics are used to determine the 'attractiveness' for AC/DC EV charging interventions at each site:

- **Population:** The population per hexagon,
- **Site AC/DC Attractiveness:** This metric determines the 'attractiveness' for EV charging interventions based on each site's key features. The attractiveness score is a combination of estimated parked vehicle dwell time, typical journey distance, and the potential utilisation of EVCI.
- **Average Journey Distance:** Journey distance per trip type.

Figure 10 - Commercial and Visitor Sites



4.6 Commercial/Visitor (Market) Scoring

Sites are scored from 1 (highly unattractive for EV Charging) to 5 (highly attractive) for AC and DC charging. Hexagons are scored for market interventions as follows:

- Green: Hexagon contains sites with an AC attractiveness score of 4-5 and a DC attractiveness score of 1-3
- Blue: Hexagon contains sites with an DC attractiveness score of 4-5 and a AC attractiveness score of 1-3
- Purple: Hexagon contains sites with an AC and DC attractiveness score of 3
- Orange: Hexagon contains a mixture of green, blue, and/or purple sites

The results of the community need multi-criteria assessment are presented in the E-Mobility Interventions section (Section 9) of this report.

4.7 Electrical Infrastructure Assessment

The electrical infrastructure assessment is based on the firm headroom capacity of both primary and secondary substations throughout the district. This provides an indication of the potential opportunities and constraints for additional EV charging in the district.

The results identify a significantly larger amount of available capacity in the city and town centres of Lancaster and Morecambe compared to outlying areas on both the primary (Figure 12) and secondary (Figure 11) networks.

Whilst this initially indicates good potential for future EVCIs, the EV model will assess whether the capacity is sufficient to connect the desired level of community EV infrastructure by 2040, should the headroom remain the same.

Figure 11 - Assessment of the existing electrical network capacity (secondary network)

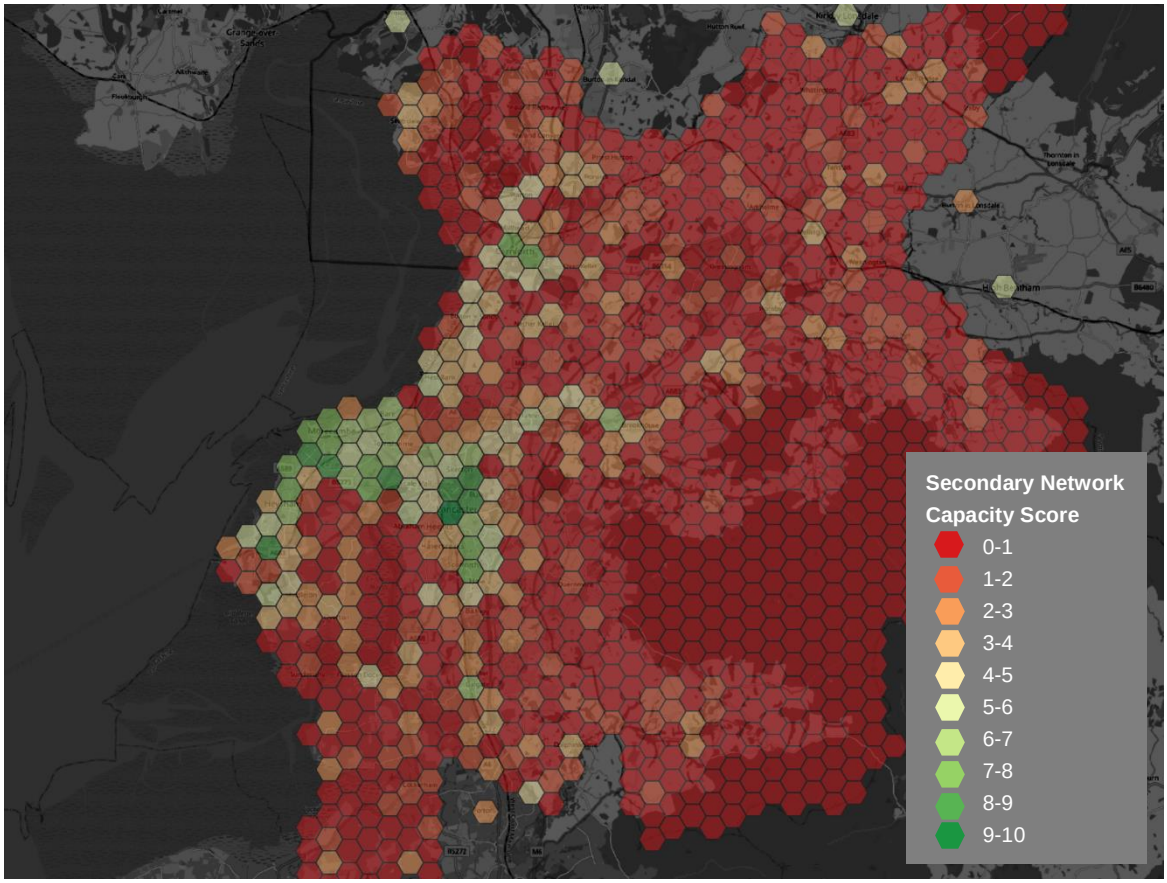
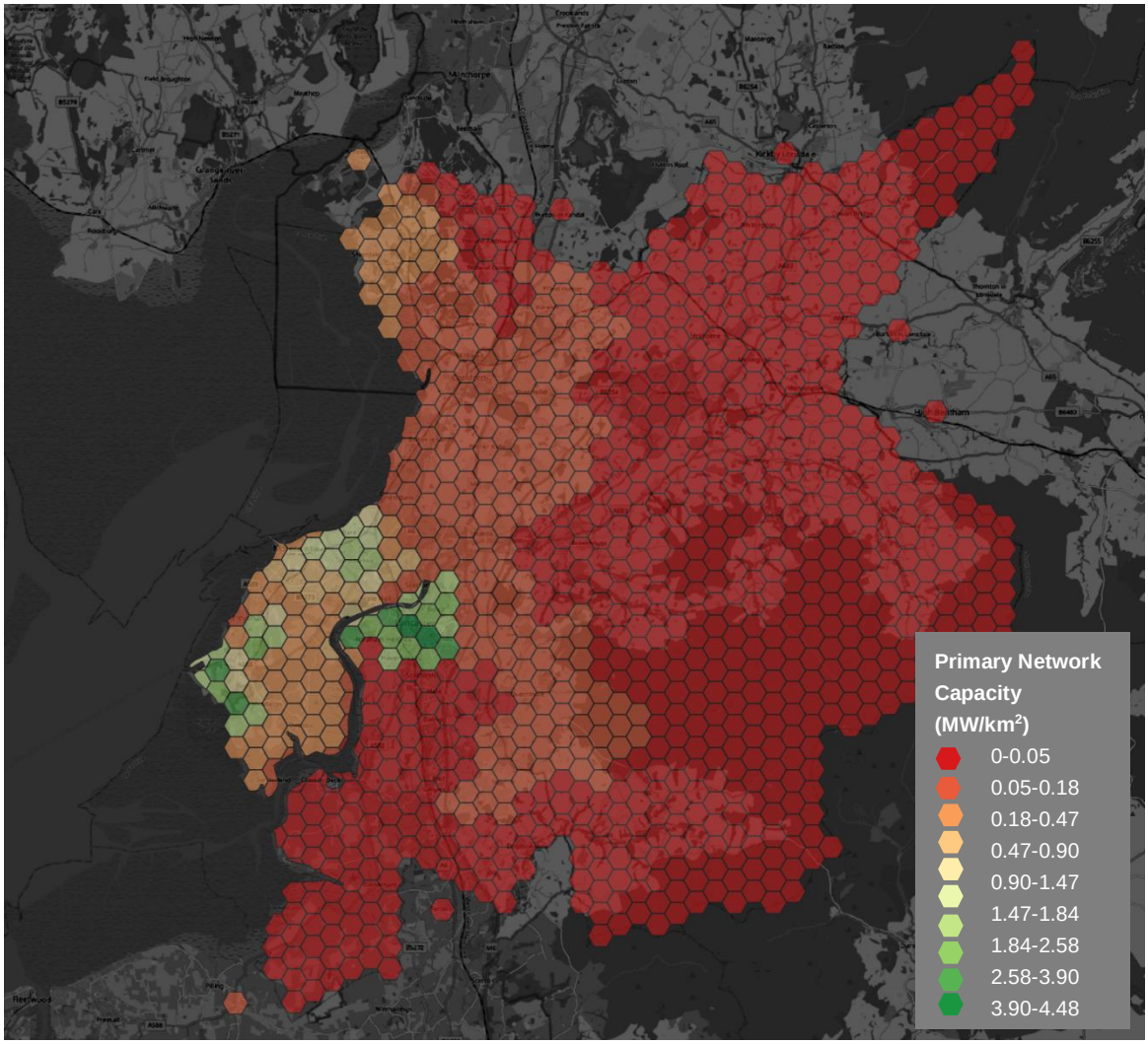


Figure 12 - Assessment of the existing electrical network capacity (primary network)

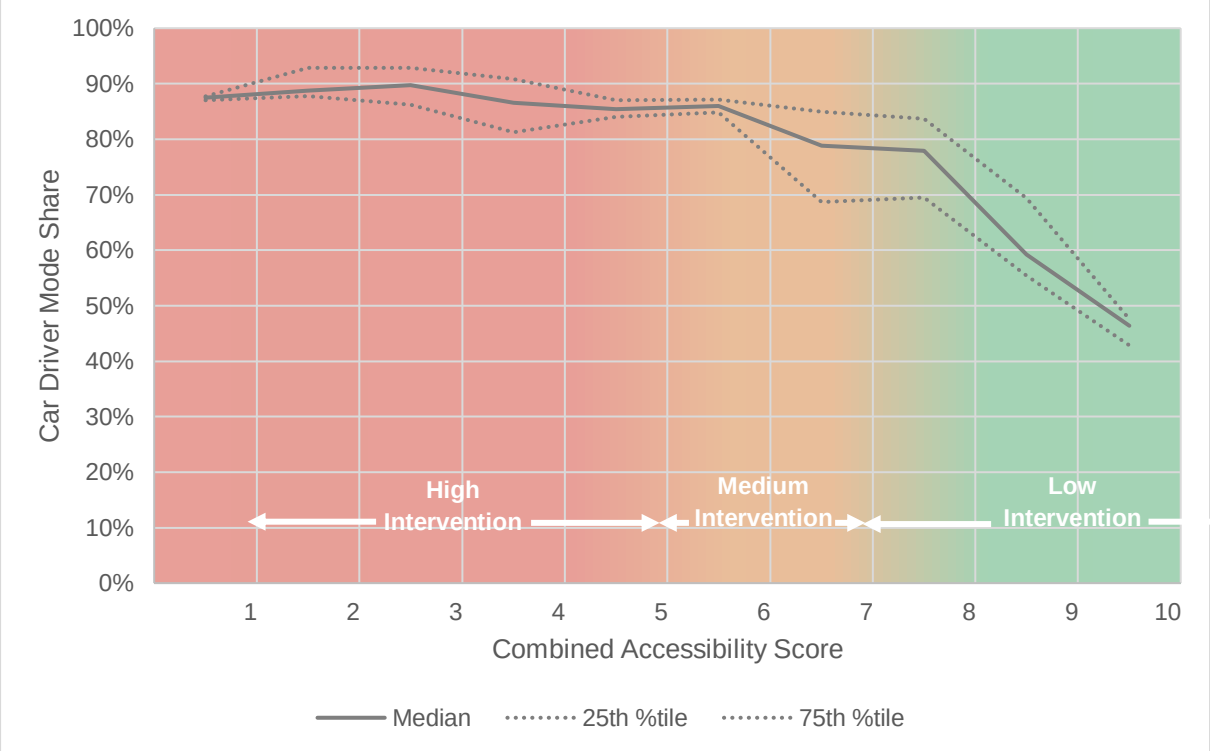


5 Assessing Accessibility

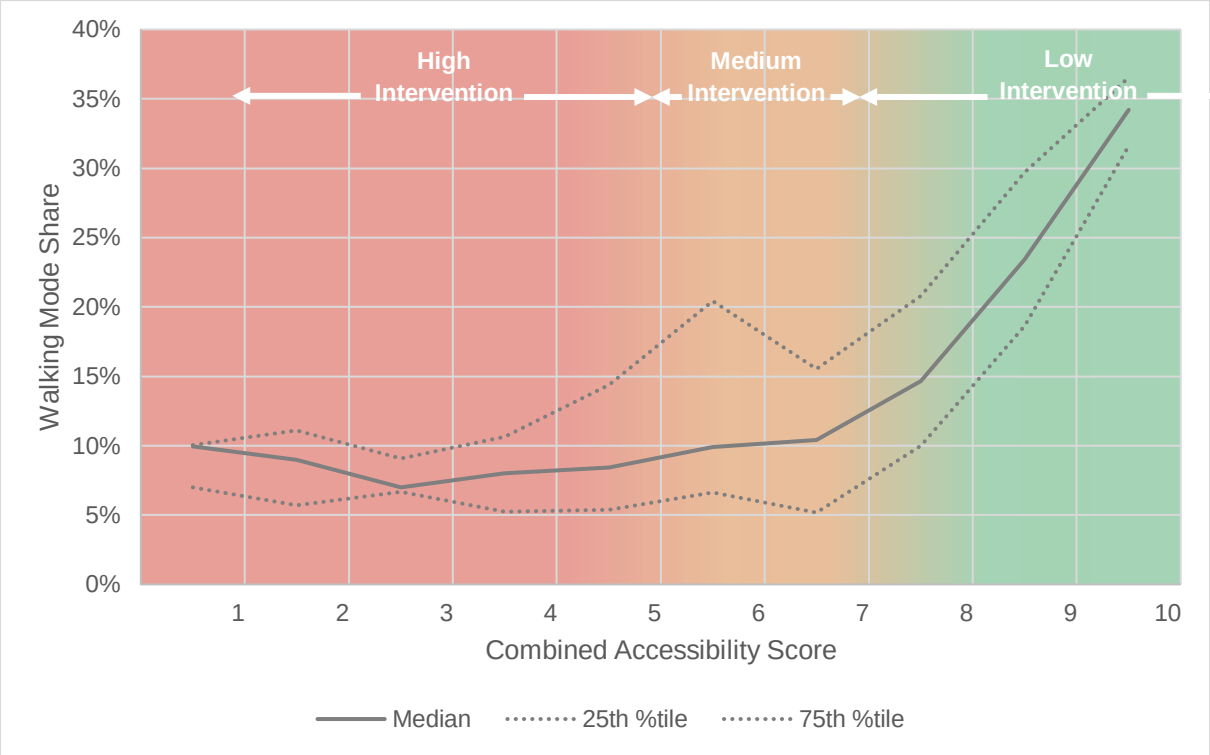
5.1 Accessibility Model Outputs (Baseline)

Mapping the strategic accessibility scores for each hexagon across the district clearly illustrates where existing sustainable transport infrastructure is currently focused (as set out in Section 3.5 - 3.8). This, perhaps unsurprisingly, closely correlates with urban centres and a number of key corridors. A working assumption has been that increasing levels of provision of sustainable transport infrastructure would be matched by increasing levels of mode share for these sustainable modes (with a corresponding reduction in mode share for the private car). To test this hypothesis the overall, strategic accessibility of each hexagon has been graphed against the actual car driver mode share, as shown in Graph 1 to Graph 4 (repeated below). This confirms that, in general, areas with higher combined accessibility scores correlates with having a greater share of trips undertaken by sustainable modes- i.e. better sustainable travel infrastructure tends to result in greater use of these modes.

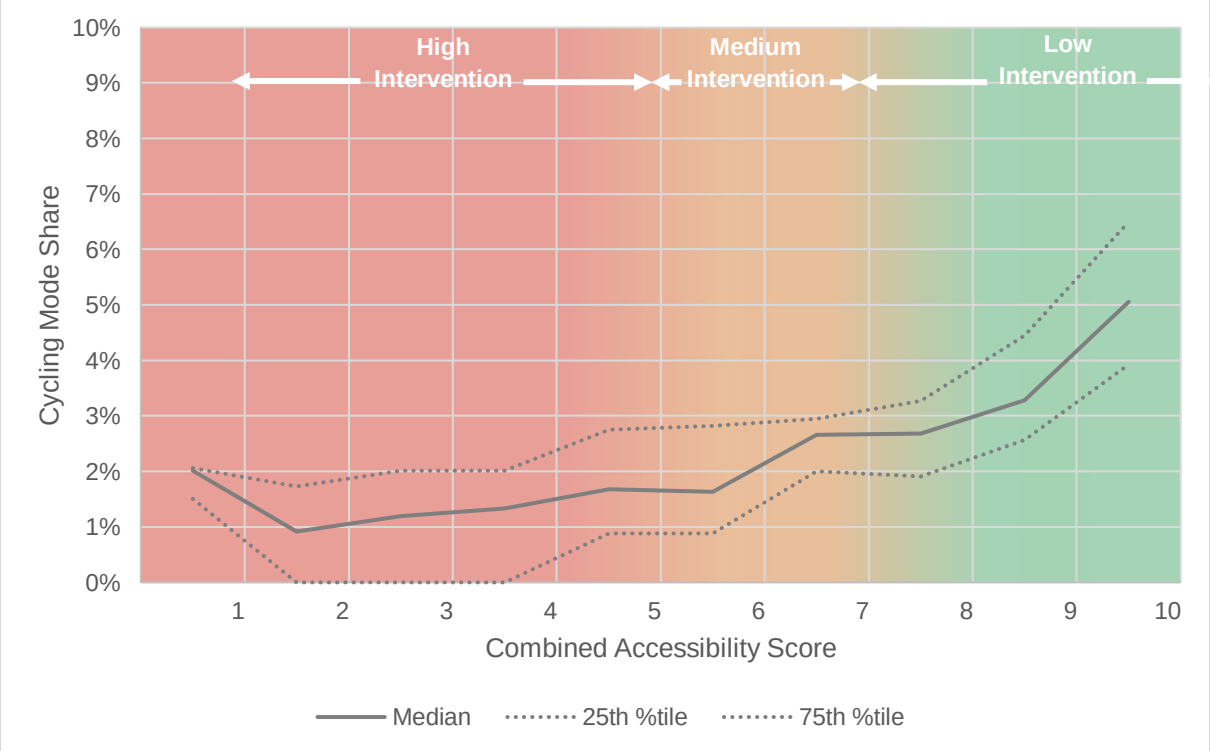
Graph 1: Car Driver Mode Share vs Combined Accessibility Score



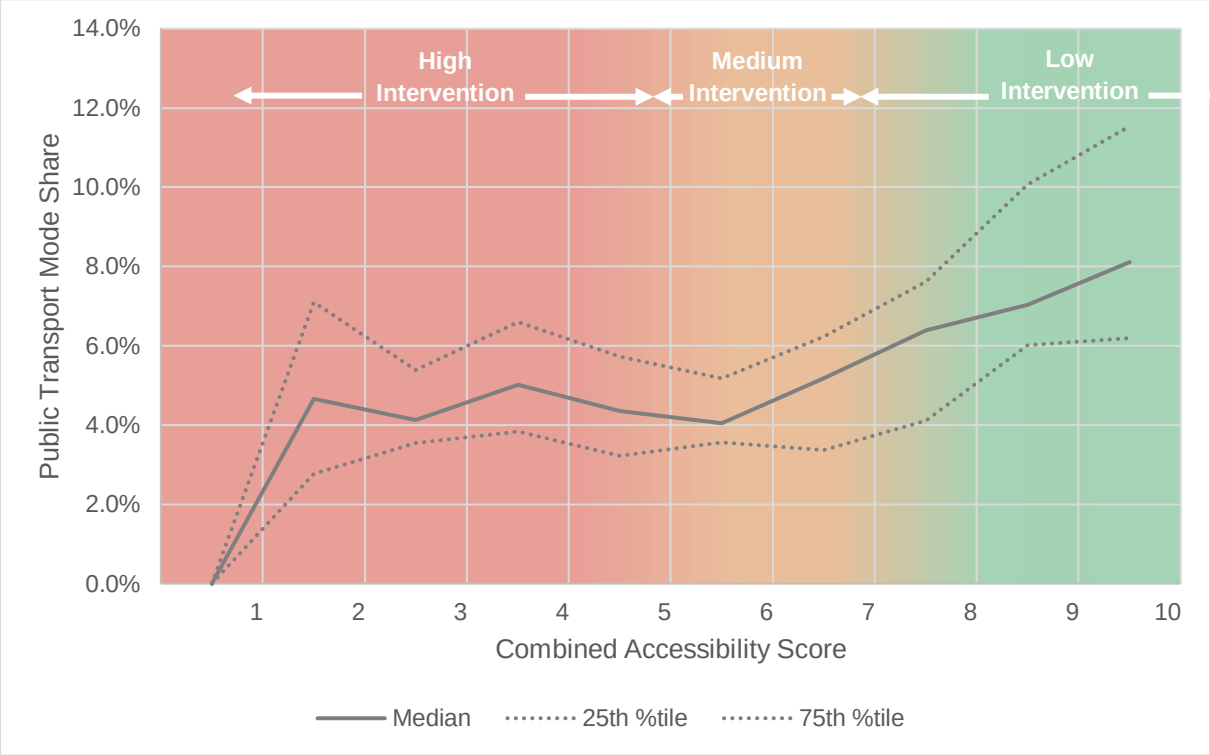
Graph 2: Car Driver Mode Share vs Combined Accessibility Score



Graph 3: Cycling Mode Share vs Combined Accessibility Score



Graph 4: Public Transport Mode Share vs Combined Accessibility Score



However, possibly of most interest is that this relationship does not appear to be linear. Instead, improvements in strategic accessibility appear to have little to no impact on the uptake of sustainable modes at lower levels. It would appear that it is not until a certain threshold is reached in the level of provision for sustainable modes of travel that this then results in an increase in the uptake of these modes. Based on our analysis, this tipping point would appear to be around a strategic accessibility score of approximately seven out of ten.

One of the practical implications of this analysis is that, even if a new development may be delivering improvements to the sustainable travel network, if these improvements still fail to reach this tipping point then it is unlikely that this will result in significant mode shift.

Essentially, for a development to credibly claim that their site will achieve a high sustainable transport mode share, it must demonstrate that they can achieve a strategic accessibility score of at least eight.

5.2 Strategic Accessibility

The study identified 123 hexagons which have been identified as potential broad locations to explore for future development needs. The purpose of the Hexagon Summary Sheets (which are provided in Appendix D) is to better illustrate the nuances that sit behind this overall score and provide recommendations about the types of interventions that would encourage greater uptake of sustainable modes of travel.

The Hexagon Summary Sheets enable the local authority(s), developers and other interested parties to quickly understand, at a strategic level, the accessibility and transport related issues of a particular hexagon; and to understand the types of interventions that may help to address some of these issues.

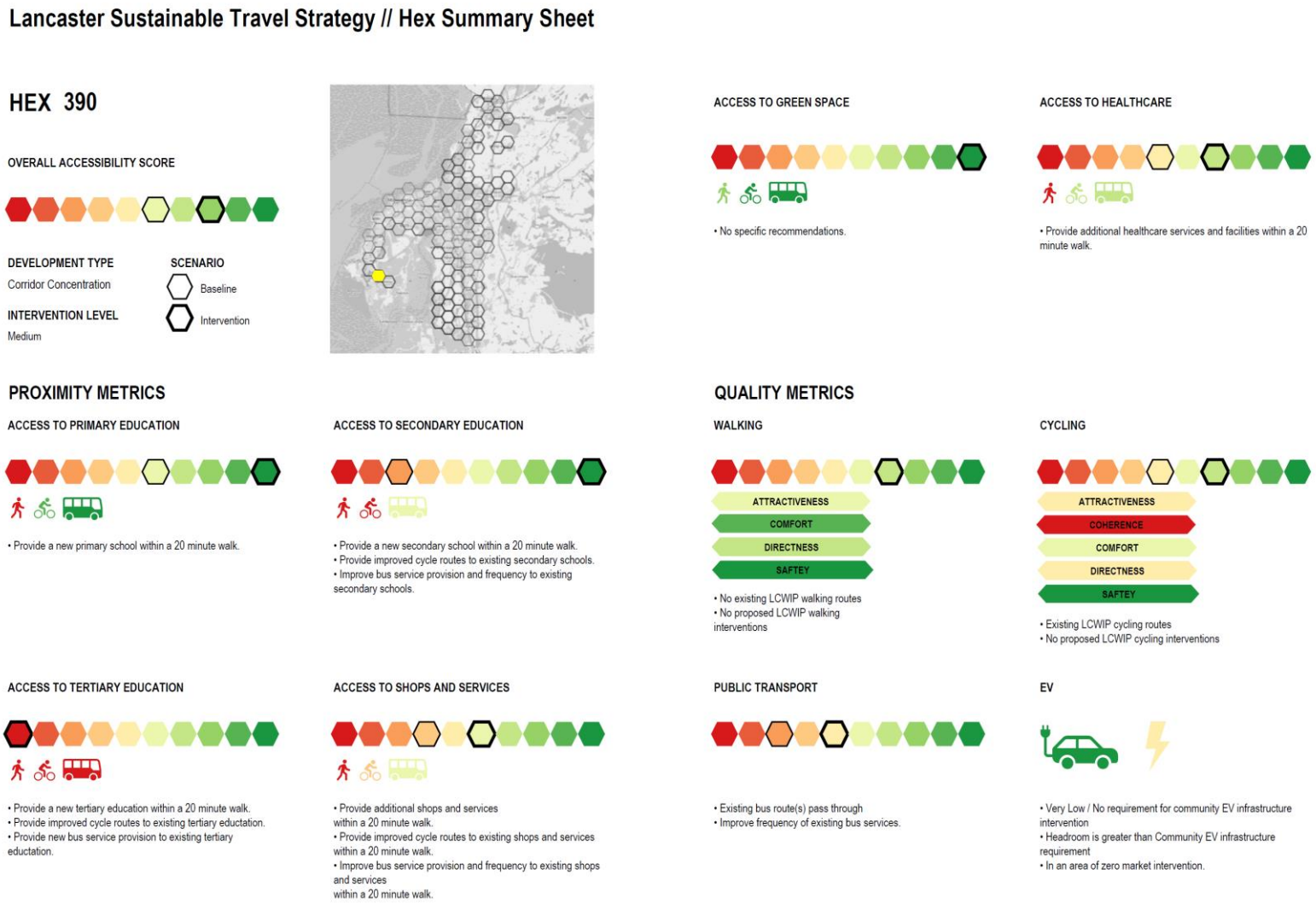
This is achieved through the provision of a set of high-level recommendations wherever the hexagon score falls below a score of seven on a particular metric. This knowledge can then feed into the formulation of planning and site allocations policies and possible mitigating measures, enabling development to take place in the most sustainable, or potentially sustainable locations. It can also assist developers and officers during the development management process.

The Hexagon Summary Sheets are intended to be quickly and easily understood by transport and built environment professionals, as well as other stakeholders such as local Members and the local community. In order to achieve this, the Hexagon Summary Sheets adopt a highly graphical or visual approach with minimal text. An example is shown in Figure 13 overleaf.

The Hexagon Summary Sheets present data and findings from the accessibility and EV models for each of the individual hexagons that enable users to identify key issues relating to accessibility and sustainable travel. The data presented includes:

- Hex reference
- Location map
- Overall accessibility score
- Type of development most likely to be appropriate to the hex location
- Proximity / access to the following key facilities (overall / combined score, and by walking, cycling and public transport):
    - Primary education
    - Secondary education
    - Tertiary education
    - Shops and services
    - Green spaces
    - Healthcare
- Quality of walking infrastructure (based on attractiveness, comfort, directness and safety)
- Quality of cycling infrastructure (based on attractiveness, coherence, comfort, directness and safety)
- Quality of public transport infrastructure (based on presence of bus routes and frequency)
- Electric Vehicle (EV) charging community demand and electricity network spare capacity

Figure 13 - Hexagon Summary Sheet Example



Each of these metrics is explained in further detail within the Hexagon Summary Sheet Guide (Appendix C) which sets out the parameters and scoring system for each metric.

Other pertinent information has also been highlighted, including whether the hexagon contains any existing or proposed LCWIP walking or cycling routes, bus routes and train stations. Further explanation of EV scoring is also provided to help users understand the need for additional EV charging infrastructure, and the local headroom to enable it to be provided.

Based on the data presented within the Hexagon Summary Sheets, a set of standard, high-level recommendations were developed and presented in the text where a hexagon scored below a score of 7. These typically included:

- Providing additional facilities (e.g. a school, shops, green space etc.) within a reasonable walking distance of the hex.
- Improving walking, cycling and/or public transport routes and infrastructure to improve access to existing facilities.

The recommendations are high-level and can help to inform policy development and the development management process. They can help to identify key issues and where local facilities, and infrastructure interventions may be required.

As with any individual development site, further work would be required as a site came forward to understand the issues in greater detail and develop specific local interventions to address them.

5.3 Local Accessibility

5.3.1 Introduction

The primary focus of this study has been to map and analyse sustainable transport infrastructure at a strategic level across the district. This understanding is fundamental to maximising sustainable travel opportunities through the spatial distribution of new developments.

However, it is also recognised that this only forms one part of the solution to increasing the use of sustainable modes. As well as the need to concentrate new development in areas that either already have or have the potential to reach a desirable strategic accessibility score, there is also the need to ensure that local accessibility to these networks also reaches certain, minimum criteria.

To assist the Council and developers to identify and address potential shortcomings in local accessibility within any given hexagon, a practical Local Accessibility Audit process has been developed with the ambition of creating more liveable neighbourhoods.

The audit follows the concept and methodology of the Active Travel Zone Assessment developed by Transport for London, but has been adapted to both the Lancaster context and the wider parameters of this project. The process adopts the following steps:

- Mapping of key destinations and existing active travel routes
- Mapping of broader healthy neighbourhood characteristics such as street density and access to green space

- Assessment of the existing conditions against core active travel principles of good design
- Development of mitigating measures to improve local accessibility to the sustainable transport networks

This process, described in more detail in the sections below, provides a consistent methodology for a local accessibility assessment that will help identify how sites in strategically accessible areas can ensure that they maximise the potential of this infrastructure by addressing any local accessibility issues.

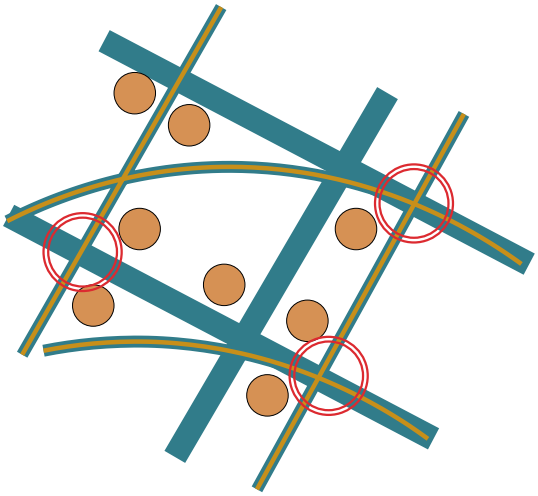
5.3.2 Map Key Destinations & Active Travel Routes

Within the hexagon (and possibly within adjacent hexagons), key destinations should be identified - the everyday amenities that people require along with their connections to wider strategic transport links.

The key destinations identified through this initial analysis could include amenities and infrastructure associated with:

- Education - primary, secondary and tertiary
- Healthcare
- Shops and services
- Parks
- Key walking and wheeling routes
- Strategic cycle networks
- Bus stops
- Train stations

Figure 14: Illustration of mapping key destinations & active travel routes



Where a site is close to the edge of a hexagon or important local amenities are located within adjacent hexagons then the extents of the assessment may need to be increased accordingly.

5.3.3 Map Healthy Neighbourhood Characteristics

Some of the key characteristics of a liveable neighbourhood are street density, access to green space and access to sustainable transport. These should be mapped for the study area along with a Lynchian-type legibility analysis of paths, nodes, districts, edges and landmarks.

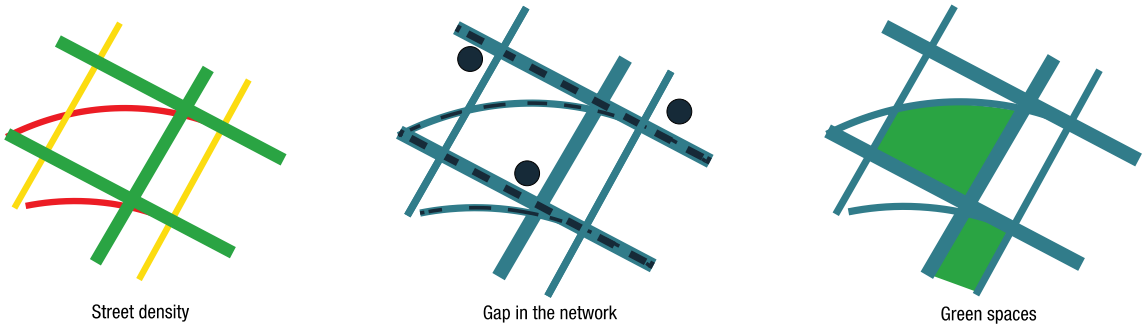
Street density is important as dense, well-connected streets lined with a wide range of uses can lead to resource efficient living. This is because people's immediate needs are much closer to them as opposed to an urban sprawl situation in which people are likely to use private cars to get to further away amenities.

Green spaces are places where people go to exercise, socialise and relax. In addition to this, they are also key community hubs that are often at the heart of a neighbourhood. Easy local access to these spaces is important for a wide range of social and health reasons.

Easier access to active travel infrastructure means people are more likely to use these modes - whether that is access to more local sustainable travel options or better connections to larger more strategic transport links.

These characteristics should be mapped and measured throughout a particular focus area. Other features, including those associated with issues of severance should also be considered and may include railway lines, rivers and major highways.

Figure 15: Illustration of mapping of healthy neighbourhood characteristics

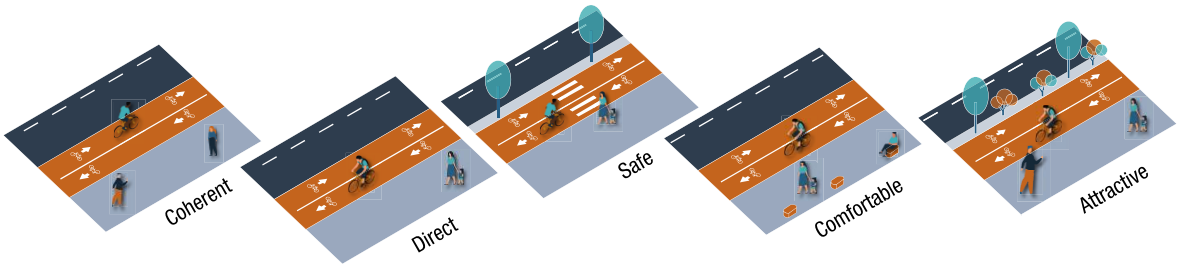


5.3.4 Assess Against Core Principles

The Department for Transport Local Transport Note 1/20: Cycle Infrastructure Design identifies five principles that are instrumental to creating good conditions for both walking and cycling. Section 1.5.1 of LTN 1/20 states:

> *"There are five core design principles which represent the essential requirements to achieve more people travelling by cycle or on foot, based on best practice both internationally and across the UK."*

Figure 16: LTN 1/20 Design Principles



As referred to throughout this document, the core principles are:

- **Coherent** – routes that are well-connected, are simple to navigate / intuitive and of a consistently high quality
- **Direct** – routes that are at least as direct as those available for private motor vehicles and avoid lots of stopping and starting
- **Safe** – routes that are not just imperially safe but also perceived to be safe by those that use them
- **Comfortable** – routes that good quality, well-maintained surfaces, adequate widths, minimal stopping and avoiding steep gradients
- **Attractive** – spaces and facilities that are well-designed which people want to spend time using

The walking and cycling routes in the focus area and their connections to strategic travel routes should be evaluated according to the LTN 1/20 principles. Their overall assessment can also be measured according to how the active travel network connects the key destinations along with wider strategic transports links.

5.3.5 Develop Mitigating Measures

Where the assessment process described above has identified potential issues with the local sustainable travel networks and their connections to local amenities, there are a number of more detailed assessment techniques and audits that can be used to assist in the development of mitigating measures:

- Transport for London's Healthy Streets Check for Designers can provide a useful, overarching assessment of local conditions as well as help to quantify the likely improvement that a proposed scheme might achieve
- Equally, both Road Safety Audits and Accessibility Audits can provide an independent check and recommendations for existing and proposed situations
- Other tools, such as a Community Street Audit or the Cycling Level of Service Tool and Junction Assessment Tool can be used to help identify and resolve specific issues

The development of proposals should then follow national and, where available, local guidance such as the previously mentioned LTN 1/20. This process should include appropriate stakeholder engagement, which may also help to increase political and public acceptance for change

6 Appropriate Forms of Development

6.1 Introduction

Whilst supporting sustainable travel options as a genuine alternative to the private car is necessary to successful place-making. On its own it is not sufficient to provide genuine choice in whether, how and when people travel.

Urban form and place-making, the way that streets, spaces and buildings are arranged in the landscape, also plays a crucial role and requires the right urban design inputs at the right time into the planning process. This section considers the types of successful urban forms that should be encouraged by the planning process and how these forms can support sustainable travel options.

Urban form and place-making, whether good or bad, shapes the choices that we make and the habits that we adopt, including how we travel. Whilst new development will nearly always be limited by relatively arbitrary ownership boundaries, it should still consider its surroundings and its relationship with the wider place.

Poor urban form and bad place-making can result in places which lack nearby amenities such as shops, pubs and cafes, are disconnected from surrounding areas, have poor public transport links and do little to encourage walking and cycling. Whilst good urban form and place making helps to make places more efficient, safer, lives healthier and environments more sustainable.

From the outset new development should seek to learn from the incremental growth of established urban form rather than rely upon the retrofitting of mitigation and off-setting measures to make-up for any shortcomings.

New development as an extension to an existing town, for example, may very well be located in an area with a high level of strategic accessibility by sustainable modes. But the realisation of this potential can be dramatically affected by a proposed development's approach towards urban form or place-making, particularly in relation to the existing settlement.

If this new development forms isolated suburban estates where land-uses are segregated, or permeability is poor, then the inherent potential of the surrounding sustainable travel networks will be wasted.

For example, if the rears of properties front the existing street network, historic streets become over engineered, sites are 'hung' off secondary streets and pseudo local centres are 'hidden' on lower-order, internal streets. Therefore, sites like this are almost guaranteed to be dependent on car ownership as well as require costly, major road and parking infrastructure (almost regardless of nearby sustainable travel infrastructure). Conversely, if new development is delivered as a seamless and harmonious extension of an existing urban area or emulates the organic growth of an historic settlement, then walking, cycling and public transport will inherently become an obvious choice.

On the following pages we consider three key types of urban form and explore how these can best be delivered, not least as a means of helping to realise the sustainable travel potential of any given site.

6.2 Urban Infill + Extension

The concept of urban infill and urban extension is when vacant or underutilised sections of land within or at the edge of well-established urban areas are developed. This approach towards development can utilise disused sites, regenerate communities, and eliminate urban sprawl. Some of the main advantages of urban infill and extension are:

- **Increasing the density of an area** – helping to support local businesses, increase the economic viability of public transport and encouraging a useful mix of land uses
- **Utilising existing infrastructure** - as development will be focussed on existing urban sites and possibly extending them there will be existing transport facilities, utilities and services which can be utilised and enhanced
- **Reducing greenfield development** - with the development of existing sites, greenfield sites at the edge of towns and cities can remain untouched which is good for biodiversity and maintaining existing landscapes

Development through urban infill and extension has many benefits for sustainable transport. It:

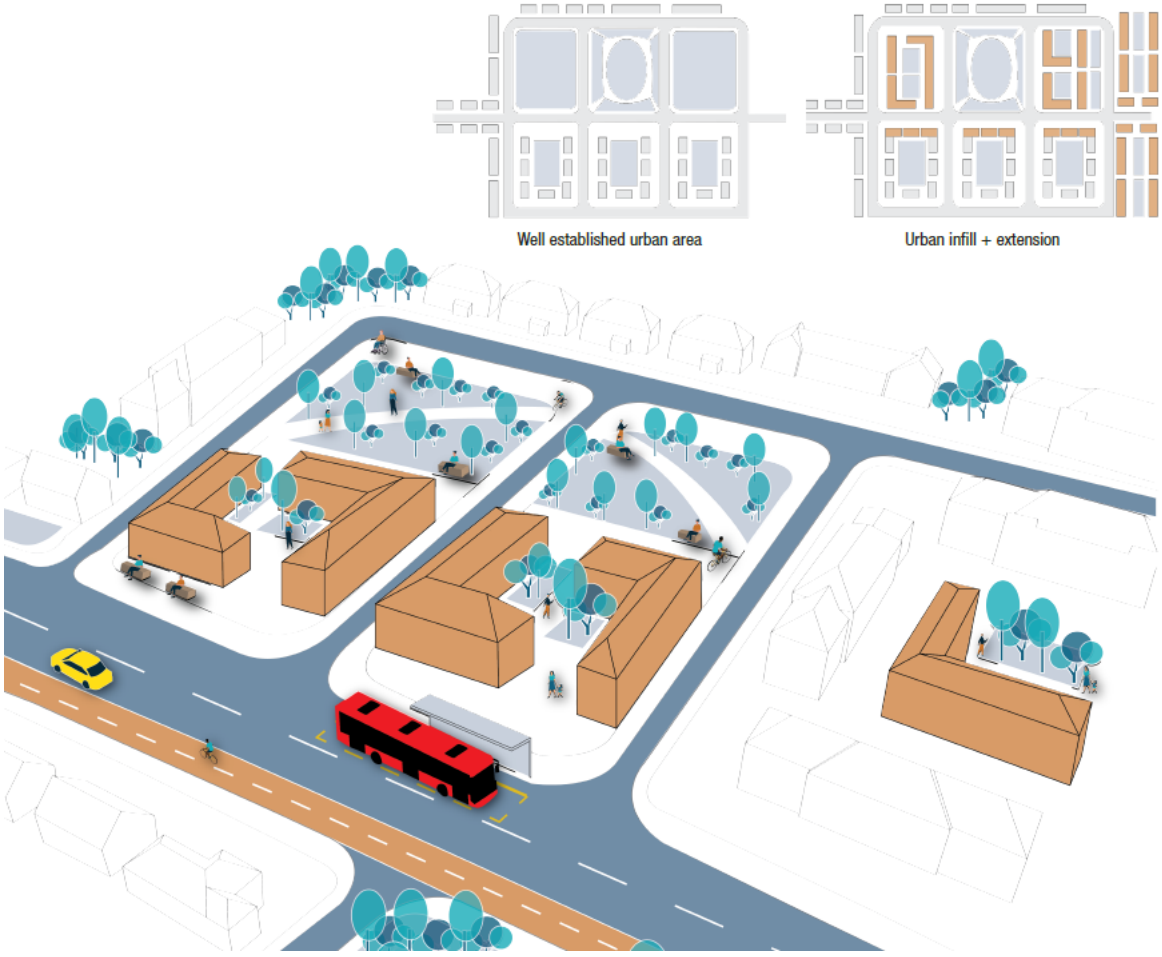
- **Promotes active travel** - higher densities reduce the walking, wheeling and cycling distance to amenities thus encouraging people to use these modes;
- **Increases accessibility to public transport** - higher density and the utilisation of existing infrastructure gives more people access to public transport and makes high frequency, high-quality services commercially viable;
- **Incentivises mixed use development** - urban infill and urban extensions can encourage the development of different types of spaces such as residential, commercial and amenities. This creates self-sustained urban areas; and
- **Supports community regeneration** - the creation of a self-sustained area with mixed-use development where people can travel around easily and sustainably can act as a catalyst to help regenerate an area.

Any urban infill or urban extension must be designed as a cohesive part of the wider urban context. It should seek to connect with and extend major throughfares as well as create lower order, smaller streets to create a well-connected network.

Development sizes and shapes should vary in response to local topography, history and cultural characteristics, helping to promote and make-sense of varied land uses within a neighbourhood. Good town form should facilitate efficient movement and permeability by sustainable modes and create a sense of place by promoting community interaction and responding to the diverse needs of its users. Above all, any new streets should feel like a seamless, organic extension to the existing network.

Delivering new development through urban infill and urban extension provides an opportunity to create resilient and efficient development for the long-term. Such development can take advantage of existing infrastructure, upgrade and enhance current facilities and help to support and fund services. Without the need to necessarily fund significant investment in sustainable infrastructure, developer contributions can potentially be focused elsewhere. Equally, it means that smaller sites, which would ordinarily struggle to fund such infrastructure, can be delivered and still achieve a high sustainable mode share.

Figure 17: Urban Infill + Extension Illustrative Example



6.3 Corridor Concentration

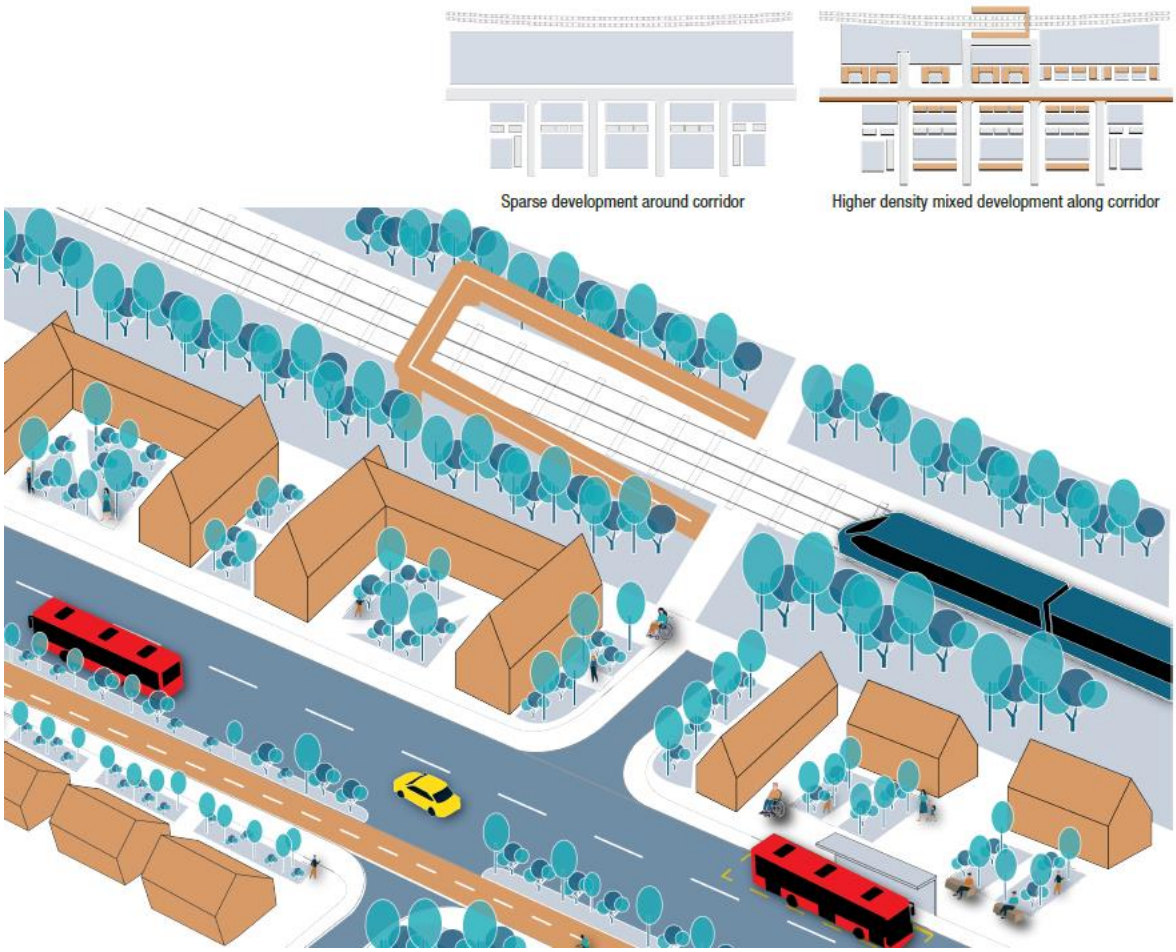
The concept of corridor concentration refers to the focus of new development along a linear, sustainable transport corridor, often centred around a transport hub. This may include a combination of active travel and public transport modes and can incorporate a range of different land uses. These corridors can often contain:

- **Dedicated infrastructure** - such as an existing or new high frequency bus corridor, a railway line if the development is focused around either an existing or proposed station, or a segregated cycle track
- **Multi-modal integration** – seamlessly connects and integrates different modes of sustainable transport
- **Green Spaces** - the creation of green areas and parks helps improve access to green spaces along with giving people access to nature

Development along sustainable travel networks through corridor concentration can have the following benefits:

- **Accessibility to public transport** - concentration around a travel corridor means people will have direct access to public transport, which can help maximise the potential of sustainable transport infrastructure
- **Promotes active travel** - development where there is active travel along a corridor will encourage people to walk, wheel and cycle, as well as interchange between modes;
- **Urban regeneration** - areas along the corridor can be used to stimulate economic growth by creating business clusters and supporting existing businesses
- **Minimising sprawl** – focusing development around a transport node helps to create more efficient development that can reduce land-take
- **Equality of access** - the proximity of active travel options and high-quality public transport can enable households to avoid the expense of buying a (second) car
- **Natural surveillance** - encouraging people to use their streets and promoting activity in public spaces helps to create safer environments, especially for the most vulnerable.

Figure 18: Corridor Concentration Illustrative Example



Importantly, such development should, as the name suggests, concentrate its prime frontage along these corridors, rather than be 'hung' off them as inward facing cul-de-sacs at the end of spur roads. As with more historic centres, they should radiate outwards from a central hub, focusing activity along the corridor.

Corridor concentration is a way in which long-term, resilient and efficient development can be achieved. It should be noted that, depending upon the current level of infrastructure, this form of development may require significant investment in sustainable transport. Particularly if this is rail-based. However, such development may also include more modest upgrades to existing bus services and cycle infrastructure, which may be sufficient to achieve the desirable levels of accessibility without such significant investment.

6.4 New Settlement

The final urban form being explored is the New Settlement. Similar to Corridor Concentration, in that it would not be attached to an existing urban area, but on a larger, more self-sufficient scale. It is likely that there will be very little in the way of existing sustainable travel infrastructure or community facilities for a New Settlement to utilise and therefore such a development will need to be of a sufficient scale to fund the associated investment.

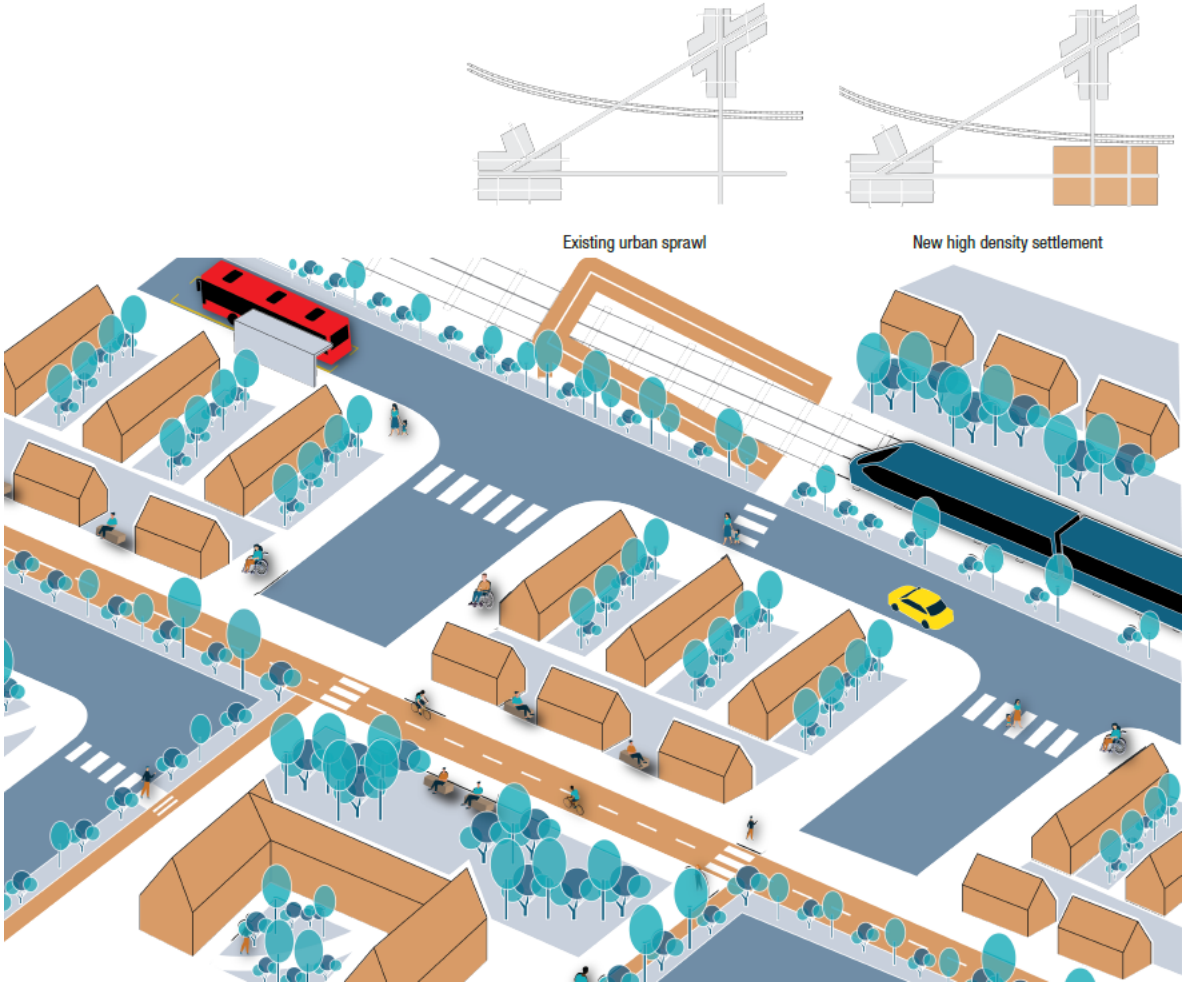
Furthermore, it would be expected that any New Settlement would also be relatively self-sufficient in providing for many of its resident's day-to-day needs in terms of land uses and local amenities. Therefore, not only would a New Settlement provide attractive sustainable travel options, but it would also seek to reduce the need to travel.

Any New Settlements should share the following characteristics to help ensure that it encourages the use of sustainable modes of travel:

- **High-density, mixed-use development** - where people will have a range of local services within walking distance that might include schools, shops and healthcare facilities. This means that many of a resident's immediate needs will be met locally, thus reducing the need to travel.
- **Promotion of active travel** – a well-connected street network that provides a clear hierarchy and route choices along with direct routes for walking and cycling. Whilst access for cars and delivery vehicles is controlled through modal filtering.
- **Concentrating Activity** – as with traditional towns, the main / high street that runs past a New Settlement should also be the main street through the development. This should be the result of introducing primary frontage, appropriate speed limits, green and blue infrastructure, waiting and loading facilities, gateway treatments, cycling infrastructure, public transport stops, pedestrian crossing facilities and the myriad other elements of a successful urban main street.

Any New Settlement is, by its very nature, likely to be isolated from other urban centres along with limited access to existing facilities and amenities. This will require any New Settlement to deliver a relatively significant amount of social infrastructure, necessitating that such a development is of a minimum size that can a) support these amenities, and b) generate the contributions to fund them. As a result, this makes it unlikely that a smaller New Settlement would ever be able to achieve the necessary levels of accessibility that would lead to the desirable levels of up-take of sustainable modes of travel.

Figure 19: New Settlement Illustrative Example



6.5 Development Density

Density is a fundamental aspect of any development for many reasons. Compact, mixed-use development can lead to resource efficient living by impacting how efficiently land is used. It affects housing affordability, environmental impact, viability of amenities and services, public transport usage and the attractiveness of walking and cycling.

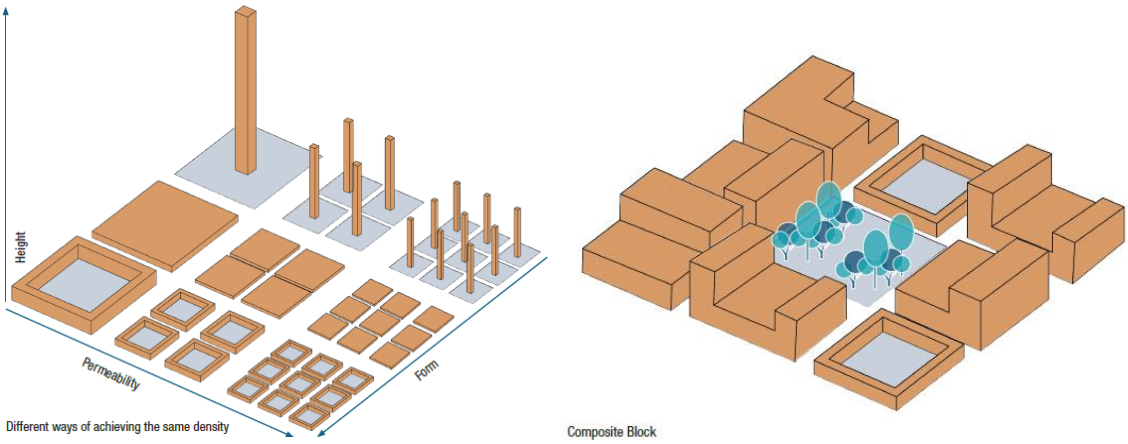
In the context of this study, it is important to realise that, much like urban form, density is another critical aspect that must compliment sustainable travel infrastructure. The full potential of a high-frequency bus route, segregated cycling infrastructure and a high-quality walking environment will never be realised where low densities result in urban sprawl, failing to create the critical mass that supports public transport, creates safe, vibrant streets and supports local businesses and amenities.

Therefore, the following aspects of any new development must be carefully considered, including their implications for travel patterns:

- **Height** - density requires height but one that is appropriate to the context of Lancaster and does not detract from the quality of the street by dwarfing everything else.
- **Permeability** - urban blocks need to be permeable, both to people and transport, and encourage the layout of a mixed-use street. However, this permeability should not compromise the privacy and threshold of homes.
- **Form** - the form of an urban block should be one that is of a human scale and is conducive to that of a mixed-use street with various functions.

There isn't, and should not be, any single answer to the question of appropriate density. It will vary from site to site and even within a site. And it is often this variation, by creating an amalgamation of different development forms, that help to create the interest and character that the best urban areas often share. But this variation must always be subservient to the overarching requirement to deliver new development at an appropriate, overall density that supports, among other things, high-quality sustainable travel infrastructure.

Figure 20: Development Density Illustrative Example



6.6 Capturing Design Principles

A Streets and Public Spaces Design Code, capturing the design principles set out above, could serve as a powerful tool to guide the quality and character of new development in the district. By embedding a design code into the local plan, LCC could provide guidance to developers that will help to support placemaking, and foster well-designed, sustainable communities that reflect local identity and help realise the sustainable transport objectives of this strategy.

7 Development Areas

7.1 Level of Intervention Required

As set out in Section 6, four broad development types have been considered for the Lancaster District, as follows:

- Urban Infill
- Urban Extension
- Corridor Concentration
- New Settlement

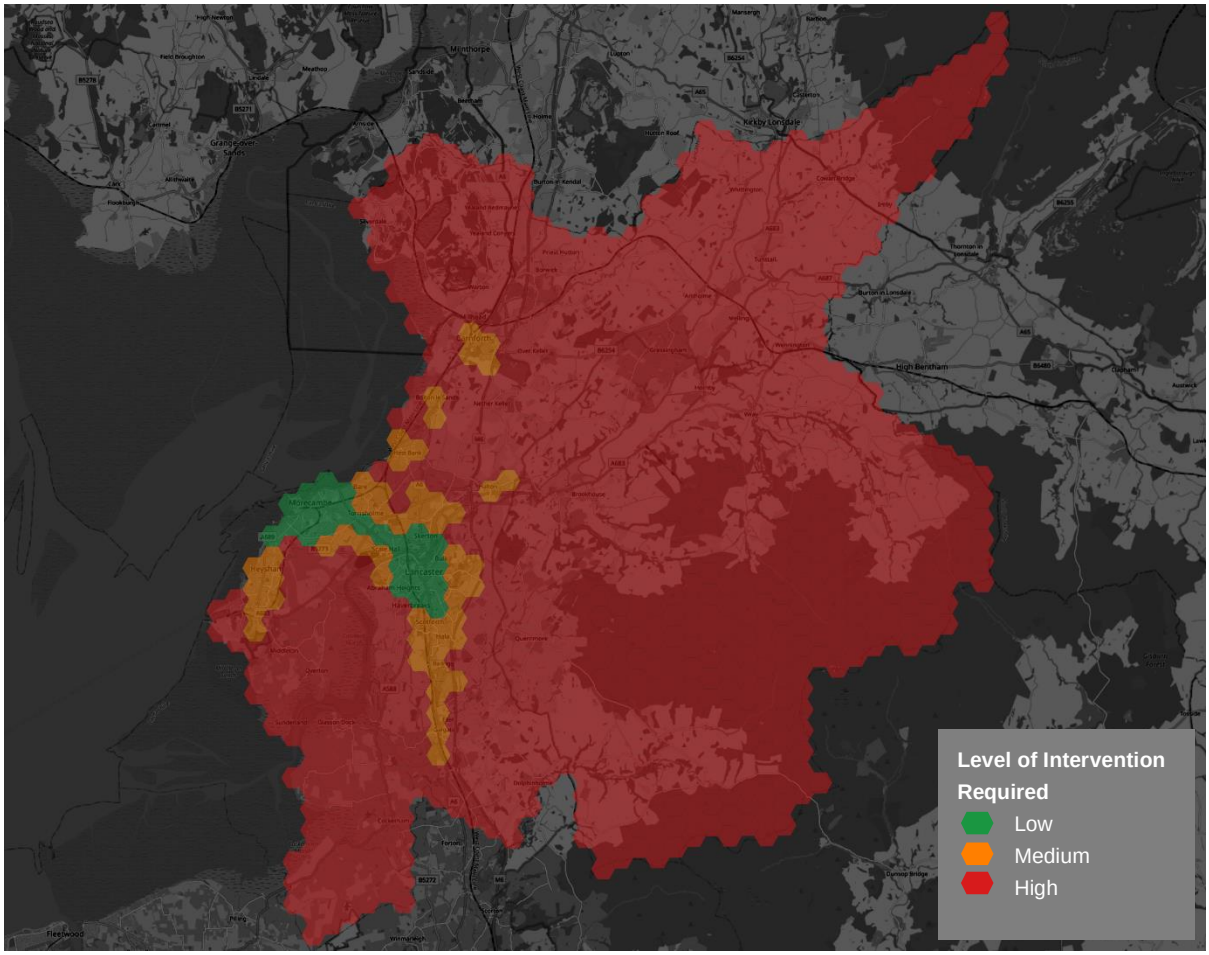
The baseline accessibility analysis has identified the likely level of intervention (low, medium, high) required to make a given hexagon sustainable in transport terms based on its baseline combined accessibility score, as previously discussed in Section 3.10. These hexagons have been plotted in Figure 21, below.

This shows that a low level of intervention would typically be required in the existing urban areas of Lancaster and Morecambe.

Medium levels of intervention are required towards the edges of these areas, Heysham, along parts of the A6 corridor to the north and south of Lancaster and the settlements of Bolton le Sands, Carnforth, Halton and Hest Bank.

The analysis shows that a high level of intervention would be required to improve accessibility across the rest of the district.

Figure 21: Level of Intervention based on Combined Accessibility Score



7.2 Development Constraints

This approach has excluded other considerations outside of sustainable transport, such as the availability, suitability and viability of sites, which should be layered on top of this Sustainable Travel Strategy as part of a future site selection process and further Local Plan considerations.

However, hexagons within the Silverdale and Arnside and Forest of Bowland National Landscapes, identified on Figure 22, have been excluded from the development areas.

Similarly, Flood Risk Zones 2 and 3, as defined by the Environment Agency, have been combined and plotted on Figure 23. Hexagons that fall substantially within these flood risk areas have also been excluded. Those hexagons that contain small areas of food risk have been included, as it is assumed that development would be possible in part of the hexagon.

Figure 22: National Landscapes

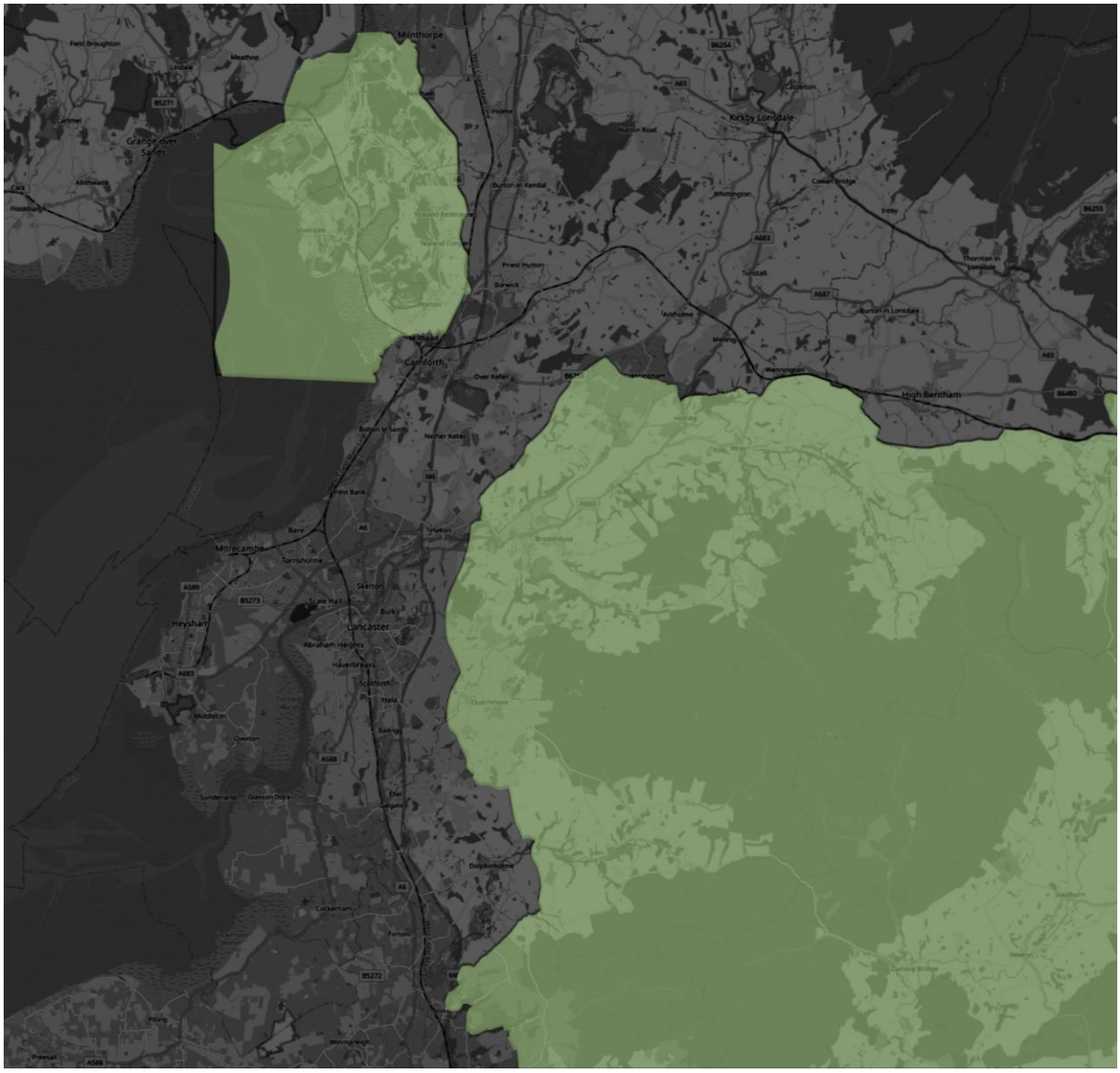
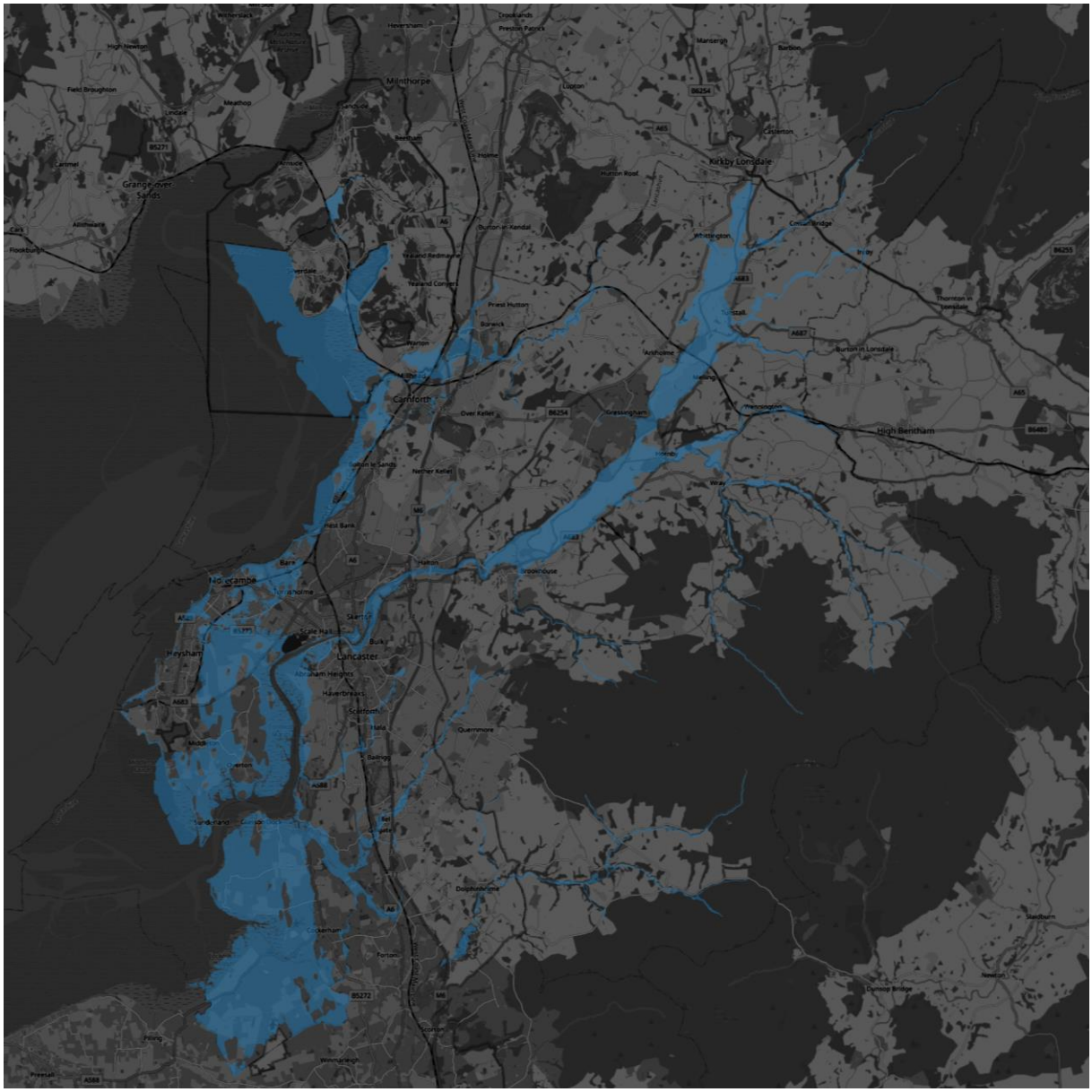


Figure 23: Flood Risk Areas

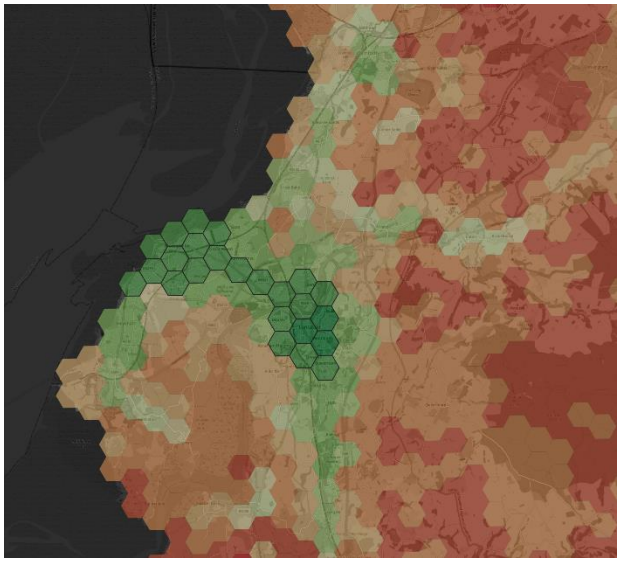


7.3 Development Areas

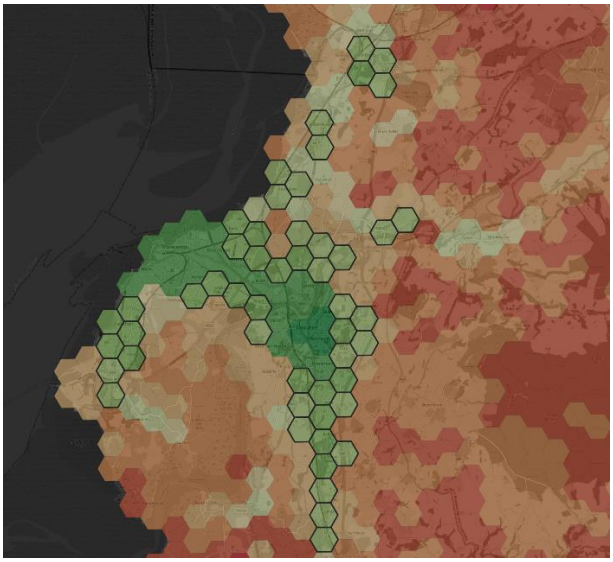
Giving consideration only to sustainable travel, the four development area categories have been developed, with consideration of the levels of intervention required (as referred in Section 7.1). Development hexagons for each of these categories have been identified as shown on Figure 24:

- **Urban Infill/Urban Extension** – Low Intervention
- **Urban Extension** – Medium Intervention
- **Corridor Concentration** – High Intervention
- **New Settlement** – High Intervention

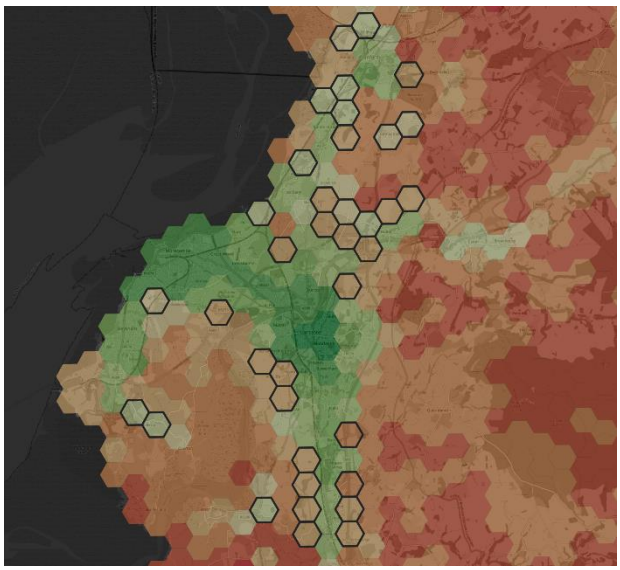
Figure 24: Development Areas



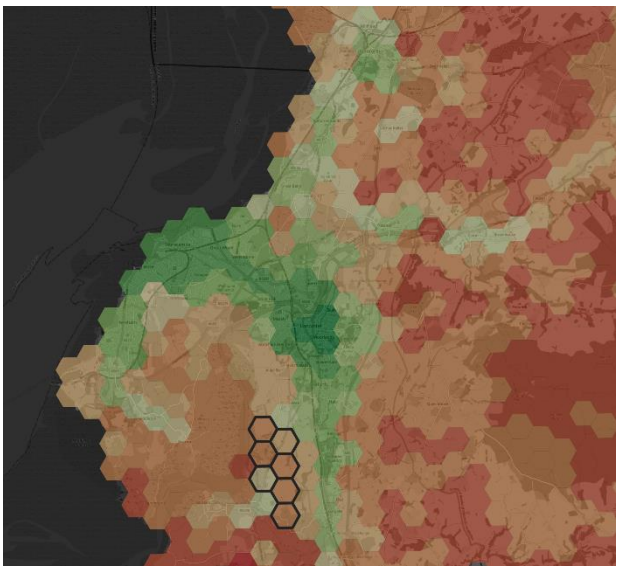
Urban Infill/Urban Extension – Low Intervention



Urban Extension – Medium Intervention



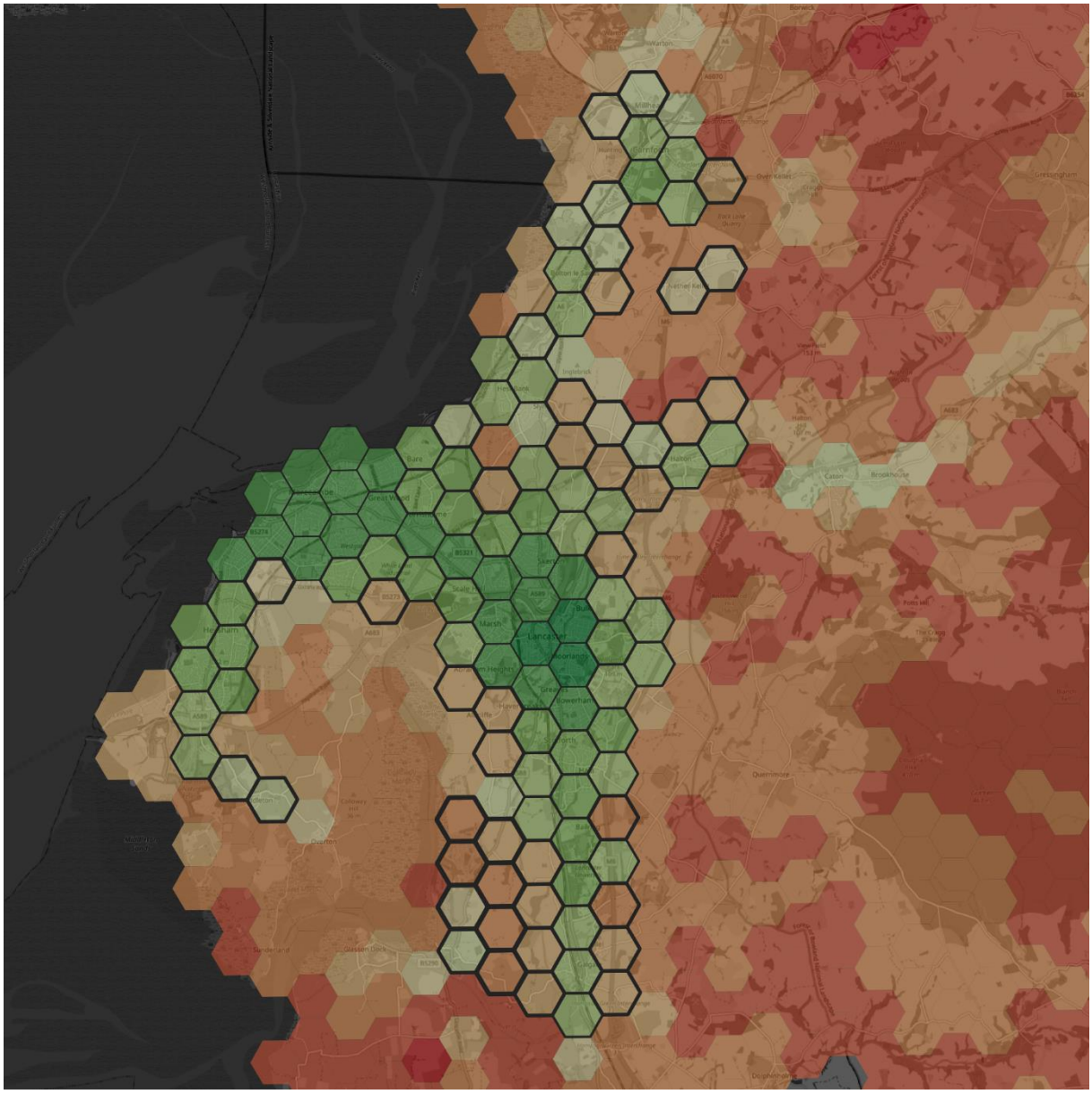
Corridor Concentration – High Intervention



New Settlement – High Intervention

These have been combined to show the development areas under consideration in this study in Figure 25.

Figure 25: Combined Development Areas



8 Intervention Modelling

8.1 Introduction

The accessibility model has been specifically designed to enable testing of interventions in addition to determining the current level of accessibility. The types of interventions that can be tested fall into two broad categories as follows:

- **Local facilities and amenities**. The local facilities and amenities set out above (employment, education, shops and services, healthcare and accessible greenspace) can be added or removed from the model to determine the effect that this has on accessibility.
- **Infrastructure**. The infrastructure within the model can be added to, removed or amended. This can include walking and cycling routes, changes to the quality of these routes, bus and rail services (including routes and service frequencies), bus stops and rail stations.

The model allows different levels of detail to be included, from indicative interventions, as considered in this report, to highly detailed interventions as would be developed at a later stage.

8.2 Intervention Identification

For each of the development area hexagons identified in Figure 25, a Hexagon Summary Sheet has been prepared (available in Appendix D) summarising the overall levels of accessibility to different amenities as well as the high-level interventions recommended to enhance accessibility. Note, hexagon summary sheets have not been prepared for all areas of the district.

These interventions range from the provision of new local facilities or amenities (e.g. a new primary school) to the provision of new infrastructure (e.g. new cycling route to shops and services).

As introduced in Section 5.1, the following sustainable travel interventions are broadly split into two streams. The first stream focuses on interventions that will result in an increase in the active mode share as a percentage of all trips. This can be achieved through a mixture of providing local facility and amenity interventions and providing transport infrastructure interventions. The second stream, covered in Section 9, focuses on increasing the sustainability of the remaining private vehicle trips. This can be achieved by increasing the uptake of EVs through targeted EV charging interventions.

8.3 Intervention Scenario

Based on the interventions recommended on the hexagon summary sheet (5.2 - Strategic Accessibility), an intervention scenario has been developed. This scenario is intended to demonstrate how accessibility would change in the event that development was brought forward in all of these hexagons together with the interventions recommended on the Hexagon Summary Sheets.

It should be noted that this is not a wholly realistic future scenario, as development sites may not be available in all the identified hexagons. Rather, it is intended to create a scenario to demonstrate the extent to which accessibility of hexagons can be improved and to use this as a basis for determining the areas that have the most potential to maximise sustainable travel.

8.4 Local Facility and Amenity Interventions

Figure 26 shows the hexagons where access to new primary schools, secondary schools, shops and services, healthcare and accessible greenspace are recommended on the Hexagon Summary Sheets.

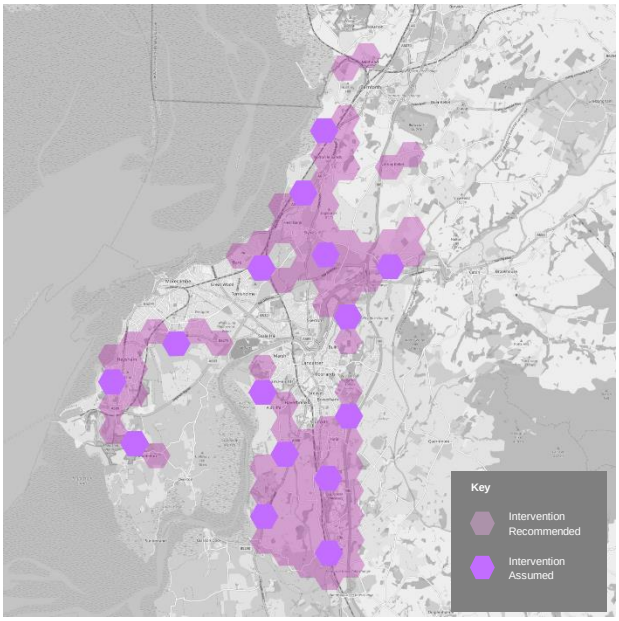
It is not necessary to provide new facilities in every hexagon where such facilities are required, as it would be possible to walk, cycle or use public transport to access new facilities in nearby hexagons. As such, the intervention locations have been chosen to provide the minimum number of facilities necessary to provide accessibility to those hexagons where additional facilities are recommended. These intervention locations assumed in the intervention scenario are also shown on Figure 26.

It should be noted that these are only assumptions for the purpose of the intervention scenario and the location of local facilities will need to be carefully considered alongside the proposed allocations.

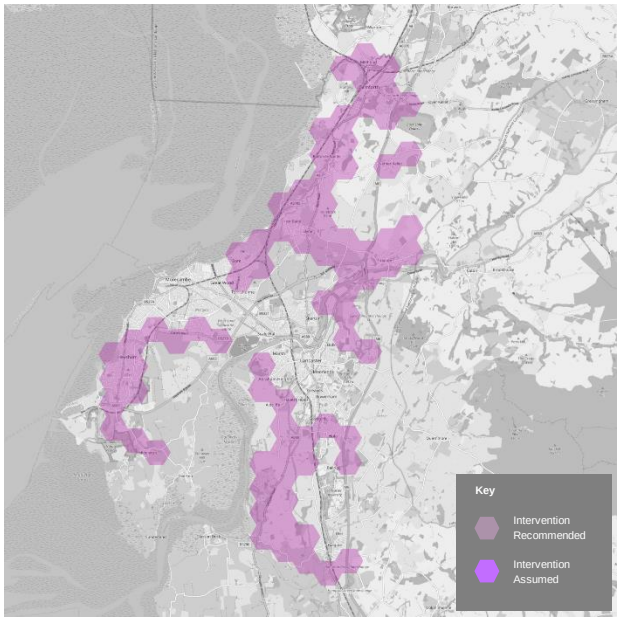
No interventions have been assumed for tertiary education, as it was not considered necessary to provide access to such facilities on foot. Rather, such facilities would be accessed by cycle or public transport.

Figure 26: Recommended Amenity Intervention Areas and Interventions Assumed

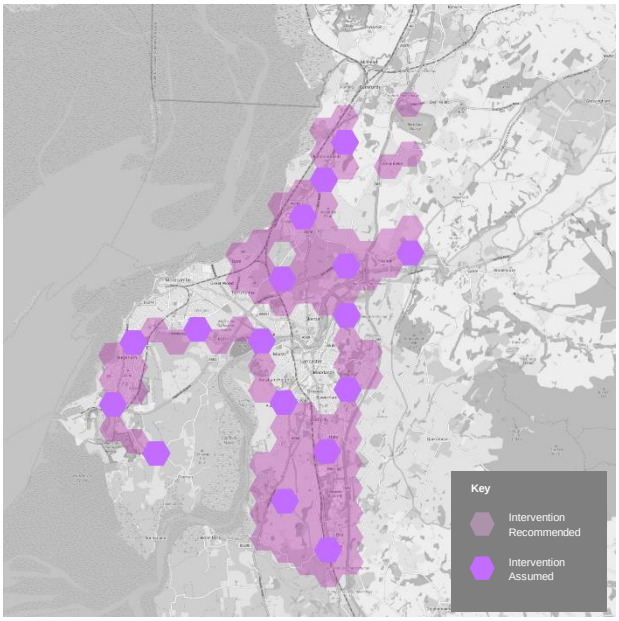
Primary Education



Secondary Education

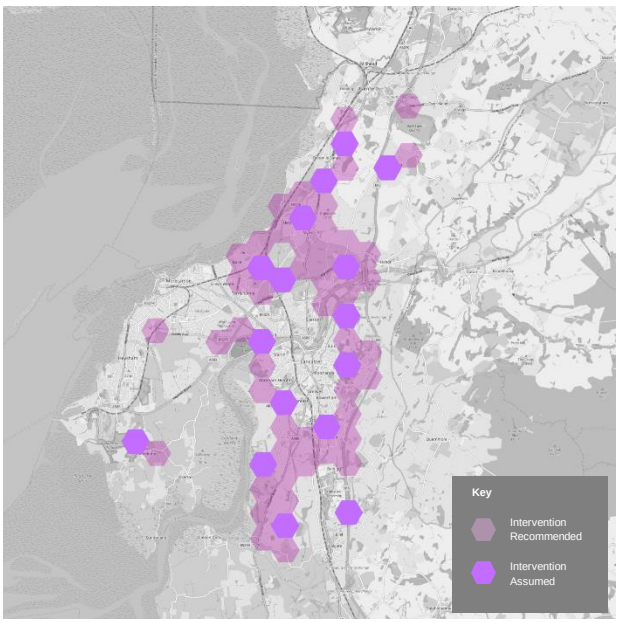


Tertiary Education



Shops and Services

Accessible Greenspace

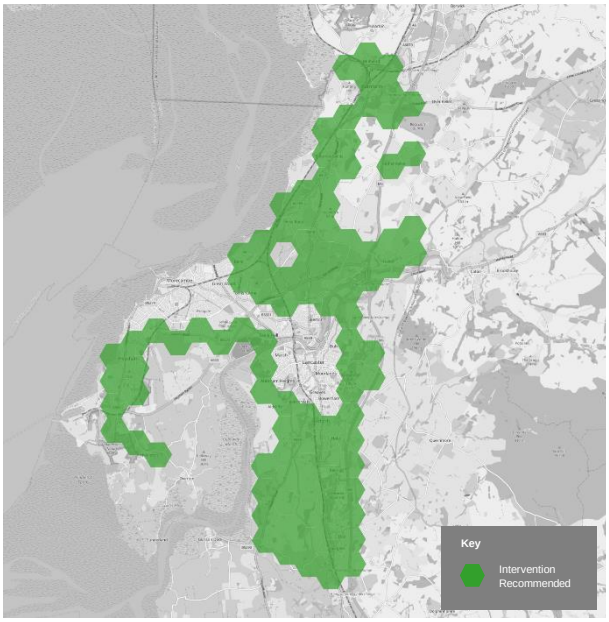


Healthcare

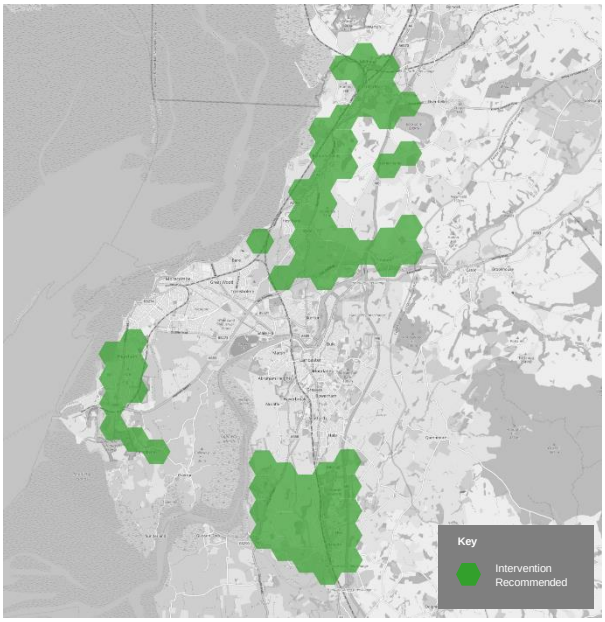
8.5 Infrastructure Interventions

The areas where improved walking, cycling and public transport have been recommended on the Hexagon Summary Sheets are shown spatially in Figure 27. Given the current stage of work, where no specific development sites have been identified and no master planning has been undertaken, it is not possible to specifically define the routes that new walking, cycling and public transport infrastructure would follow.

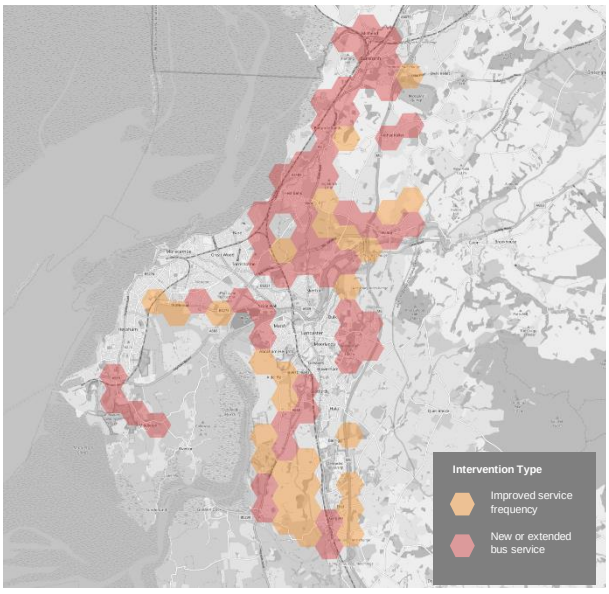
Figure 27: Recommended Infrastructure Intervention Areas



Pedestrian Infrastructure Interventions Recommended



Cycle Infrastructure Interventions Recommended



Public Transport Interventions Recommended

For the purposes of the intervention scenario, it has therefore been assumed that any new walking, cycling and public transport routes would be designed to the highest quality in terms of the route quality metrics used within the model.

This means that for all development area hexagons, any new routes to adjacent hexagons or connections to the existing transport networks:

- Provide dedicated pedestrian and cycle infrastructure
- Are perfectly direct, taking the shortest possible route
- Are safe, with no accidents
- Are comfortable and have no significant change in level
- Are attractive, following dedicated pedestrian and cycle infrastructure

Whilst this level of quality is unlikely to be obtainable in practice, it does reflect the ambition to provide new routes of the highest quality. Once the routes have connected into existing infrastructure in the model, the existing quality of this infrastructure is then taken into account for the remainder of the route assessment.

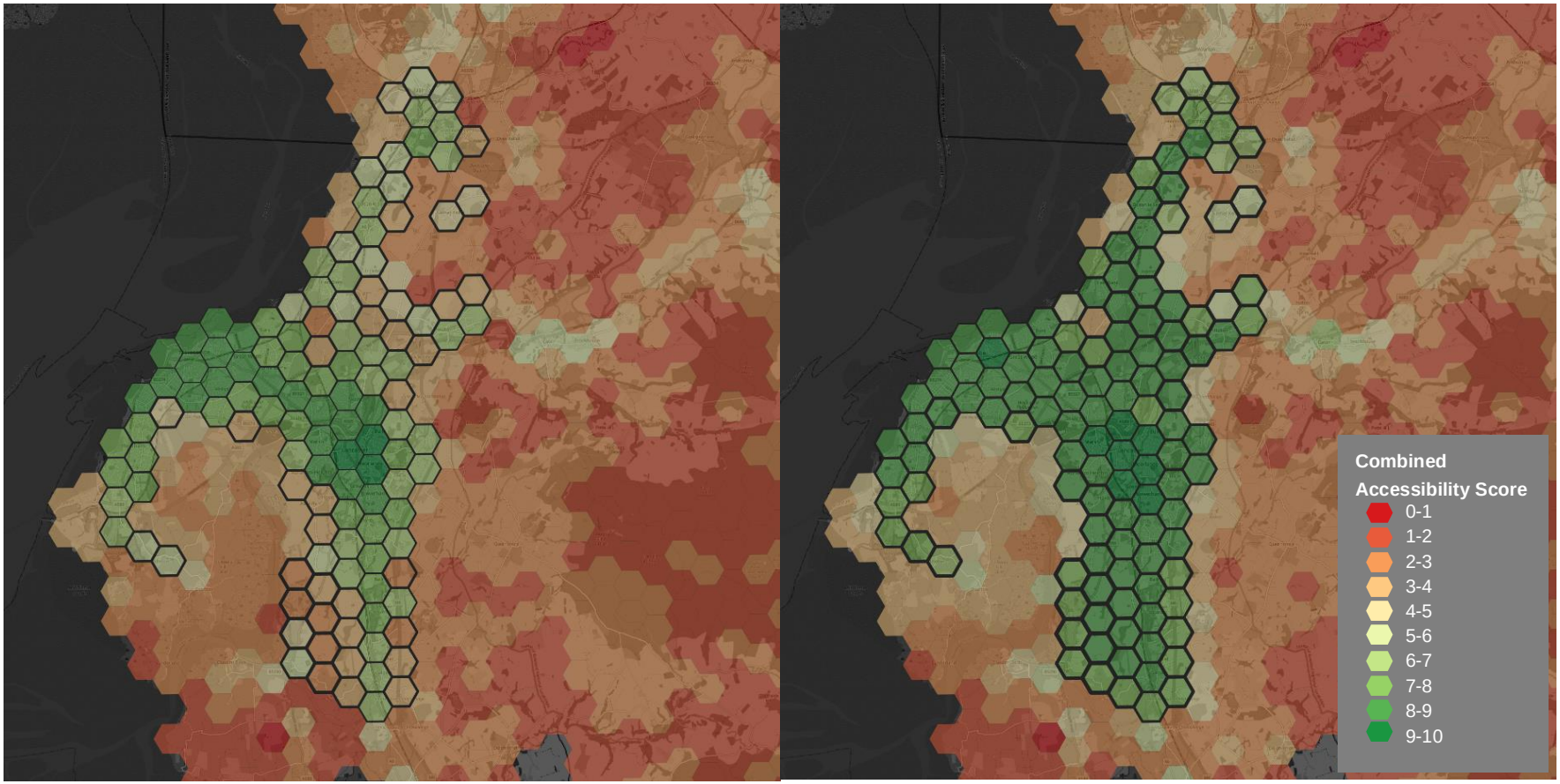
Similarly, for public transport, it has been assumed that each development area hexagon would be connected to the nearest bus station or interchange (i.e. Lancaster Bus Station, Morecambe Bus Station or Carnforth Railway Station) with a service frequency of at least four buses per hour in each direction, which represents a significant increase in frequency for many areas.

Higher frequency services could be provided in line with the aspirations of the local authority, which would lead to higher accessibility scores in the analysis. New bus routes have been coded to follow direct routes between new development hexagons before connecting to the existing highway network to complete their journey.

8.6 Combined Accessibility Score

The combined accessibility score in the vicinity of the development areas is shown in Figure 28 (right image). Comparing this to Figure 7 (reproduced as the left image in Figure 28), it can be seen that there has been a significant increase in accessibility within the intervention areas, with all development areas now having a combined accessibility score of at least 5.

Figure 28: Combined Accessibility Score – Intervention Scenario: Left: Baseline Scenario, Right: Intervention Scenario)



9 E-Mobility Interventions

9.1 Community Need Interventions

Areas recommended for Community Need EV Charging Infrastructure (EVCI) interventions are presented on Figure 29 or AC and Figure 30 for DC. The darker the colour, the greater the requirement for EVCI.

As expected, the areas with the greatest requirement for both AC or DC community need interventions are Lancaster city centre and Morecambe, as a result of the high population density and limited access to off-street parking.

The results of the EV model outline some areas in central Lancaster which will require circa 1000 AC chargers to meet the desired community need demand by 2040. It is impractical to install this number of chargers in an 800m-800m area (1 EV charger per 4.2 square meters).

As such, the solution to meeting the Community Need EV demand will likely be comprised of a mix of low power (AC) EV chargers, either owned by each household or provided as an on-street solution (via charging lamp pOSTTS, cable trays, charging bollards etc.), and EV charging hubs, containing a smaller number of fast-rapid DC chargers.

The prioritisation, incentivisation through market forces and proactive development of DC charging hubs, coupled with a range of potential AC charging solutions, will be essential for meeting the community need EV demand. This is particularly important when it comes to potential future housing developments within these areas.

Whilst Part S of the Building Regulations provides a foundation for the level of charging provision that must be provided by a new development, this requirement is naturally focused on developments with assigned parking spaces. Where developments do not have an assigned parking space, there is no requirement to provide off-site charging provision. Should future residential developments look to focus on increasing the population density within city centres, the impact on community need EV charging infrastructure should be considered.

Figure 29: Required Community need AC EVCI interventions

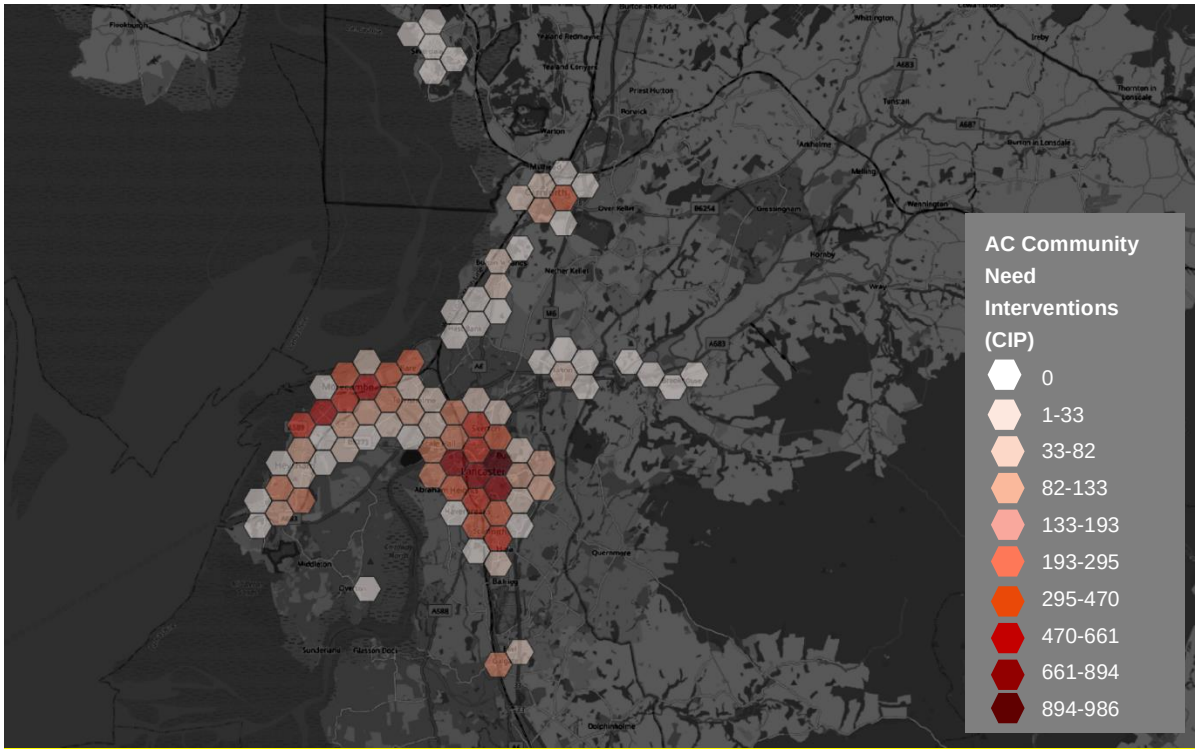
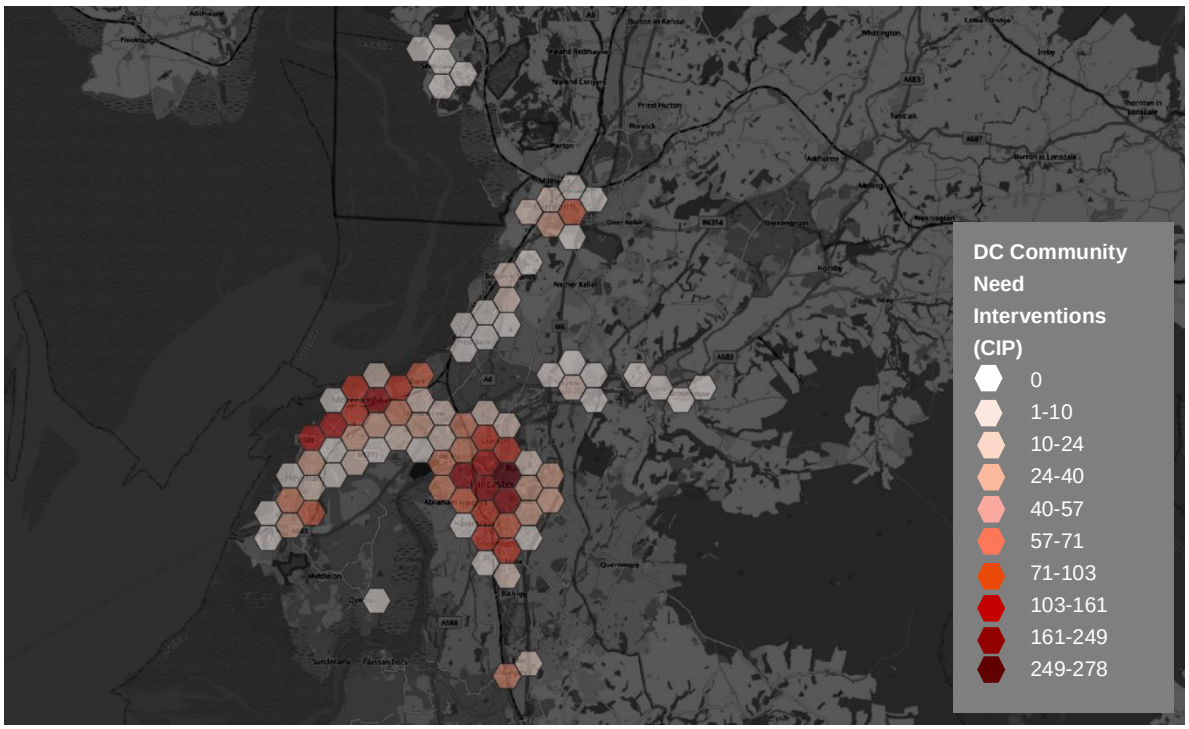


Figure 30: Required Community need DC EVCI interventions



9.2 Impact of Grid Capacity on Community Need Interventions

Figure 31 and Figure 32 visualises the capacity on the secondary electrical network against the required community need AC and DC EV demand respectively.

Areas in green are those where the capacity exceeds the anticipated EV demand, areas in yellow are where it meets the capacity, or where these are areas with no perceived community EV demand and capacity, and areas in red are where the capacity is insufficient for the anticipated EV demand.

The results highlight two key conclusions. Firstly, whilst there is currently adequate electrical capacity on the secondary and primary networks in central areas of Lancaster and Morecambe, this still may be insufficient to meet the anticipated EV demand.

Whilst ongoing reinforcement works will continue to increase the peak capacity, the increasing push towards decarbonisation and electrification across the built environment could compete with this additional capacity and, thereby, could constrain the rollout of EV chargers in central Lancaster and Morecambe.

Secondly, whilst the solution in urban areas will likely be a mix of AC and DC charging interventions, grid capacity limitations could restrict the ability to rollout DC charging hubs for residential use. This could be further restricted by competition with the potential market interventions visualised in Figure 35.

Figure 31: Assessment of existing electrical network capacity vs community need intervention requirements (AC)

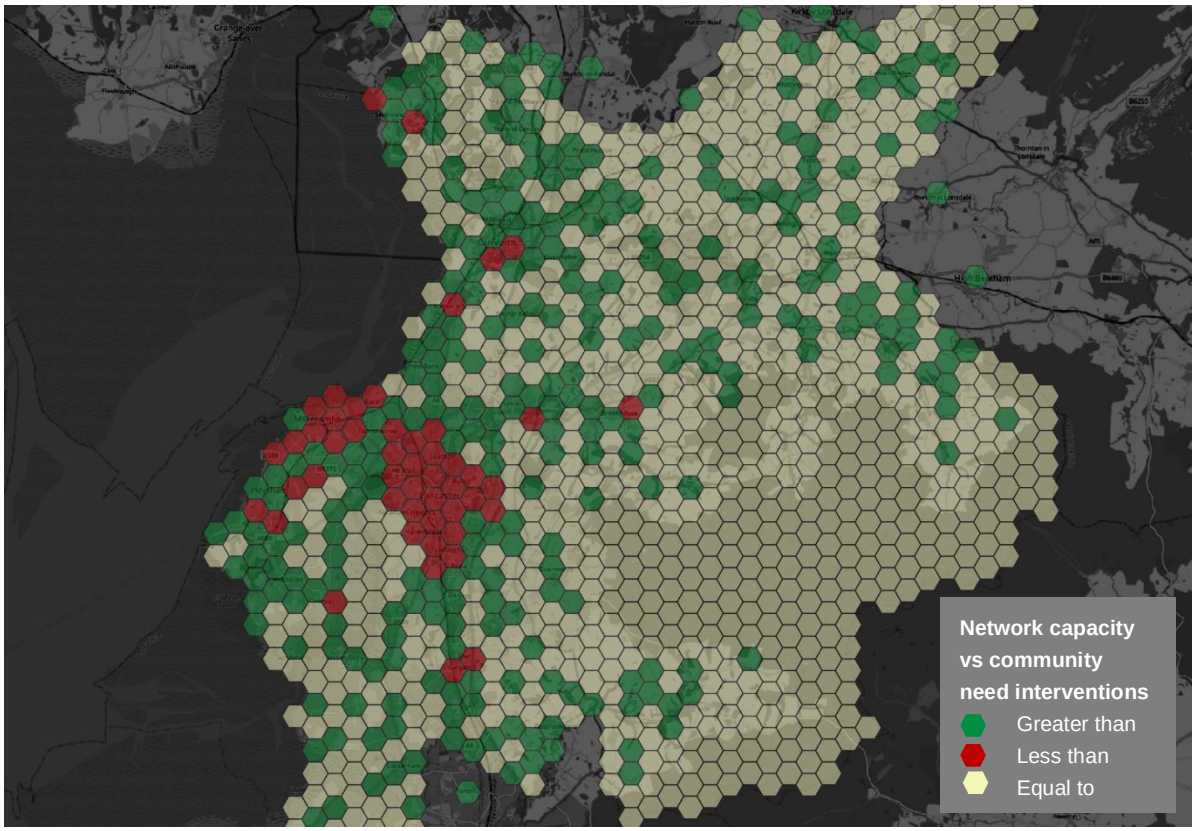
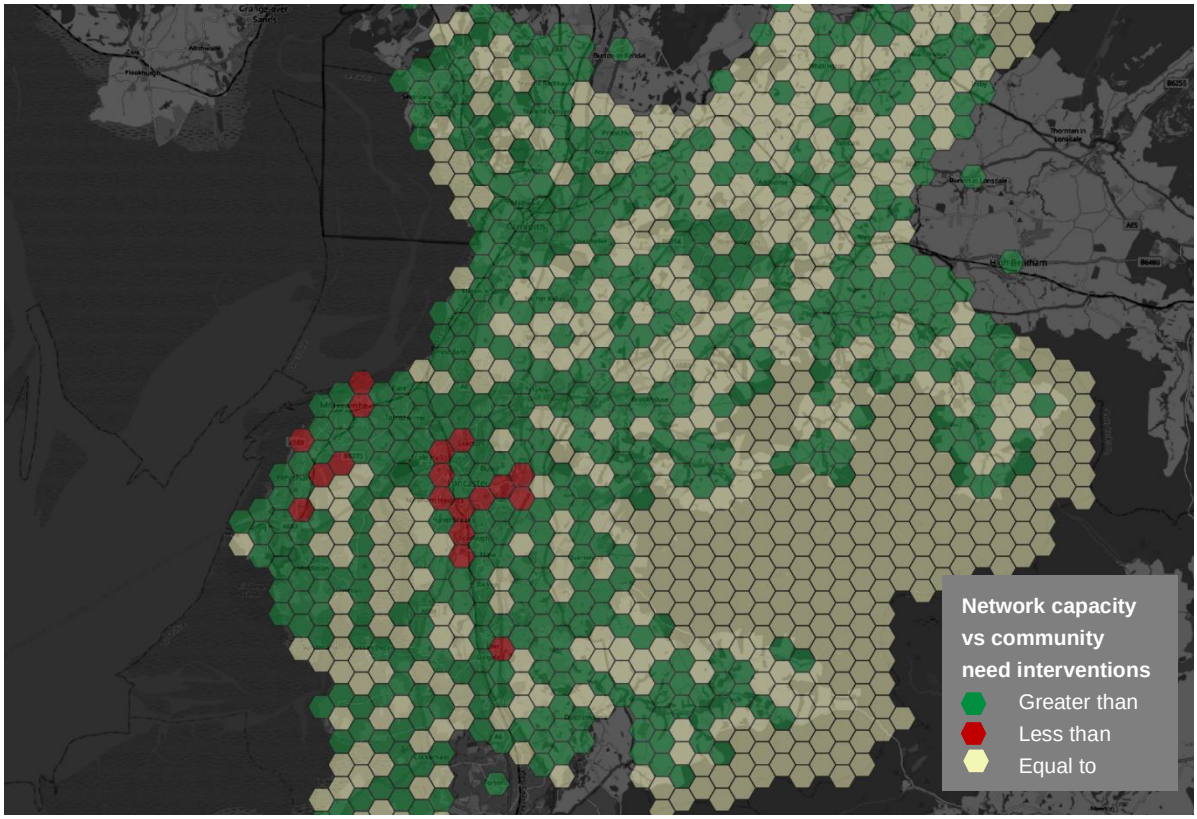


Figure 32: Assessment of existing electrical network capacity vs community need intervention requirements (DC)



9.3 Environmental Impact of Community Need Interventions

This section quantifies the potential environmental benefits of the proposed community need interventions through the indirect reduction in CO_2 and NO_x emissions.

The environmental impact model uses the following modelling inputs to determine the number of EVs that would be selected over Internal Combustion Engine (ICE) vehicles as a result of the community need interventions. These are:

- **Annual EV uptake between 2025-2040:** The Environmental Impact model uses the average of the four aforementioned EV uptake scenarios
- **Community need households:** The number of community need households in each hexagon as per the Community Need Model
- **Private vehicle ownership:** This is determined to be 1.2 vehicles/households as per the Community Need Model
- **Desired accessibility to an AC EV Charger:** This is set to 80% as per the Community Need Model

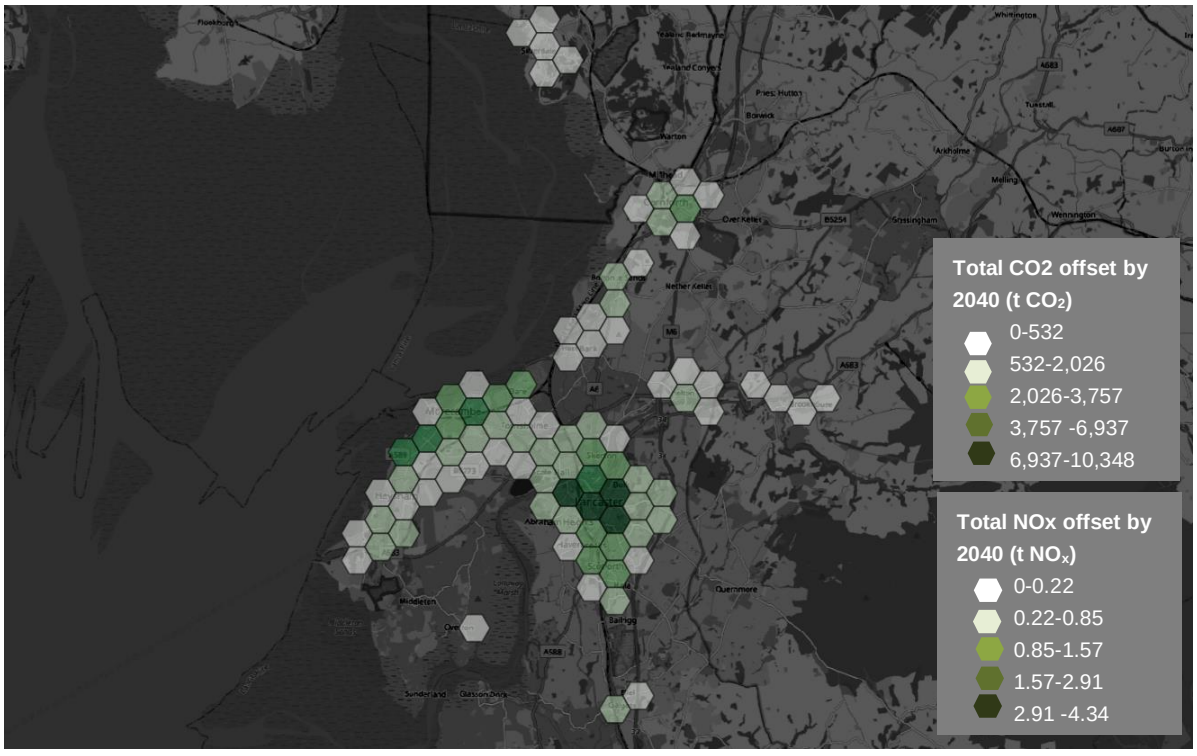
This model assumes that without the proposed community need interventions, a resident in a community need area would not switch to an EV.

By taking an average annual mileage of 7,000 miles per resident (reflecting the latest (2023) data on annual mileage of all cars according to the Governments Vehicle mileage and occupancy Statistical data set (NTS0901)[4]) and an average CO_2 emission rate per mile (167 g/mile, which is a pessimistic estimate according to the Governments New car carbon dioxide emissions transparency data[5]),

Figure 33 visualises the potential CO_2 and NO_x emissions that could be avoided by the proposed community need interventions throughout the district.

Over a 15-year period, the switch to electric vehicles in the centre of Lancaster could offset upwards of 10,000 tonnes of CO_2 and 4 tonnes of NO_x. This would have a direct impact on the health of the local residents with improved air quality and would significantly contribute to the Council's Net Zero commitments.

Figure 33: Total CO_2 and NO_x offset potential through Community Need interventions by 2040



[4] *Annual mileage of cars by ownership, fuel type and trip purpose: England, 2002 onwards*

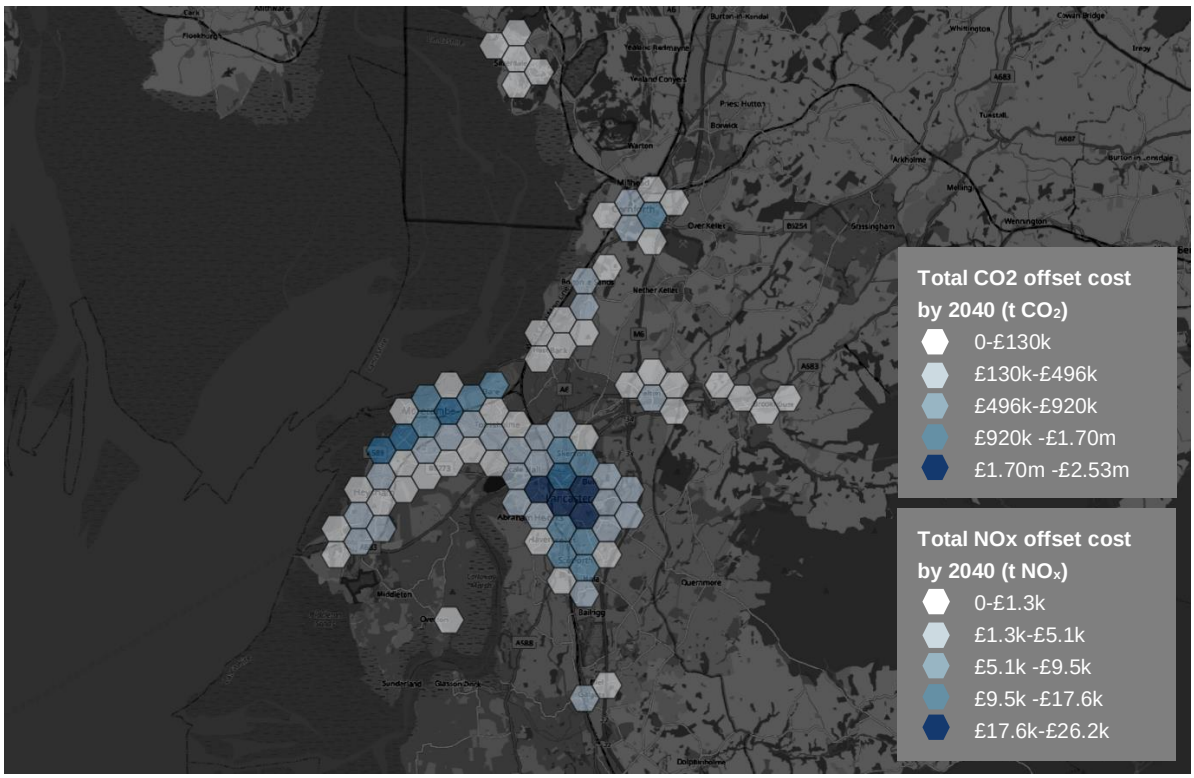
[5] *https://www.gov.uk/government/publications/new-car-carbon-dioxide-emissions*

To quantify the financial impact of this reduction in CO_2 and NO_x emissions, a Transport Analysis Guidance (TAG) assessment has been completed for each hex. The TAG assessment allows for the financial quantification of non-financial benefits by applying a damage cost to specific factors, such as CO_2 or NO_x emissions. These cOSTTS are not direct cOSTTS that would be paid for by the council but instead represent the indirect cOSTTS associated with their emission, such as poorer local air quality and failure to meet Net Zero targets.

By applying a damage cost of £245/t CO_2 [6]and £6,048/t NO_x[7],

Figure 34 visualises the value of the reduction in CO_2 and NO_x emissions over the 15-year period. Due to the high damage cost associated with CO_2, which relate to meeting specific Net Zero Targets outlined in the Zero Emissions Vehicle (ZEV) mandate, the interventions would result in an indirect cost reduction of over £2.5m for CO_2 and over £26k for NO_x.

Figure 34: Value of CO_2 and NO_x offset potential through Community Need interventions by 2040



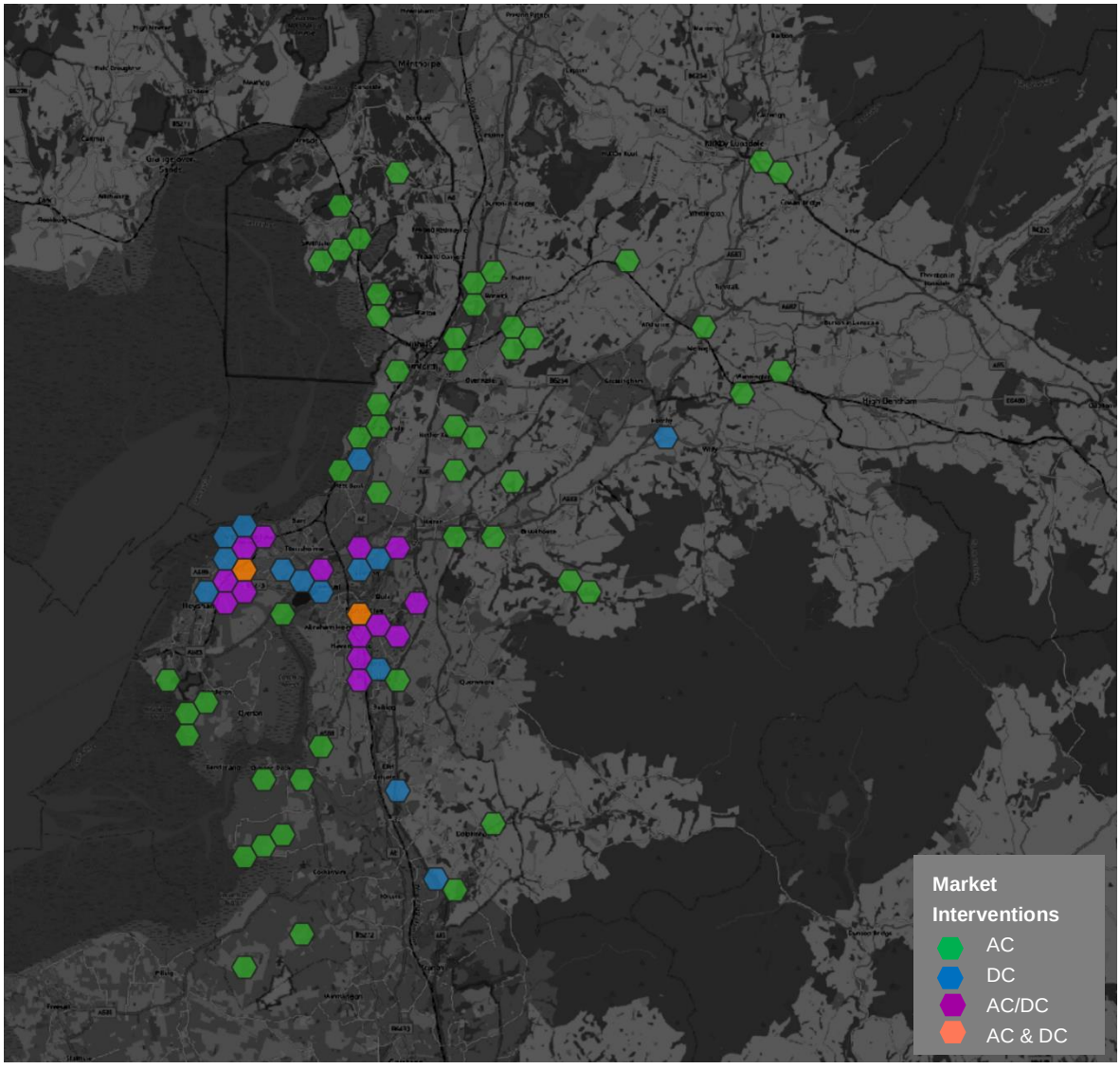
[6] *https://assets.publishing.service.gov.uk/media/6554be55544aea000dfb2d59/zev-mandate-consultation-final-cost-benefit-analysis.pdf*

[7] *https://www.gov.uk/government/publications/tag-data-book*

9.4 Commercial/Visitor (Market Interventions)

Figure 35 shows the distribution of potential market interventions throughout the district. Hexagons containing commercial/visitor destinations with a score of 4 or 5 for overall AC attractiveness have been coloured green, DC attractiveness coloured blue, and equal AC and DC attractiveness coloured purple. Hexagons with a mixture of attractiveness scores have been coloured orange.

Figure 35: Potential EVCI market interventions in the Lancaster District: AC (Green), DC (Blue), mixed (purple), multiple (orange)



It is worth highlighting that the overall attractiveness is a function of the type of EV charging that would be preferred at the location, irrespective of whether there is parking available.

As expected, there is a centralisation of higher power DC and mixed charging infrastructure, expected in commercial and short stay destination sites in Lancaster City Centre and Morecambe.

Outside of the city centre, these are largely longer stay destination spots, such as campsites, where AC charging intervention is anticipated.

When comparing this to the existing accessibility to publicly available EV charging infrastructure presented in Figure 9, the centralisation of DC and mixed ECVI interventions in areas that score poorly for existing accessibility will potentially enable local residents to use market chargers for top-up charging.

This also highlights the potential for council intervention, by providing charging hubs or incentivising market intervention in community need areas, through public-private partnerships. The council could also look to subsidise charging by providing differential charging tariffs for nearby community need residents.

9.5 E-Mobility Interventions Summary

The community need model outlines the requirement for significant EV charging infrastructure interventions to meet the demands of residents without access to off-street parking (community need residents). Due to the magnitude of EV chargers required, the interventions will need to be comprised of a mixture of low power (AC) EV chargers, either owned by each household or provided as an on-street solution (via charging lamp pOSTTS, cable trays, charging bollards etc.), and EV charging hubs, containing a smaller number of fast-rapid DC chargers.

Whilst this solution would meet the requirements from an infrastructure perspective, the rollout of EV charging infrastructure, especially DC charging infrastructure, may be limited by grid constraints. This will be particularly the case in central Lancaster, where the current secondary headroom would be insufficient to meet the 2040 EV community need demand.

To understand the environmental impact of the proposed community need interventions, assuming a resident in a community need area wouldn't select an EV without the interventions, The results, presented in Figure 33, indicate that over a 15-year period, the uptake in EVs as a result of the interventions could offset upwards of 10 tonnes of CO_2 and 4 tonnes of NO_x. This represents significant environmental and air quality benefits. To financially quantity these benefits, a TAG style assessment was completed for each hexagon. The results, presented in Figure 34, indicate an indirect cost reduction of over £2.5m for CO_2, largely as a result of meeting specific Net Zero Targets outlined in the ZEV mandate, and over £26k for NO_x as a result of the health impact of improved air quality.

When assessing the probable interventions required to meet the commercial and visitor destination demands, the market interventions model demonstrates a consolidation of faster DC charging infrastructure required in the city centres of Lancaster and Morecambe, with slower AC charging infrastructure required elsewhere.

This provides an opportunity for prioritisation, incentivisation through market forces and proactive development of DC charging hubs, coupled with a range of potential AC charging solutions, that can both meet the demands of the community need areas and the destination sites.

10 Potential Growth Locations

10.1 Introduction

Graph 1 to Graph 4, presented previously, shows that lower car driver mode shares and higher sustainable mode shares only occur in areas with higher accessibility scores, with the most sustainable locations having a combined accessibility score greater than or equal to 8.

An accessibility score of 8 therefore provides a reasonable threshold for identifying hexagons as potential growth locations. Figure 36, below, shows areas with accessibility scores greater than or equal to 8 in the intervention scenario. These areas are considered to be potential growth areas where it may be possible to provide development with a good level of accessibility and reduce the reliance on the private car.

The intervention scenario provides significant levels of improvement in terms of access to amenities as well as new walking, cycling and public transport connections. Even in the intervention scenario, the very highest scores (>9) only occur in and around Lancaster city centre and in the centre of Morecambe.

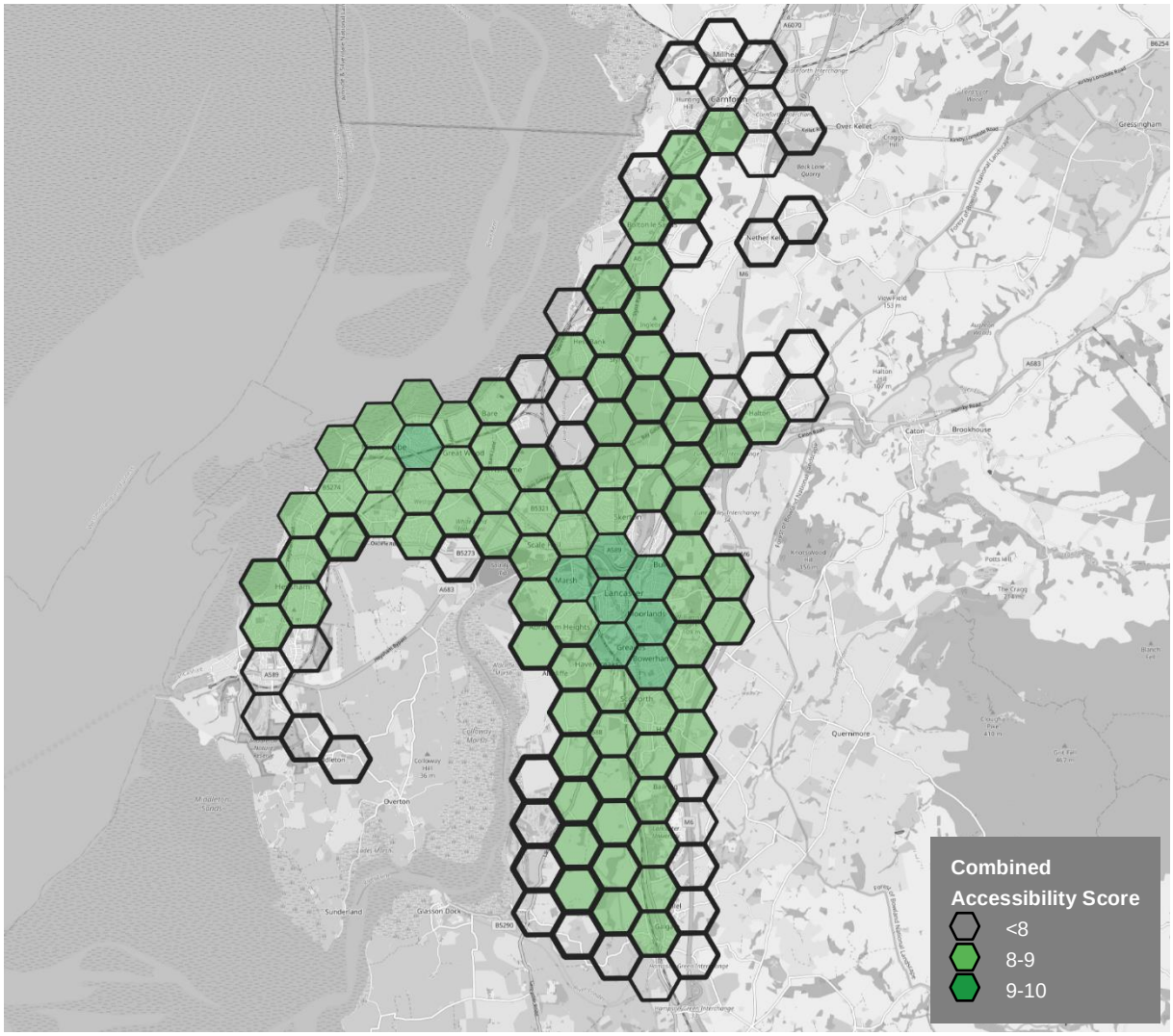
Despite this, a number of development hexagons do not meet the threshold accessibility criteria of having a combined accessibility score greater than or equal to 8, as shown by the black outlines in Figure 36. These hexagons tend to be beyond the edge of the existing urban area and therefore struggle to benefit from existing levels of accessibility.

Of particular note is Carnforth centre and north of Carnforth. Whilst south of Carnforth is included, the remainder of Carnforth does not meet the threshold combined accessibility score of 8 or more. This is because these parts of Carnforth have a lower level of accessibility than the rest of the A6 North corridor in the intervention scenario, with combined accessibility scores of around 7. Whilst Carnforth has a rail station, this only provides relatively infrequent local services. Moreover, the railway, combined with the canal, result in a relatively high degree of severance, which limits the sustainable mode catchments to local facilities.

This analysis shows that many of these areas are not performing poorly and offer reasonable potential for sustainable growth locations, but they do not meet the ambitious threshold of 8 or more that has been adopted in this study. However, with more significant intervention than those assumed in the intervention scenario, these hexagons could achieve levels of accessibility that would result in lower car driver mode share.

The holistic nature of a sustainable transport strategy should consider the impact of both the accessibility model interventions and the EV community need interventions. Whilst focusing on growth in one area, additional sustainable transport links could be favourable from the perspective of improving active mode share, it may, in the case of city centre areas, exacerbate issues of poor accessibility to residential EV charging, should no additional charging interventions be provided. As such, this section also highlights the impact of the proposed growth locations on existing community need EV demand.

Figure 36: Combined Accessibility Score ≥ 8



Having regard to Figure 21 and Figure 36 and, potential growth areas could include:

- **Core of Lancaster and Morecambe urban area** (urban infill and urban extension)
- **Edge of the existing Lancaster and Morecambe urban area** (urban infill and urban extension)
- **A6 South Corridor** to the south of Lancaster, towards Galgate (corridor concentration)
- **A6 North Corridor** between Lancaster and Carnforth, including the settlements of Slyne, Hest Bank and Bolton le Sands (corridor concentration)
- **A589 Caton Road and Halton**. Corridor between Lancaster and M6 Junction 34 and also incorporating Halton (corridor concentration)
- **North of Lancaster** (urban extension / new settlement)
- **A588 Ashton Road Corridor** (urban extension / new settlement)

These potential growth areas are discussed in further detail in Sections 10.4 to 10.11, including the identification of interventions and the level of intervention likely to be required.

10.2 Cost of Interventions

The cost of the interventions that would be required for each potential growth area is not able to be determined at this stage. This study only seeks to identify the broad locations where development could be located to achieve sustainable outcomes and also to identify, at a high level, the interventions that would be required to deliver this development.

The precise interventions that would be required can only be determined once site allocations have been identified and an appropriate masterplanning exercise has been undertaken. This will identify specific interventions which can then be costed.

However, the growth areas have been prioritised (between 1 and 6, with 1 representing the highest priority and 6 the least priority). This has been based on the average number of interventions per hexagon recommended through the analysis, with potential growth locations requiring less interventions being assigned a higher priority.

This prioritisation can also be used as a proxy for the likely cost and hence viability of bringing forward sustainable development in each potential growth location, with sites within Priority Area 1 likely to required the least costly interventions and those in Priority Area 5 being subject to the highest cost interventions.

10.3 Carbon Emissions

The purpose of this sustainable travel strategy is to determine the locations where a level of accessibility is provided that will minimise the car driver mode share (promoting EV uptake) and maximise the use of sustainable modes of transport. In doing so, and in conjunction with the uptake of EVs, the transport related carbon emissions associated with development in these areas will be minimised.

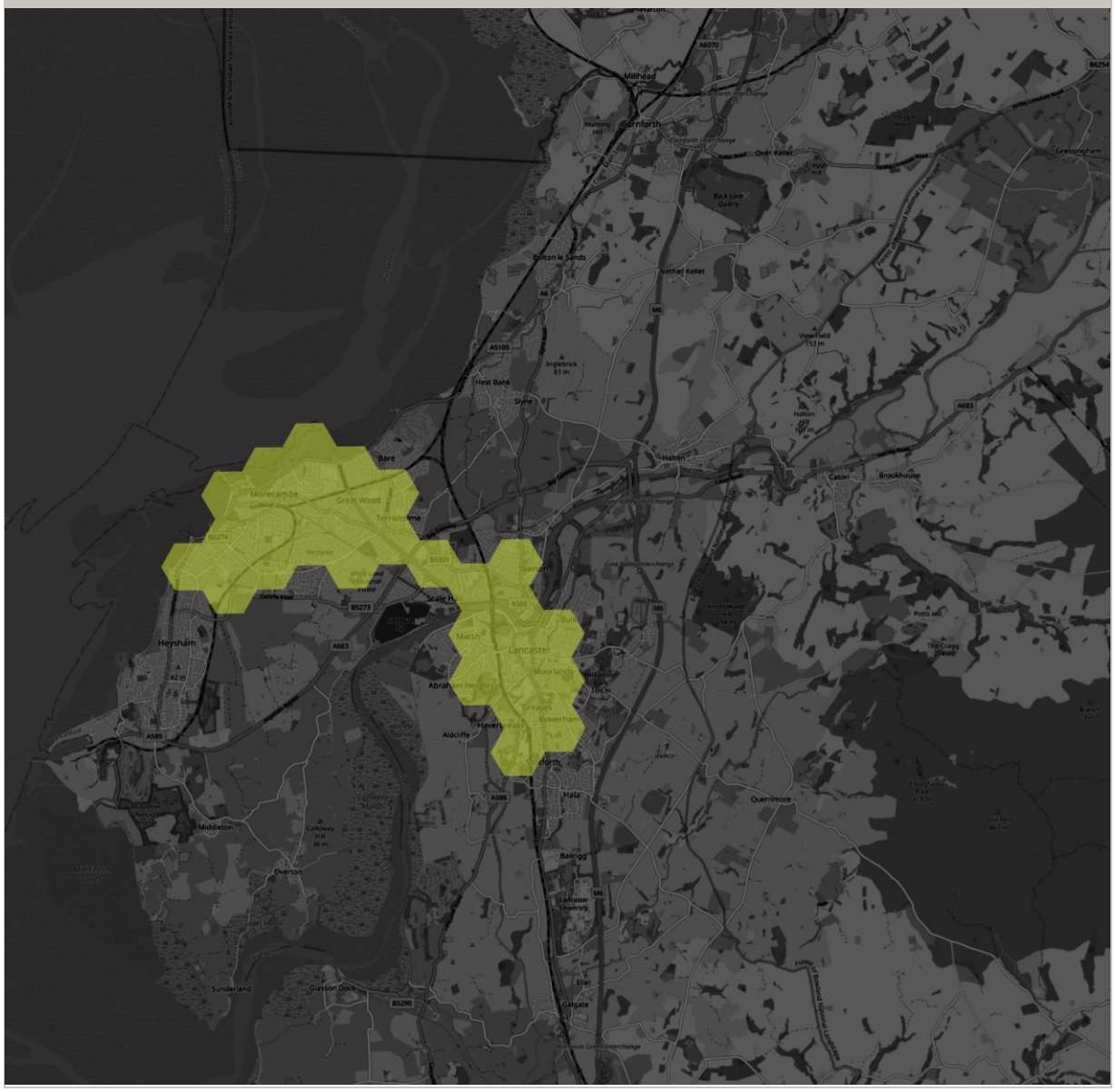
At this stage, the number of trips being generated by each potential growth area is unknown and as such, it is not possible to calculate the carbon emissions associated with each growth area. However, all potential growth areas have the potential to achieve a combined accessibility score of at least 8, implying that all areas considered are likely to generate similar levels of operational carbon emissions, with those areas with a higher score on average generating less carbon.

It should also be noted that the higher intervention areas are likely to have higher levels of embodied carbon due to the need to construct a higher number of interventions. The prioritisation discussed above can therefore be used as an indicator of relative carbon emissions, with development in Priority 1 areas having the lowest carbon emissions and those in Priority 6 areas having the highest carbon emissions.

10.4 Core of Lancaster / Morecambe Urban Area

Table 1: Existing Lancaster & Morecambe Urban Area | Urban Infill | Low Intervention

Growth Location:	Existing Lancaster & Morecambe Urban Area
Development Type:	Urban Infill
Priority:	1
Intervention Level:	Low
Intervention Required:	Connections to existing transport networks, as identified by Local Accessibility Audits. Provision or contributions towards parts of the LCWIP and BSIP proposals.



The baseline analysis identified hexagons within the existing urban area with a combined accessibility score of 8 or more as being areas where development could be brought forwards with a low level of intervention. This development would comprise urban infill within the existing urban fabric and this area is considered as highest priority area for bringing forward development.

Figure 37 identifies these hexagons together with the combined accessibility score in the intervention scenario. When these are compared to the same hexagons in baseline scenario (also shown in Figure 38), it can be seen that the overall accessibility of many of these hexagons has increased in the intervention scenario, despite no specific interventions being coded in the model for these hexagons. This is because some of these hexagons benefit from interventions provided in the wider area, such as provision of additional local facilities and amenities or additional public transport services. This demonstrates how sustainable development outside of the existing urban area can benefit development within it.

Increasing the density of development in the existing urban area can also help to support additional local amenities and public transport services in the wider area. For example, if a new bus service were provided from an urban extension and connecting into an existing public transport corridor, provide additional infill development along this corridor would help to sustain that new bus service by providing additional patronage. Similarly, a new service could be provided from an urban extension and then routed through an area currently underserved by public transport, providing additional patronage to help sustain the service on a commercial basis. This shows how infill development within the existing urban area and urban extension, corridor concentration and new settlements could work to together to provide more sustainable outcomes than if the developments were considered in isolation.

The figure in Table 1, identifies the Core of Lancaster / Morecambe Urban Area potential growth location. In this area, urban infill development could capitalise on already high level of accessibility and therefore be brought forward with a relatively low level of sustainable transport intervention. Interventions would generally be associated with providing high quality connections to existing sustainable transport networks. It may also be necessary to provide or contribute towards upgrades to those networks, including delivering parts of the Local Walking and Cycling Infrastructure Plan (LCWIP) and the Bus Service Improvement Plan (BSIP). The interventions required would be identified by Local Accessibility Audits.

It is acknowledged that there are existing congestion issues within the urban area, particularly within the centre of Lancaster. Whilst development within the existing urban area could add to this congestion, it is suggested that the focus of any new development in this area should be on connecting to and enhancing the existing walking, wheeling and cycling networks and local facilities to enable both existing and new development in these highly accessible areas to maximise trips by sustainable modes. Providing highway capacity improvements in this area is only likely to attract more trips by the private car and counter the vision of the sustainable transport strategy.

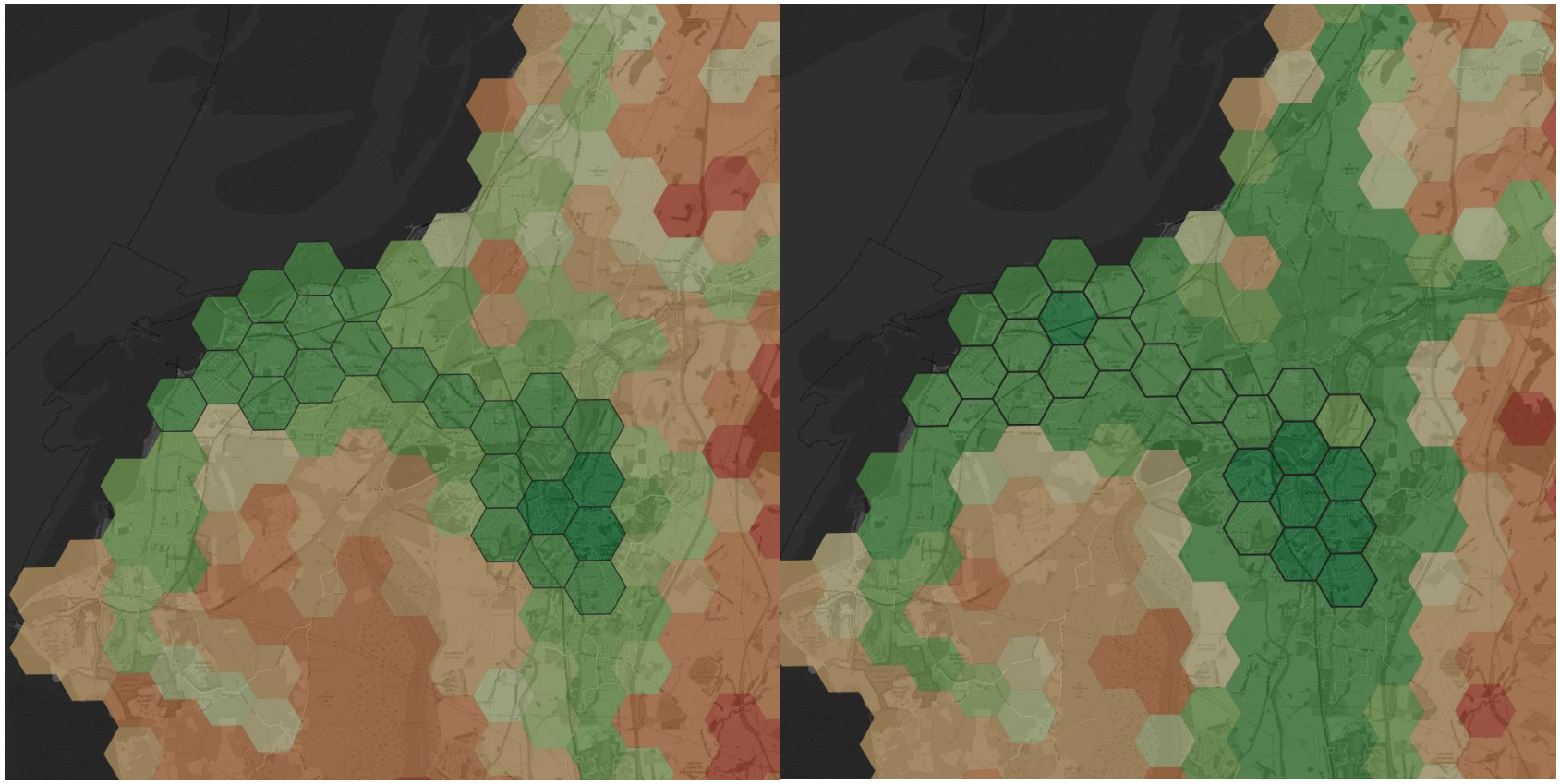
Whilst the above analysis has concentrated on locations for residential development, this area of high accessibility would also provide an ideal opportunity for new commercial uses that could capitalise on and further improve the existing sustainable transport networks. For example, the Eden Project Morecambe is proposed within this potential growth area providing a unique opportunity to provide

new employment opportunities that are highly accessible by sustainable transport networks as well as potentially contributing towards improvements to those networks, which could bring wider benefits.

It is also proposed to relocate the Royal Lancaster Infirmary to a site at East Bailrigg (discussed further in section 10.6). This would free up a highly accessible site to the south of Lancaster city centre, which would provide a unique opportunity to provide high density mixed-use development that could genuinely minimise the need for trips by private car. Connecting this site effectively into, and improving, existing sustainable transports networks through a comprehensive local accessibility audit will be key to ensuring a low car development.

In these highly urban areas, there is a significant community need and market driven destination EVCI demand. Whilst some of this would be met by market interventions to primarily serve the destination demand, it is likely that, due to the limited availability of land, further development proposals within these areas would only exacerbate the community need demand, with more increasing numbers of residents without access to off-street parking. Development proposals in these areas should, therefore, be required to help address this community need through the provision and funding of both AC and DC charging infrastructure.

Figure 37: Urban Infill and Urban Extension with the Existing Urban Area (Left: Baseline Scenario, Right: Intervention Scenario)



10.5 Edge of Existing Lancaster / Morecambe Urban Area

Table 2: Edge of Existing Lancaster and Morecambe Urban Area | Urban Infill / Extension | Medium Intervention

Growth Location:	Edge of Existing Lancaster & Morecambe Urban Area
Development Type:	Urban Infill/Urban Extension
Priority:	2
Intervention Level:	Medium
Intervention Required:	Connections to existing transport networks, as identified by Local Accessibility Audits. Provision or contributions towards parts of the LCWIP and BSIP proposals. Provision of new local facilities including schools, shops and healthcare, as identified by Local Accessibility Audits.

Towards the edges of the existing Lancaster /Morecambe urban area, a number of hexagons are identified through the intervention scenario of having a combined accessibility score of greater than 8 and are identified on Figure 21 as requiring a medium level of intervention. These areas are shown on the figure in Table 2.

These areas typically have lower levels of accessibility in the baseline scenario than neighbouring Priority 1 areas, but their accessibility can be improved through a medium level of intervention. The analysis suggests that there are a number of distinct areas towards the edge of the urban area that are potential growth locations as follows:

- **Heysham:** The area of Heysham is identified as having potential as a sustainable growth location, drawing on existing local facilities and reasonable frequency bus services. This area is already significantly built-up and therefore growth in this area is likely to comprise limited infill development.
- **White Lund Road:** A single hexagon is identified broadly straggling White Lund Road, with existing residential development to the east and industrial estate development to the west, with potential for limited infill development.
- **Bare:** A single hexagon within Bare, also incorporating Happy Mount Park. This area is already built-up with potential for limited infill development.
- **North of Torrisholme Road:** Three hexagons to the north of Torrisholme Road, providing potential for urban infill and urban extension development types. This area is bisected by the A683 Bay Gateway and the West Coast Mainline, which may provide some challenges around severance, although an existing cycleway runs alongside the A683 Bay Gateway. Sustainable development could be brought forward in this area, supported by connections to existing local facilities, the provision of new facilities and extensions to, and enhancements of, existing bus services.
- **Salt Ayre:** Two hexagons comprising parts of Scale Hall, the White Lund Industrial Estate and the area to the south to the River Lune, including parts of the Salt Ayre tip, providing potential opportunities for urban infill and extension.
- **West of Marsh:** Two hexagons comprising parts of the existing urban area and providing opportunity for sustainable urban extension, with connections to existing local facilities and well as the provision of new facilities and extensions and enhancements of existing bus services.
- **East of Lancaster:** A large area to the eest of Lancaster, bordered by the M6 to the east. This could comprise urban infill development within the existing urban fabric and urban extension, with connections to existing local facilities and well as the provision of new facilities and extensions of, and enhancements to, existing bus services.

Similar to the Core of the urban area, transport mitigation should focus on connecting to and enhancing the existing walking, wheeling and cycling networks and local facilities. Any highway mitigation should be carefully targeted to avoid the provision of additional highway capacity that would undermine the objectives of the sustainable travel strategy.

The EV modelling shows a moderate anticipated existing community need EV demand within these areas. This should be taken into account when considering any future residential developments, especially if assigned parking spaces are not to be provided.

10.6 A6 South Corridor

Table 3: A6 South Corridor | Corridor Concentration | Medium Intervention

Growth Location:	A6 South Corridor
Development Type:	Corridor Concentration
Priority:	2
Intervention Level:	Medium
Intervention Required:	Connections to existing transport networks, as identified by Local Accessibility Audits. Provision of new pedestrian and cycle routes. Provision of new local facilities including schools, shops and healthcare, as identified by Local Accessibility Audits. Extension or diversion of existing bus services Digital bus priority solutions.

This area comprises the A6 corridor between Scotforth and Galgate, to the east of the West Coast Mainline, as shown in the figure in Table 3. This growth location would concentrate development along the existing A6 corridor, capitalising on the existing sustainable transport links to the University of Lancaster campus and would also build on the low intervention urban infill development further north along the corridor.

The campus is particularly well served by public transport, with highly frequent bus services connecting to Lancaster City Centre and beyond. These services could be extended or diverted to serve new development on the A6 corridor with commercially viable services from opening of development.

A network of existing cycle routes is available in the area, principally providing north-south connections from Galgate, through the University campus and towards Lancaster through a combination of lightly trafficked on-road routes and off-road cycleways, although these do not necessarily offer the most direct routes. Connections to, and improvements of, the existing walking, wheeling and cycling networks will need to be identified through Local Accessibility Audits.

It is acknowledged that that the current A6 corridor suffers from congestion issues and there is limited potential to reallocate road space to sustainable modes. For this reason, improvements to the existing walking, wheeling and cycling networks described above could provide a more attractive alternative to using the A6.

The existing congestion on the A6 impacts on existing bus services. Whilst there is little scope to reallocate road space to provide new bus lanes, for example, it would be possible to employ digital solutions to provide priority to buses using the A6, including the use of virtual triggers and AI driven optimisation solutions.

The analysis has also shown a need to provide additional schools, shops and healthcare facilities. It is noted that it is proposed to relocate the Lancaster Royal Infirmary to a site within this potential growth corridor. Whilst this relocation has not been assumed in this analysis, this will provide additional health facilities in this area whilst also helping to support other shops and services that are needed to ensure sustainable residential development in the corridor.

The EV modelling shows a limited anticipated existing community need EV demand, in particular north of the Bailrigg area. Whilst this should be taken into account when considering any future residential developments, especially if assigned parking spaces are not to be provided, it is likely that future EV charging requirements could be met by policy and regulatory requirements.

10.7 A6 North Corridor

Table 4: A6 North Corridor | Medium Intervention

Growth Location:	A6 North Corridor
Development Type:	Corridor Concentration
Priority:	3
Intervention Level:	Medium
Intervention Required:	Connections to existing transport networks, as identified by Local Accessibility Audits. Provision of new pedestrian and cycle routes. Provision of new local facilities including schools, shops and healthcare, as identified by Local Accessibility Audits. Extension or diversion of existing bus services. Provision of a new rail station and sustainable travel hub.

The A6 north corridor between Lancaster and Carnforth has the potential to have a high degree of accessibility, with many hexagons on this corridor having the potential to achieve an accessibility level greater than 8. The potential growth location is therefore identified in the figure in Table 4 and also includes the existing settlements of Slyne, Hest Bank and Bolton-le-Sands.

The south of Carnforth is included within this growth location, although the remaining parts of Carnforth are not. This is because these parts of Carnforth have a lower level of accessibility that the rest of the A6 North corridor in the intervention scenario. Whilst Carnforth has a rail station, this only provides relatively infrequent local services. Moreover, railway, combined with the canal, result in a relatively high degree of severance, which limits the sustainable mode catchments to local facilities.

Local facilities such as schools, shops and healthcare are already provided within the existing settlements, but these would need to be supplemented by new facilities to meet demand and ensure that all people lived within a reasonable walking, wheeling and cycling distances. The provision of such facilities would also increase the accessibility of existing areas.

The Lancaster Canal runs through the growth area, providing walking and cycling connections along blue-green infrastructure, which is an asset that could be capitalised on the provide attractive routes for walking, wheeling and cycling along the corridor. However, there would be a need to supplement this with new high-quality walking, wheeling and cycling networks, which could be provided as part of development. There would also be a need to consider ways to overcome some of the severance that the canal provides through the provision of new bridges.

The corridor is served by existing bus services providing connections to Lancaster and Heysham in the south and Carnforth in the north, although these services are relatively infrequent (one or two per hour). Sustainable development on this corridor require the provision of additional bus services, which could also benefit existing residents.

The West Coast Mainline runs through the corridor, also carrying local services between Lancaster and Carnforth. There are currently no stations between Lancaster and Carnforth, but there could be the potential to provide a new station to serve development along the corridor, subject to there being sufficient capacity on the line. Any new station could form the focus for a sustainable travel hub, providing for interchange between sustainable modes.

The EV modelling shows a moderate anticipated existing community need EV demand, particularly within the Carnforth area. This should be taken into account when considering any future residential developments, especially if assigned parking spaces are not to be provided.

10.8 A589 Caton Road Corridor and Halton

Table 5: A589 Caton Road Corridor and Halton | Medium Intervention

Growth Location:	A589 Caton Road Corridor and Halton
Development Type:	Corridor Concentration
Priority:	4
Intervention Level:	Medium
Intervention Required:	Connections to existing transport networks, as identified by Local Accessibility Audits. Provision of new local facilities including schools, shops and healthcare, as identified by Local Accessibility Audits. Provision of a sustainable travel hub at the Park and Ride site. Enhancement of existing bus services including possible extension and improvement of Park and Ride services, including stopping at intermediate stops.

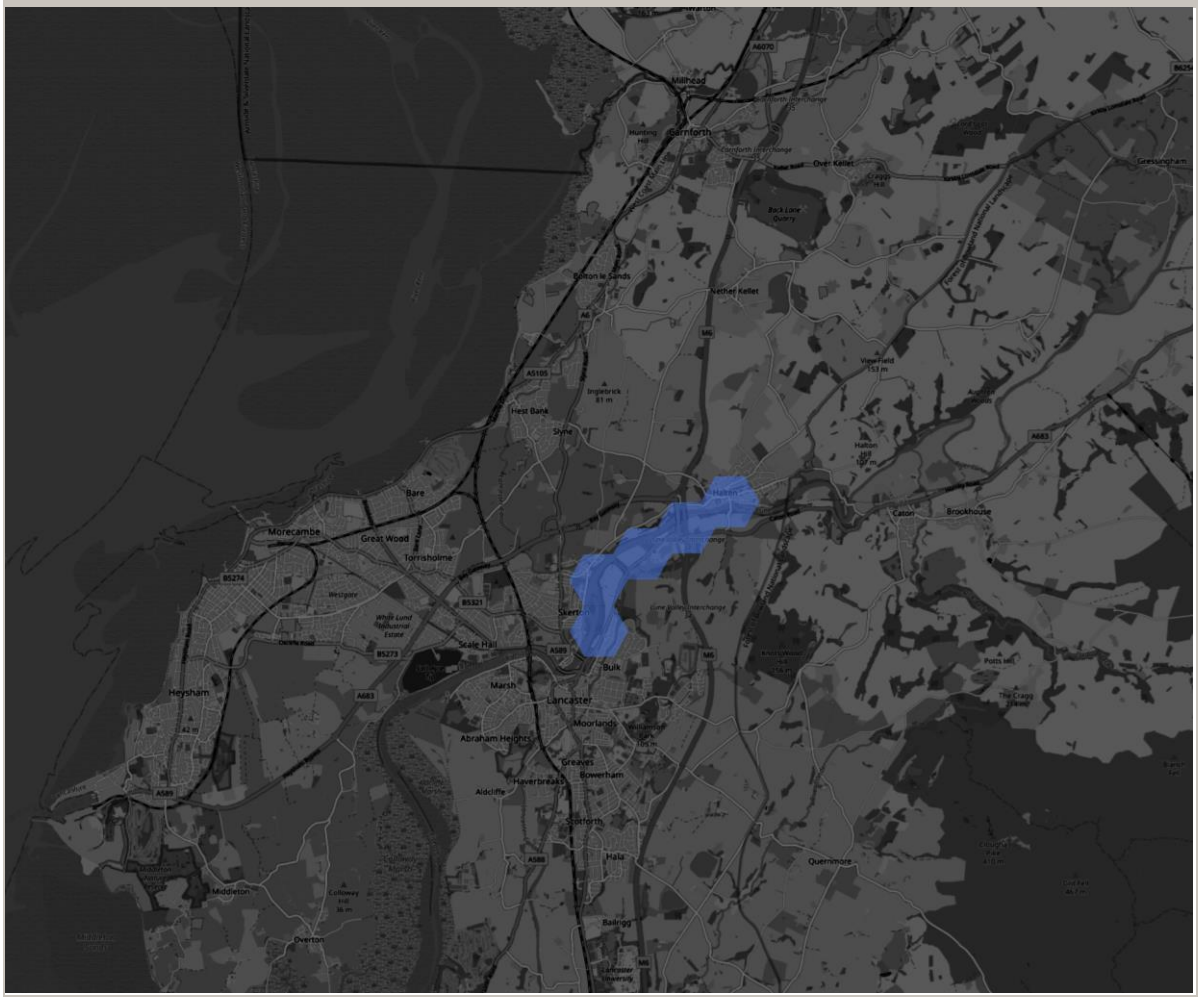


Table 5 identifies a potential growth corridor following the A589 Caton Road from north of Lancaster City Centre to M6 Junction 34. The corridor then heads north up the A683 to Halton Road and to the centre of Halton (for vehicular traffic) and via Halton Bridge (for walking, wheeling and cycling).

One hexagon (Hex 790) does not quite meet the combined accessibility score threshold of 8, which can be seen in Figure 36. However, this has been included within the corridor, because the combined accessibility score for this hexagon is 7.975 and its inclusion completes the corridor.

The corridor already includes National Cycle Route 69, providing good quality walking, wheeling and cycling connections to Lancaster City Centre with Halton Bridge providing access over the River Lune into Halton. Development along the corridor would need to connect to and enhance these existing routes. Cycle facilities are also provided along the A689 Caton Road, although these are sometimes intermittent and would benefit from improvements. Lancaster Canal also passes through the area, with the canal towpath providing connections to Lancaster City Centre by an attractive route using blue/green infrastructure.

Service L1 provides connections by bus between Lancaster Park and Ride and the city centre at a 15 minute frequency. There is the potential to enhance the Park and Ride as a sustainable travel hub, where walking, wheeling, cycling and public transport could connect with the existing park and ride services. The existing corridor between the Park and Ride and the city centre scores quite poorly for public transport provision because the L1 service does not call at the existing bus stops on the corridor. However, development along this section of the corridor could provide the opportunity to increase the frequency of these services whilst at the same time stopping at intermediate stops. The increased frequency would offset journey increases, maintaining the level of service for park and ride passengers.

Bus services from Halton are relatively infrequent and these would need to be enhanced, possibly by extending the existing Park and Ride service L1.

New local facilities would be required to serve the corridor including schools, shops and healthcare.

The EV modelling shows a moderate anticipated existing community need EV demand, particularly within the Lancaster City Centre area. This should be taken into account when considering any future residential developments, especially if assigned parking spaces are not to be provided.

10.9 North of Lancaster

Table 6: North of Lancaster | High Intervention

Growth Location:	North of Lancaster
Development Type:	Urban Extension / New Settlement
Priority:	5
Intervention Level:	High
Intervention Required:	Provision of new comprehensive walking, wheeling and cycling networks. Connections to adjacent A6 North corridor. Provision of new local facilities including schools, shops and healthcare. Extension of enhancement of existing bus services Provision of new bus services.

Table 6 identifies an area to the east of the A6 North Corridor and to the north of the A589 Caton Road Corridor that has the potential to be highly accessible. Whilst this was originally identified as "corridor concentration" development, in practice this could lend itself to new settlement or significant urban extension development.

Initially, development could be provided to the southeast of the potential growth area, in the area bounded by Halton Road to the south and the A683 Bay Gateway to the north. Halton Road provides bus connections to Lancaster and Halton, with approximately 30-minute daytime frequencies in each direction.

A cycle route also runs along the A683 Bay Gateway. However, to bring this area to the desired level of accessibility, improvements to existing, as well as additional, walking, wheeling and cycling routes would be required together with extension and enhancement of existing bus services. Consideration would also need to be given to providing new local facilities.

Further north, the area is undeveloped and therefore would require a high level of intervention including the provision of new high frequency bus services and a full range of local facilities. It would be necessary to provide the appropriate density of housing to sustain these bus services and local facilities. However, local facilities provided within this area could also benefit those in the adjacent A6 North potential growth location and vice-versa.

The A683 Bay Gateway, which could provide good highway access, although this could also be detrimental to sustainable travel due to the effects of noise and severance. Careful master planning would therefore be required to offset these negative aspects and ensure that sustainable modes of travel are attractive.

As this area is not currently residential, the EV modelling shows that there is minimal need for EVCI within these areas and EV charging needs for new development would be catered for through policy and regulatory requirements.

10.10 A588 Ashton Road Corridor

Table 7: A588 Ashton Road Corridor | High Intervention

Growth Location:	A588 Ashton Road Corridor
Development Type:	Urban Extension / New Settlement
Priority:	5
Intervention Level:	High
Intervention Required:	Provision of new comprehensive walking, wheeling and cycling networks. Connections to the adjacent A6 South corridors, possibly including new bridge over the West Coast Mainline. Provision of new local facilities including schools, shops and healthcare. Extension of enhancement of existing bus services Provision of new bus services.

Table 7 identifies a large potential development area broadly along the A588 Ashton Road Corridor. It is envisaged that development could initially comprise lower levels of intervention adjacent to the existing urban area with development connecting into and improving existing sustainable transport routes.

As more development is provided, additional walking and cycling routes should be provided alongside new bus routes and amenities, which would provide benefits to existing residents along the corridor. Careful master planning would be required to ensure that development comes forward with the right form and density to provide and sustain new services and amenities.

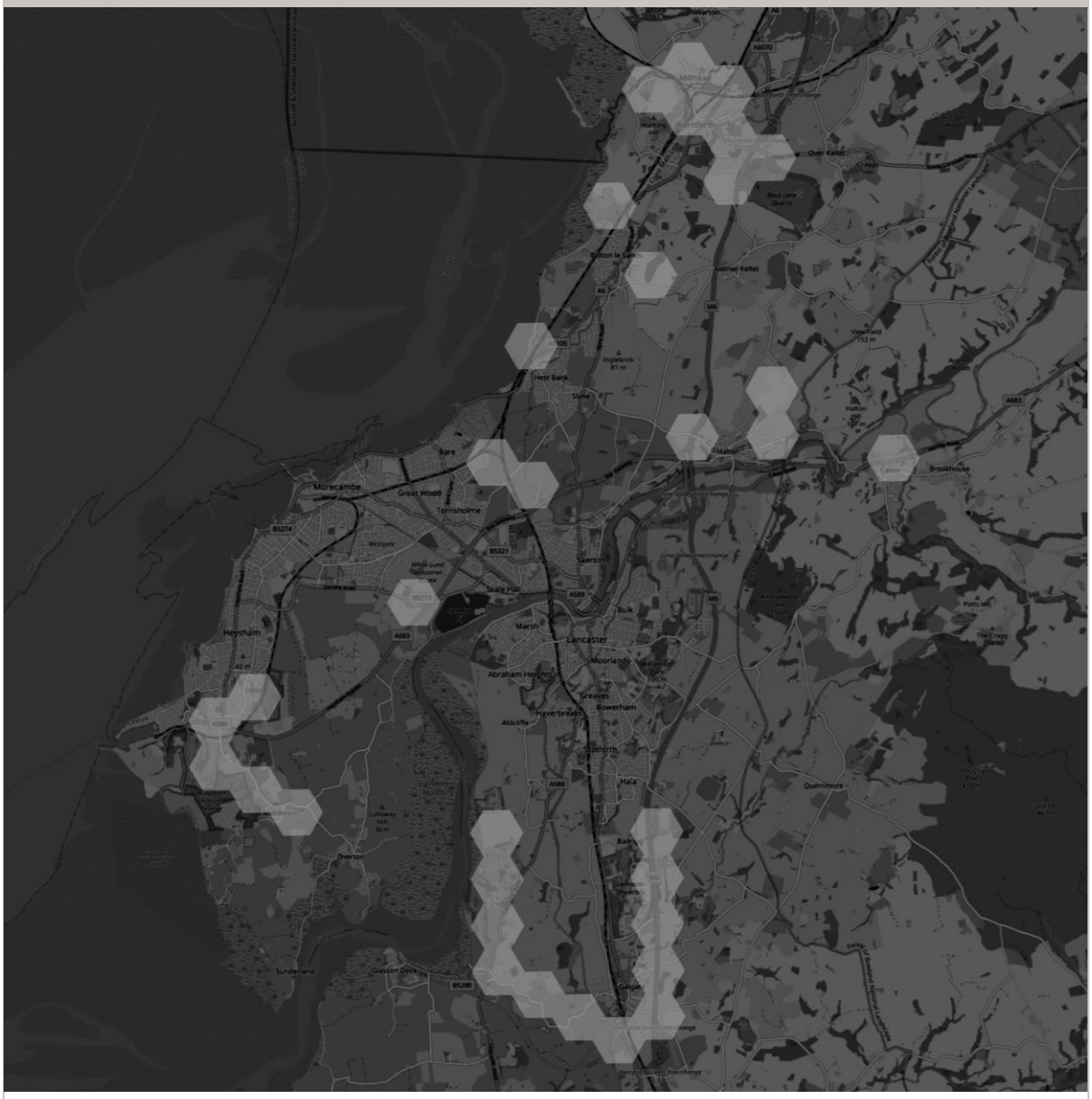
Eventually, development could connect into that on the A6 corridor, requiring new connections to be provided over the West Coast Mainline. However, this would also open up the opportunity for the A588 Ashton Road to be used as an alternative to the highly constrained A6 corridor, providing sustainable transport links towards Lancaster City Centre.

The EV modelling shows limited anticipated existing community need EV demand in the northern most hexagon. This should be taken into account when considering any future residential developments, especially if assigned parking spaces are not to be provided. However, as the remaining hexagons are not currently residential, the EV modelling shows minimal need for EVCI and EV charging needs for new developments in these areas would be catered for through policy and regulatory requirements.

10.11 Next Best Potential Growth Locations

Table 8: Next Best Potential Growth Locations | Additional Interventions Required

Growth Location:	Next Best Potential Growth Locations
Development Type:	Various
Priority:	6
Intervention Level:	High
Intervention Required:	To be determined following assessment of Hex Summary Sheets and Local Accessibility Audit.



The potential growth locations identified in Sections 10.4 to 10.10 have been based on hexagons with a combined accessibility score of 8 or more in the intervention scenario. However, there are a number of hexagons, generally adjacent to these potential growth locations, that have lower combined accessibility scores of between 6 and 8. These locations are identified in Table 8.

These next best potential growth locations may have been excluded from the identified growth locations for a number of reasons including:

- The intervention scenario may not have assumed sufficient intervention to bring these areas up to a combined accessibility score of 8 or more
- These areas may have travel distances that exceed the catchment distances for particular modes due to the more outlying nature of some of these areas
- There may be specific severance issues that could lead to excessive route lengths for sustainable modes without specific interventions

If development is sought in these areas, it is recommended that the Hexagon Summary Sheet(s) for the area is studied to understand the reasons why the area is underperforming in terms of accessibility and that a Local Accessibility Audit is undertaken to determine what interventions would be required.

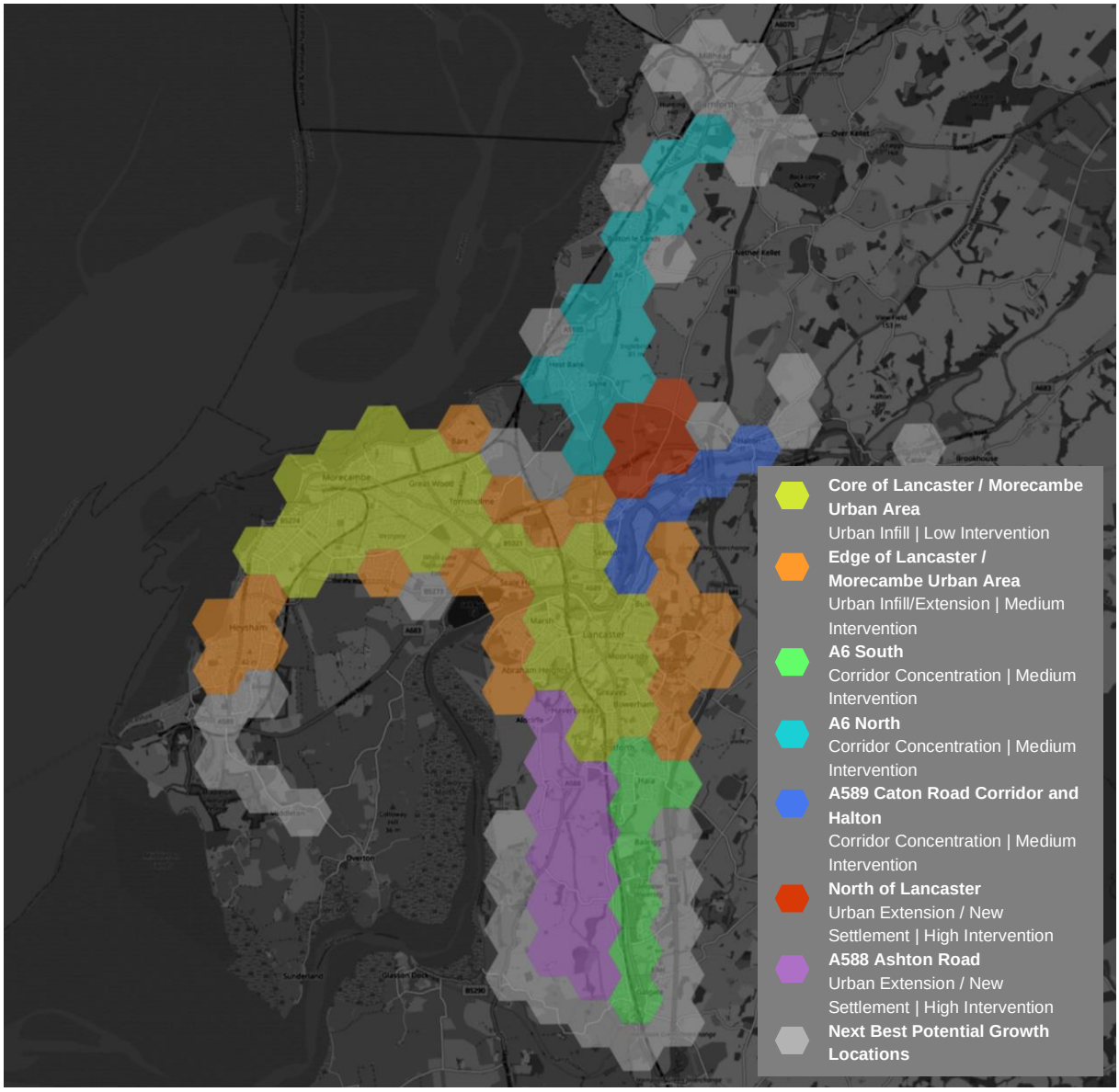
The EV modelling shows a wide range in anticipated existing community need EV demand, with increasing demand in more urban areas. This should be taken into account when considering any future residential developments, especially if assigned parking spaces are not to be provided. For the remaining hexagons that are not in residential areas, the EV modelling shows minimal existing need for EVCI and that EV charging needs for new developments would be catered for through policy and regulatory requirements.

11 Summary of Potential Growth Locations

11.1 Introduction

Combining the potential growth locations set out in Section 10.4to 10.10 gives the map in Figure 38, which shows potential growth locations across Lancaster District that would maximise sustainable travel opportunities. It is notable that these locations are generally within or adjacent to the existing urban areas of Lancaster, Morecambe and Heysham, or follow existing transport corridors that directly connect to these areas. In particular, none of the smaller towns and villages within the Lancaster District are identified as locations that would maximise sustainable travel opportunities.

Figure 38: Summary of Potential Growth Locations



11.2 Summary of Potential Infrastructure Requirements

Based on the infrastructure requirements identified previously (Section 8.4 and 8.5), Table 10 summarises the infrastructure that is likely to be required to maximise sustainable travel opportunities for each of the potential growth locations.

Both the provision of new amenities and new transport infrastructure are considered, with the level of intervention required conveyed by a simple tick system, as follows in Table 9:

Table 9: Description of Icons for Intervention Requirements

Icon	Description
-	No intervention required.
✓	Limited intervention required, perhaps for some sites in the growth area. This could include minor new transport infrastructure, small extensions to existing public transport services, or improved access to new amenities.
✓✓	Medium intervention required, such as new sections of transport infrastructure to plug missing links, increases in frequency and extensions to public transport services, or new amenities in a single location.
✓✓✓	Significant intervention required, such as significant lengths of new transport infrastructure, wholly new public transport services, or new amenities in multiple locations.

Table 10 demonstrates how development within the existing urban areas of Lancaster and Morecambe could be delivered with a low level of intervention, primarily focussed around connecting the development into the existing transport infrastructure and connecting with existing local amenities.

Medium intervention areas are shown to require greater levels of intervention, with some provision of new amenities, greater levels of supporting transport infrastructure and new and improved public transport services.

The highest levels of intervention are then necessary to support potential urban extensions / new settlements in North Lancaster and the A588 Ashton Road corridor, where significant new infrastructure, public transport and amenities would need to be provided.

Table 10: Summary of Interventions Required

	Prioritisation / Deliverability	Amenity Interventions Required							Infrastructure Interventions Required								
		Education			Amenity				Walk		Cycle		Public transport			Highway	
		Primary Education	Secondary Education	Tertiary Education	Employment	Shops and Services	Healthcare	Green Space	Local connections to pedestrian network	New strategic pedestrian routes	Local connections to cycle network	New strategic cycle routes	Public transport stops	Public transport with min 15-minute frequency	Public transport priority measures	Connections to existing highway network	New highway network required
Lancaster / Morecambe Urban Area Urban Infill Low Intervention	1	-	-	-	-	-	-	-	✓	-	✓	-	-	-	-	✓	-
Lancaster / Morecambe Urban Area Urban Infill/Extension Medium Intervention	2	✓	✓	✓	✓	✓	✓	✓	✓✓	-	✓✓	-	✓	✓	-	✓	-
A6 South Corridor Concentration Medium Intervention	3	✓	✓	✓	✓	✓✓	✓✓	-	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓	✓	✓

	Prioritisation / Deliverability	Amenity Interventions Required							Infrastructure Interventions Required								
		Education			Amenity				Walk		Cycle		Public transport			Highway	
		Primary Education	Secondary Education	Tertiary Education	Employment	Shops and Services	Healthcare	Green Space	Local connections to pedestrian network	New strategic pedestrian routes	Local connections to cycle network	New strategic cycle routes	Public transport stops	Public transport with min 15-minute frequency	Public transport priority measures	Connections to existing highway network	New highway network required
A6 North Corridor Concentration Medium Intervention	3	✓	✓	✓✓	✓	✓✓	✓✓	-	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓
A589 Caton Road Corridor Corridor Concentration Medium Intervention	4	✓✓	✓✓	✓✓	✓	✓✓	✓✓	-	✓✓	✓✓	✓✓	✓	✓✓	✓✓	✓✓	✓	✓
A588 Ashton Road Urban Extension / New Settlement High Intervention	5	✓✓✓	✓✓✓	✓	✓✓	✓✓✓	✓✓✓	-	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓

	Prioritisation / Deliverability	Amenity Interventions Required							Infrastructure Interventions Required								
		Education			Amenity				Walk		Cycle		Public transport			Highway	
		Primary Education	Secondary Education	Tertiary Education	Employment	Shops and Services	Healthcare	Green Space	Local connections to pedestrian network	New strategic pedestrian routes	Local connections to cycle network	New strategic cycle routes	Public transport stops	Public transport with min 15-minute frequency	Public transport priority measures	Connections to existing highway network	New highway network required
North of Lancaster Urban Extension / New Settlement High Intervention	5	✓✓✓	✓✓✓	✓✓	✓✓	✓✓✓	✓✓✓	-	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Next Best Potential Growth Locations	6	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	-	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓

11.3 Funding Considerations for Sustainable Transport and Associated Highways Infrastructure

A mix of funding sources is typically used to deliver transport infrastructure linked to Local Plans. This includes developer contributions through Section 106 agreements for site-specific mitigation and Community Infrastructure Levy (CIL) for strategic, area-wide improvements. CIL is particularly useful for pooling funds and prioritising investment in sustainable transport, especially where infrastructure serves multiple developments.

Additional funding can be sought from regional and central government grants (e.g. City Region Sustainable Transport Settlements (CRSTS), Active Travel England, DfT schemes), combined authorities, and through local authority capital budgets or prudential borrowing. Aligning infrastructure plans with Local Transport Plans and working with regional transport bodies can strengthen funding bids.

Best practice examples include:

- **Cambridge**: Used CIL alongside Growth Deal funding to invest in a network of high-quality cycle routes
- **Greater Manchester**: Integrated developer contributions and government funding to deliver its Bee Network for active travel
- **Nottingham**: Leveraged workplace parking levy revenues to fund major public transport upgrades
- **Oxford**: Used CIL and Active Travel England funding to deliver the Central Oxfordshire Transport Plan, including bus gates and segregated cycle routes
- **Southampton**: Combined CIL, Transforming Cities Fund, and S106 to roll out the SCN (Southampton Cycle Network) and bus priority corridors
- **Bristol**: Deployed CIL to match-fund West of England Combined Authority grants to deliver city-wide Liveable Neighbourhoods and bus infrastructure upgrades

A plan-led, integrated funding strategy allows councils to make the best use of CIL and external funds to accelerate sustainable transport delivery.

12 Recommendations & Next Steps

12.1 Recommendations

This Outline Sustainable Travel & Transport Strategy (OSTTS) has identified seven broad areas for potential growth as part of the local plan, as well as the interventions that would be required to achieve high levels of accessibility.

The growth areas have been allocated a priority, with higher priority areas requiring less intervention and thus being more viable and deliverable. The high priority areas would also result in lower carbon emissions. It is therefore recommended that local plan site prioritisation has regard to the growth area priority allocated within this strategy. However, it is also important to recognise that sustainable travel is just one strand of the decision making around site allocations and many other factors will also need to be considered.

The intervention scenario presented within this report assumes that sufficient development would come forward in each growth area, and at an appropriate density, to support local amenities, infrastructure and public transport services. This should be taken into account when considering potential local plan sites, as better outcomes would be achieved by concentrating development in fewer high priority growth areas. If development is spread across all potential growth areas and critical quanta and densities are not achieved, then the desired sustainable travel outcomes may not be realised.

The growth areas provide a useful tool for short-listing local plan sites that have the potential to be sustainable from a transport perspective. However, as local plan allocations are short-listed, it is recommended that local accessibility audits are undertaken to identify the amenities and infrastructure that is required to deliver those sites, including their potential as low car or car free developments. The proposed developments, local amenities and infrastructure can then be combined to create growth scenarios that can then be coded into the accessibility model to verify the likely sustainable travel outcomes. This would also inform infrastructure options and assist in identifying the most sustainable growth scenario for the local plan.

Once the preferred sustainable growth scenario and associated interventions is identified, this will provide the basis for a vision-led transport assessment of the local plan. The accessibility model can be used to inform and validate the likely mode share scenarios for particular sites, which can then be used in within the transport assessment for the local plan. This will ensure that sustainable travel will be prioritised within the transport assessment process with only residual impacts on the highway network needing to be assessed. This will minimise the level of highway intervention that is required to deliver the local plan.

The EV community need model outlines the requirement for significant EV charging infrastructure interventions to meet the demands of residents without access to off-street parking (community need residents). Due to the magnitude of EV chargers required, the interventions will need to comprise a mixture of low power (AC) EV chargers, either owned by each household or provided as an on-street

solution (via charging lamp pOSTTS, cable trays, charging bollards etc.), and EV charging hubs, containing a smaller number of fast-rapid DC chargers.

It is recommended that the Council investigates further where market forces will bring forward suitable charging infrastructure (for example, destination charging associated with local businesses or visitor attractions – e.g. Eden North), and to determine whether this will partially or fully meet the needs of residents without off-street parking.

It is anticipated that market forces will not fully meet demand. It is therefore also recommended that the Council investigates where additional charging infrastructure should be provided, for example on existing car parks, to meet underserved local residents. This will ensure fair and equitable access to charging infrastructure and will support the uptake of electric vehicles

It is recommended for the council to consider the impact on both existing and future EV charging infrastructure demand when assessing new developments. Whilst rural developments with assigned parking spaces will likely provide EV charging interventions through existing policy and regulatory requirements, urban infill and certain corridor extensions could exacerbate unmet community need demand. Development proposals in these areas should, therefore, be required to help address this community need through the provision and funding of both AC and DC charging infrastructure.

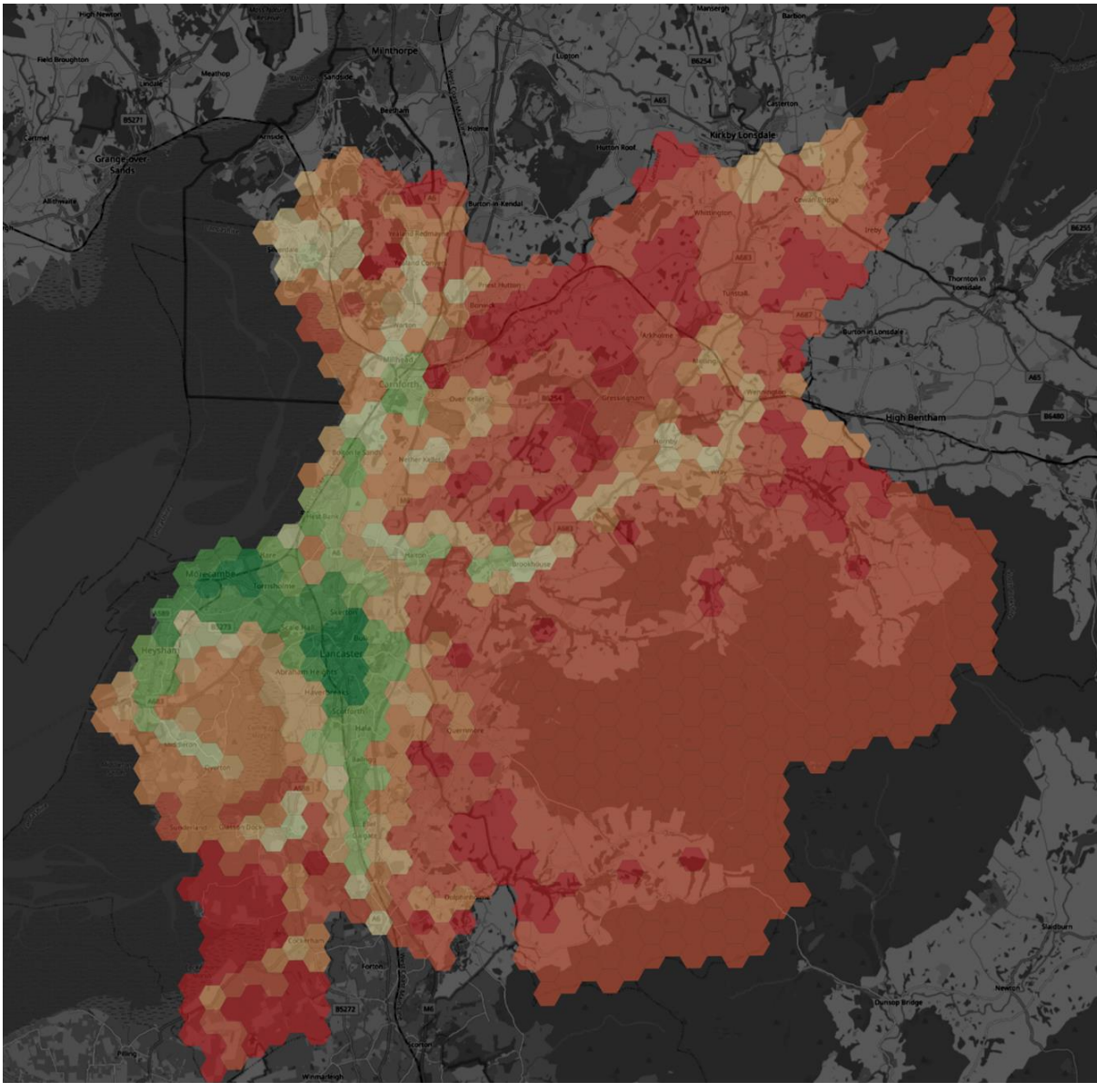
12.2 Next Steps

Following the completion of this OSTTS there are a series of actions and next steps which will support the Council as they move through the plan process ultimately working towards achieving the Vision set out in Section 2:

- Use the OSTTS and the associated Vision, as agreed with Lancashire County Council and National Highways, to instigate engagement and collaboration with these partners as the Council move through the plan process.
- Review priority areas set out in Section 10 against, and alongside, parallel technical workstreams and evidence base which might identify constraints to make the priority areas from a sustainable transport perspective less desirable.
- Consider the recommendations for priority locations as set out in Section 10 against the call for sites process. This would seek to identify which sites fall within priority areas and how they would that get the Council towards the required housing allocation numbers.
- Review additional sites identified through the call for sites process which fall outside of the priority areas defined in Section 10. Interrogate the associated Hexagon Summary Sheets and considering both strategic and local accessibility, identify potential intervention requirements to achieve a desirable accessibility score (above 8). Understand how these additional sites would get the Council towards the required housing allocation numbers.
- Revisit accessibility model and EV model as part of progression of local plan process as more clarity emerges on the sites, schemes, and infrastructure required and proposed. This is a critical next step to ensure that ultimately the sites and associated infrastructure being proposed as part of the local plan will deliver the desired levels of accessibility.
- Test specific site applications using the model and identify mitigating measures.
- Develop outline proposals for key sustainable travel corridors to help support and guide new development as it is brought forward.

- Produce a Streets and Public Spaces Design Code to sit alongside the accessibility tool to stipulate required parameters and design metrics associated with new development.
- Assess the opportunities for the council to provide AC/DC EV charging hubs on council owned land to provide both community need and destination EVCIs.
- Assess possible funding opportunities to facilitate the rollout of EVCIs in strategic locations across the district.
- Assess the opportunity for on-street EV charging installations.

Appendices


Milnthorpe
Kirkby Lonsdale
Burton-in-Kendal
Grange-over-Sands
Carnforth
High Bentham
Morecambe
Lancaster
Heysham
Burton in Lonsdale
Thornton in Lonsdale
Dunsop Bridge
Sladburn
Newton
Arkholme
Whittington
Hutton Roof
Lupton
Barbon
Mansergh
Meathop
Field Broughton
Beetham
Storrs
Cowan Bridge
Ireby
Wennington
Hornby
Brookhouse
Torrisholme
Skerton
Scotforth
Abraham Heights
Halton
Aughton
Dolphinholme
Quernmore
Caton
Claughton
Over Kellet
Nether Kellet
Borwick
Warton
Yealand Redmayne
Yealand Conyers
Silverdale
Arnside
Carnforth
Milnthorpe
Sandside
Levens
Crosthwaite
Cartmel
Allithwaite
Grange-over-Sands
Kirkby Lonsdale
Burton-in-Kendal
Thornton in Lonsdale
Burton in Lonsdale
High Bentham
Morecambe
Lancaster
Heysham
Dunsop Bridge
Sladburn
Newton
A65
A683
A687
B6254
B6255
B6480
B5271
B5273
B5272
M6

Appendix A Literature & Policy Review

1 Literature and Policy Review

1.1 Introduction

Lancaster District is characterised by a diverse and evolving transport landscape, encompassing urban, rural, and coastal areas. As the region continues to grow, both in population and economic activity, the development of effective and sustainable transport policies becomes increasingly important. Transport policy documents play a crucial role in shaping the direction of local transportation systems, influencing decisions on infrastructure development, public transport provision, and environmental sustainability.

This literature review aims to explore and analyse key policy documents relevant to Transport in the Lancaster District, examining their objectives, strategies, and implementation outcomes. These documents provide the context in which the Outline Sustainable Travel & Transport Strategy (OSTTS) has been developed.

1.2 National Planning Policy Framework (February 2025)

The National Planning Policy Framework (NPPF), which provides national guidelines for planning and development in the UK, emphasizes the importance of sustainable transport in shaping development and improving accessibility. It encourages planning authorities to ensure that transport systems are aligned with the principles of sustainability, which helps reduce emissions and supports healthier lifestyles.

NPPF sets out the following in relation to sustainable transport:

- **Promote Sustainable Transport Choices:**

  The NPPF highlights the need to ensure that developments are located and designed to reduce the need for travel, particularly by car. It encourages development near public transport hubs or corridors to increase accessibility.

  New developments should be well connected to public transport networks, cycling paths, and walking routes to promote sustainable travel options.

- **Encouraging Active Travel:**

  The NPPF stresses the importance of promoting walking and cycling as primary means of travel, particularly in urban areas. Developments should provide safe, convenient, and accessible routes for pedestrians and cyclists.

- **Reducing Car Dependency:**

  The NPPF encourages reducing car dependency by promoting mixed-use developments, where people can live, work, and access services in close proximity, thus reducing the need for long-distance car journeys.

- **Travel Plans and Accessibility:**

  The NPPF suggests that major developments should include travel plans that set out how the impact of the development on transport can be managed and encourage sustainable travel.

- **Integration with Transport Networks:**

  New developments should be designed to integrate well with existing transport infrastructure, ensuring seamless connections between transport modes (e.g., buses, trains, cycling lanes) to make sustainable travel easy and convenient.

- **Supporting Low-Carbon Transport:**

  The NPPF recognizes the importance of reducing carbon emissions from transport and encourages development that supports low-carbon alternatives, such as electric vehicles, through the provision of charging infrastructure.

The NPPF emphasizes a holistic approach to planning that prioritises sustainable, low-carbon, and accessible transport choices, aiming to create environments that reduce reliance on cars, encourage walking and cycling, and integrate with public transport systems.

1.3 Lancaster District Highways and Transport Masterplan (Lancashire County Council, 2016)

The Highways and Transport Masterplan forms part of the Local Transport Plan and was produced by the County Council alongside the development of the Lancaster Local Plan. It outlines a transformative strategy designed to guide transport development in the district to 2031 and beyond, aligning with sustainable growth and regeneration priorities.

Key themes from this document offer vital direction for this OSTTS:

- **Vision for Sustainable Growth:**

  The Masterplan places sustainability at the heart of transport planning. It aims to enable economic development—particularly housing and employment growth—while reducing congestion, promoting modal shift, and improving public health and air quality. The overarching goal is a sustainable, low-carbon transport system that supports Lancaster's future prosperity.

- **Integration of Land Use and Transport Planning:**

  The document strongly links future land use (e.g., the Bailrigg Garden Village and Lancaster University expansion) with transport planning. It supports compact, mixed-use development underpinned by sustainable mobility, reinforcing the literature's emphasis on integrated spatial-transport frameworks.

- **Mode Shift and Active Travel:**

  It called for major investment in walking and cycling infrastructure through the *Lancaster Links* initiative, echoing global best practices in promoting active transport as a core part of everyday travel. The aim was to make non-motorised travel a realistic, attractive choice—particularly in urban centres and for short journeys.

- **Public Transport Enhancement:**

  A key strategy was the creation of the *Lancaster Reach* bus rapid transit network, linking key growth areas and improving reliability. Emphasis is placed on ultra-low emission vehicles (ULEVs), supporting carbon reduction goals.

- Addressing Air Quality and Congestion:
- The plan targeted air quality improvements by reducing city centre traffic, especially HGVs, through rerouting enabled by the new Bay Gateway link road. This infrastructure change was

used as a catalyst to support further sustainable interventions, a valuable case study in leveraging new roads to enhance—not hinder—sustainability.

- Rural and Regional Connectivity:
- Acknowledging the district's rural nature, the Masterplan explores innovative rural mobility solutions, recognising the limitations of traditional public transport and the need for flexible, integrated options.
- Community and Stakeholder Engagement:
- The strategy was shaped through public consultation, ensuring that local perspectives informed the final vision. The emphasis on place-making and improved accessibility underscores a people-centred approach to sustainable mobility.
- Strategic and Policy Alignment:
- It aligned with the Local Transport Plan (LTP3), Lancaster's Local Plan, and the Lancashire Strategic Economic Plan, reinforcing the importance of policy cohesion in sustainable transport strategies.
- This Masterplan takes account of the proposed growth in and around Lancaster and recognises the constraints of the existing highways network. It then sets out how, through a range of transport measures, these constraints can be overcome. This includes a number of sustainable transport initiatives aimed at bringing about significant levels of modal shift, such as the provision of a high quality bus service, a Cycle Superhighway, Park and Ride facilities and the reconfiguration of the city's one way system.

1.4 Lancashire County Council Highways and Transport Strategy 2023-25 (Lancashire County Council, 2023)

This Strategy presents a high-level view of how Lancashire County Council will deliver their highways and transport responsibilities over the next three years to deliver to their corporate priorities.

It is supported by a number of other transport-related strategies for Lancashire either published or in production, including the Local Transport Plan. Transport Asset Management Plan, Highways Decarbonisation Strategy, Bus Service Improvement Plan, and Cycling and Walking Strategy.

This Strategy provides a single point of reference for the council's activities envisaged in the period to 2025. The following four core priorities and twelve objectives set their framework for the activities in this period:

Highways Asset Management

- Manage our highways assets efficiently and effectively to support connectivity to employment and to essential services.
- Build our understanding of the condition of all our highways assets to focus our maintenance activity and leverage investment.
- Reduce the carbon footprint of our highways maintenance activities.

Network Management & Safety

- Improve the efficiency of our urban and rural road networks.
- Reduce all road casualties and progress towards zero people killed or seriously injured.

- Create safe and social spaces.

Public Transport & Active Travel

- Deliver sustainable travel choices that are accessible, inclusive and affordable for all.
- Support bus and rail services and encourage opportunities to use different forms of transport for single journeys with improved interchanges and better inter-urban and rural connectivity.
- Reduce the need to travel by car particularly for shorter journeys.

Strategic Partnerships

- Facilitate economic growth, regeneration and levelling up.
- Establish a pipeline of plan-ready transport interventions to leverage investment.
- Bring partners together to align local, regional and national investment priorities.

1.5 Lancashire 2050 Framework (2022)

Lancashire 2050 is about bringing people together with a shared vision, shared ambition, shared goals and shared priorities. Initiated by Lancashire's 15 councils, but involving everyone with a stake in the county's success, it sets out the areas where councils can work together to help the county thrive.

The Vision of the 2050 Framework is:

> *Lancashire: a place where every single person can live their best life*

The plan for achieving the vision is organised around eight priority areas, one of which is transport and infrastructure. In relation to this priority the framework sets out that Lancashire will become better-connected and accessible, with infrastructure that links opportunities to need, and travel choices that are safe, inclusive, affordable and low carbon.

Theme priorities for transport and infrastructure include:

- To connect the economic clusters and sectors of Lancashire and tackle isolation.
- To take a place-focused approach to transport and infrastructure, which ensures that provision is designed to allow places to flourish.
- To reduce the need to travel by providing fast reliable access to digital technology.
- To reduce carbon emissions in support of a net zero county.

It seeks to deliver the following:

- Residents and communities will be better connected to opportunities and experiences, including employment, leisure and services.
- There will be less reliance on carbon-based modes of transport, with significant reductions in carbon and other vehicle emissions.
- Infrastructure and employment sites will support a low-carbon and a modern and forward-looking economy.

- Within the Lancashire 2050 priorities, sustainable transport plays a pivotal role in achieving net-zero ambitions and levelling up access to employment, education, and services across urban and rural communities. The framework supports investment in active travel infrastructure, improvements to public and shared transport, and the rollout of electric vehicle networks. It also encourages local authorities to work in alignment with national carbon budgets and place-based decarbonisation strategies.
- For Lancaster District, this means building on the area's unique geography and travel patterns to deliver inclusive, low-carbon transport options that respond to both climate and connectivity needs.

1.6 Lancaster Local Plan Transport Assessment (WYG, 2018)

In 2018 the council commissioned external consultants, White Young Green (WYG) to prepare a transport assessment for the district to support the local plan. The assessment was split into two stages. Stage 1 assessed, in high level terms, the capacity of the existing highway network to accommodate the future traffic flows expected to be generated by the proposed allocations in the Local Plan on key parts of the district's highway network. The city centre was not a focus of this assessment as this was considered in detail through the Movement Strategy, being prepared by Lancashire County Council. The assessment identifies key congestion points within the district, identifying congestion northbound along the A6 Corridor between Junction 33 and Lancaster City Centre in the AM peak and southbound in the PM peak with some congestion within Carnforth Town Centre.

Stage 2 considered and set out a range of mitigation measures and junction improvements to address highway capacity concerns. It should be noted that these suggestions were those of an independent consultant and not of Lancashire County Council. Any highways mitigation ultimately under the direction of Lancashire County Council, to support development, must take account of the wider considerations of land-ownership, air quality and maximising sustainable transport movements across the network. The assessment looked at a number of potential improvements to junctions along the A6 corridor between Galgate and Lancaster City Centre, the A683 corridor between Junction 34 and Lancaster City Centre and Kellet Road in Carnforth between the town centre and Junction 35. Generally, the suggested forms of mitigation were relatively small and did not rely on third-party land.

The transport assessment undertaken by WYG was prepared to demonstrate that mitigation can provide increased capacity to accommodate development growth within the district. However, whilst there may be measures available within the existing highway network in the short term it is expected that longer-term measures will be required, including new infrastructure and greater use of more sustainable travel modes.

It should be noted that the work did not specifically consider sustainable travel modes as part of the assessments.

1.7 Sustainable Travel SPD (Lancaster City Council, 2022)

This draft SPD includes part of the Council's response to the climate crisis in relation to travel and transport and supports the implementation of the Climate Emergency Local Plan Review (CELPR) policies. The purpose of this supplementary planning document (SPD) is to set out how the focus on active and sustainable travel can be achieved through applying relevant policies and achieving well thought out design and supporting measures to facilitate effective modal shift. The SPD does not include additional policies or requirements but supplements and expands on policies within the CERLP and provides local context for the interpretation of the National Planning Policy Framework (NPPF) and the PPG.

Chapter 4 of the SPD sets out the active travel networks expected to be delivered as part of the development of specific sites in the current Local Plan (2020). There is a focus on utility routes rather than leisure routes as the overall aim is to encourage modal shift. A draft Sustainable Travel SPD was subject to initial consultation in June 2022 The draft guidance identified the types and location of proposed routes, making the most of existing infrastructure. It provides the basis for the delivery of routes expected within new development proposals and, where necessary, by securing improvements in the wider network through the use of Section 278 highways works and developer contributions.

However, moving forward, it is now expected that rather than pursue the adoption of the SPD, the Council's will seek to formalise as much as possible the guidance and ambitions set out in the draft SPD within the relevant policies of the Local Plan as part of the current review.

1.8 Lancaster City Centre Movement and Public Realm Strategy (Lancashire County Council, 2020)

The aim of the Lancaster City Centre Movement and Public Realm Strategy was to build upon and realise the vision for Lancaster city centre as outlined in the District of Lancaster Highway and Transport Masterplan (2016) and meet the requirement set out in the Bay Gateway Development Consent Order (DCO) to implement an:

> *"Action plan [that] must aim to prevent road traffic growth within the central Lancaster area increasing to predicted "do minimum" levels between the opening and design years of the link road (thereby negating planned relief)".*

Public and stakeholder consultation on a series of eight options (with three of these further sub-divided into sub-options) for use of the city centre's gyratory system was undertaken during autumn 2020, accompanied by the publication of a strategy document entitled 'Lancaster City Centre Movement and Public Realm Strategy - Route Options Report'. The outcome of the consultation saw a preference expressed for three options.

1.9 Lancaster City Council Plan 2024–2027 (2023)

The Council Plan outlines four key principles: a Sustainable District, an Inclusive Economy, Healthy Communities, and a Responsible Council.

Transport strategy is anchored in the "Climate Emergency" theme, targeting net zero carbon by 2030. It supports sustainable energy initiatives, active travel, retrofitting housing, and enhancing biodiversity. Key projects include solar farms, flood resilience schemes, and public engagement tools like the People's Jury.

Transport strategy should align with these goals by prioritizing modal shift, carbon reduction, and inclusive access. The plan promotes cross-sector collaboration, with the climate emergency central to all actions.

1.10 Lancaster City Centre Car Parking Strategy and Action Plan (Lancaster City Council, 2024)

A draft parking strategy and action plan has been prepared to ensure there remains a well-managed supply of public car parking facilities for Lancaster City Centre. The strategy aims to provide reassurance to both businesses and community stakeholders that the council can provide sufficient parking spaces whilst maintaining its overarching commitment to climate action and delivering other priorities such as new homes for local people.

Through its declared Climate Emergency, the council also recognises the need to support the transition to an accessible and inclusive low-carbon and active transport system, promoting walking. cycling and increased use of public transport.

The strategy aims to strike a balance in future provision so that:

- Car parks are in the right place, reducing need for vehicle circulation through and around the city centre.
- Sufficient parking options are available to service the needs of the evening and cultural economy.
- The Offer is of a good quality, safe and attractive to customers.
- Blue badge holders and those with greater accessibility needs are provided for.
- Future sustainable transport strategy and development proposals recognise the continuing and necessary role of car parking availability for the city centre.

A key consideration is that the permanent car park offer is fit for the future; particularly for the use of electric vehicles and better accommodates alternative transport modes (cycle parking/car share hubs) and active/low emission travel amenity.

1.11 Lancashire Bus Service Improvement Plan (Lancashire County Council & Blackburn with Darwen Borough Council 2024)

Government provided Local Transport Authorities (LTAs) with a choice of pursuing franchising of bus services or the Enhanced Partnership process, with a decision required by the end of June 2021. Lancashire County Council pursued the Enhanced Partnership process, reflecting the history of successful partnership working with bus operators. LTAs were then required to prepare and publish Bus Service Improvement Plans (BSIPs) by the end of October 2021. These documents are intended to describe the state of bus services and the market for travel, express ambition for change and develop a comprehensive suite of interventions to increase the number of passengers on bus services.

Lancashire County Council prepared a joint BSIP with Blackburn with Darwen Borough Council. The first Bus Service Improvement Plan was published on 29 October 2021 and Lancashire County Council's Enhanced Partnership was made on 7 April 2022. An updated version of the plan was produced in October 2022, with the Enhanced Partnership updated in January 2024.

The BSIP provides the overarching framework for the Enhanced Partnership Plan (EP Plan) and Enhanced Partnership Scheme (EP Scheme). The EP Plan summarises the main themes of the BSIP in setting out an analysis of local bus services in Lancashire, the objectives for the quality and effectiveness of bus services and how the EP Scheme or Schemes are intended to achieve these objectives. The following schemes within Lancaster District are set out in the BSIP and EP Scheme:

Approved for Implementation by the Executive Board:

- Minor enhancements to improve bus priority in Bowerham. – Autumn 2024.
- Bowerham Rd / Barton junction remodelling to improve priority for buses – March 2025.

Other Schemes:

- Scale Hall Lane/ Morecambe Road junction (Lancaster) - Modification of junction layout to allow buses more priority in joining traffic (give way rather than full traffic signal control). The final design is being developed and modelled - December 2024.
- Traffic light bus priority In addition to the junctions being reviewed as part of corridor specific projects, eleven further key junctions have been identified including in Leyland, Morecambe and Ormskirk - October 2024 to March 2025.

A list of facilities that are also included within the Bus Service Improvement Plan ambition, but are not currently funded. In Lancaster district these include:

- Skerton Bridge Sustainable Transport Corridor.
- Lancaster to Morecambe - priority proposals identified in BRT feasibility study.
- Carnforth, Market St/A6 junction.
- Improvements on Caton Road and at J34 park and ride.

1.12 Gear Change: A Bold Vision for Cycling and Walking (Department for Transport, 2020)

This document, including a foreword by the then Prime Minister, makes the case for a 'step-change' in cycling and walking in the coming years. It identifies the wide range of issues that can be addressed by increasing the use of these modes of travel, which include those associated with public heath, wellbeing, the economy, congestion, the environment, air quality, climate change and local businesses (see adjacent infographic).

The document calls for a 'transformation in our transport system' with cycling and walking being the natural first choice for many journeys and the target of half of all journeys in towns and cities being cycled or walked by 2030.

It concludes by stating that 'We will not fund or part-fund any scheme that does not meet the new standards and principles {set-out in this document}. We will not allow any other agency or body to fund such schemes using any of our money.'

1.13 Local Transport Note 1/20: Cycle Infrastructure Design (Department for Transport, 2020)

This guidance describes current best practice, standards and legal practice with regards to the delivery of high-quality cycle infrastructure. This document has been produced in support of the statutory Cycling and Walking Investment Strategy (CWIS), that sets a clear ambition for cycling and walking to become the natural choices for short journeys or as part of a longer journey, as well as to increase cycling and walking levels.

The underlying theme of this guidance is to make cycling inclusive for all ages and abilities. Whilst local authorities are responsible for setting the design standards for their roads, this national guidance provides a recommended basis for those standards based on five overarching design principles for when people are walking or travelling by cycle. They need networks and routes that are:

- Coherent;
- Direct;
- Safe;
- Comfortable; and
- Attractive.

Importantly, the document notes, as Lancaster City Council have, that there will be an expectation that local authorities will demonstrate that they have given due consideration to this guidance when designing new cycling schemes and, in particular, when applying for Government funding that includes cycling infrastructure.

1.14 Lancaster Local Cycling & Walking Infrastructure Plan (2024)

AtkinsRéalis was commissioned by Lancashire County Council (LCC), in partnership with Lancaster City Council, to develop stages 1 to 4 of a Local Cycling and Walking Infrastructure Plan (LCWIP) for Lancaster District. The primary objective for the LCWIP is to increase the number of people wheeling, walking and cycling in the Lancaster District.

The Lancaster LCWIP sets out a long-term strategy of potential infrastructure to improve conditions for active travel and support a shift from car journeys to sustainable modes. Development of the LCWIP is the first step in the process to support future investment in active travel.

The document defines 13 priority cycle corridors using an evidence-based approach and outlines potential infrastructure interventions to enhance these selected strategic and primary cycle corridors. The proposed measures are high level and indicate potential interventions for consideration in the next stage of scheme development. In addition, the document identifies 11 Core Walking Zones (CWZs), the key routes within and providing access to the primary CWZs and identifies potential types of walking infrastructure measures for further consideration in future stages.

1.15 Net Zero Strategy: Build Back Greener (HM Government, 2021)

This document sets out Government policies and proposals intended to achieve the UK's upcoming carbon budgets and sets out a vision for a decarbonised economy in 2050. Specifically in relation to domestic transport it has the following to say:

"Domestic transport has the largest share of UK greenhouse gas emissions of any sector across the economy, at 23% in 2019. The majority (55%) of these emissions are from passenger cars, contributing 68 MtCO2e. This is followed by heavy goods vehicles and light goods vehicles contributing 19 MtCO2e (16%) and 19 MtCO2e (16%) respectively."

"Residual emissions from domestic transport could need to fall by around 34-45% by 2030 and 65-76% by 2035, relative to 2019 levels."

1.16 Sixth Carbon Budget (Climate Change Committee, 2020)

The UK's Climate Change Committee (CCC) outlined a transformative pathway for the surface transport sector to meet the Sixth Carbon Budget (2033–2037), targeting a 78% reduction in greenhouse gas emissions by 2035 from 1990 levels. As the highest-emitting sector in the UK (113 $MtCO_2e$ in 2019), surface transport plays a pivotal role in achieving Net Zero by 2050. Key strategies and measures to support this include:

Demand Reduction & Modal Shift:

- Significant emission reductions can be achieved by reducing private car use through societal trends (e.g. home working), increasing car occupancy via shared mobility, and shifting travel to public transport and active modes like walking and cycling.
- Modal shift strategies include promoting e-bikes for short to medium trips, expanding public transport, and improving walking/cycling infrastructure.
- Demand reductions of 7–16% in car-kilometres by 2030 and up to 34% by 2050 are modelled, with associated co-benefits including reduced congestion and improved health.

Vehicle Efficiency Improvements:

- Short-term reductions rely on more efficient driving, vehicle lightweighting, and aerodynamic enhancements.
- Fleet-wide measures, such as eco-driving and speed management, contribute 2–8% savings in fuel consumption.
- In freight, operational efficiency gains through route optimisation, consolidation centres, and improved logistics offer up to 11% emissions savings.

Electrification and Zero-Emission Vehicles:

- A rapid shift to zero-emission vehicles (ZEVs) is essential. Battery-electric vehicles (BEVs) are projected to dominate car and van sales by 2030, achieving cost parity with conventional vehicles around the same time.
- Heavy goods vehicles (HGVs) will adopt a mix of BEVs, hydrogen fuel cells, and electric road systems, although battery limitations and infrastructure needs remain key challenges.
- Full electrification of rail is targeted at 55–60% by 2050, supported by hybrid and hydrogen train deployment on non-electrified routes.

Infrastructure and Policy Support:

- Large-scale deployment of EV charging infrastructure is needed—260,000 to 480,000 public charge points by 2040.
- Policy actions include phasing out new internal combustion engine (ICE) vehicle sales by 2030–2035, strengthening emissions standards, and incentivising modal shift and shared mobility.
- Investments in low-carbon transport yield high returns, with benefit-to-cost ratios exceeding 3–4 when health, air quality, and congestion are factored in.

Achieving substantial decarbonisation in surface transport requires coordinated efforts across technology, infrastructure, behaviour, and policy. The CCC's Balanced Net Zero Pathway envisions a sector-wide transition that balances innovation with public engagement and equitable access to sustainable travel options.

1.17 Lancashire and Blackburn with Darwen Electric Vehicle Infrastructure Strategy (Atkins, 2023)

Atkins, in collaboration with Field Dynamics, was commissioned by Lancashire County Council (LCC) and Blackburn with Darwen Borough Council (BwD) to understand the need for Electric Vehicle Charging Infrastructure (EVCI) across the region and to develop an EVCI strategy that would support the needs of drivers and facilitate the increased adoption of Electric Vehicles (EVs). The aim of the strategy is to provide clear direction and transparency to the deployment of electric vehicle infrastructure across Lancashire and Blackburn with Darwen. It estimates the projected future demand for EV charging infrastructure and sets out recommendations and actions to deliver the following vision:

> *To deliver appropriate, accessible, and equitable EV charging provision across Lancashire and Blackburn with Darwen, in collaboration with commercial operators, to meet the expected growth in EV usage and demand from residents, businesses and visitors without access to off-street charging.*

The Strategy estimates, using National Grid Consumer Transformation Future Energy Scenario, that by 2030, a total of 244,728 vehicles will be electric in Lancashire, representing 36% of all cars and vans. As a result, it is estimated that there will be a need for a total of 6,655 charge points to support a current projected fleet of 245,000 vehicles by 2030. The Strategy also separates the district into four key typologies: public need, visitor, commercial, off-street, and minimum need. Public need, visitor, and commercial areas are prioritised for charging intervention, with the majority of chargers required being primary nearby chargers to serve off-street business drivers.

1.18 Lancaster District Local Climate Engagement (2023)

Developed by Shared Future as part of the national Local Climate Engagement programme, this project engaged residents in transport-related climate discussions using digital tools (Pol.is), community-led research (Community Explorers), and deliberative workshops.

Two major opinion groups emerged—car-dependent residents versus sustainability-focused citizens—but areas of consensus included the need for better rural transport, safer infrastructure, and inclusive accessibility.

Key recommendations called for integrated, affordable, and reliable public transport, improved pedestrian and cycling safety, and services that support multi-modal travel. The findings underline the importance of public trust, consensus-building, and tailoring transport policy to diverse lived experiences across the district.

1.19 Lancaster District Local Area Energy Plan (October 2024)

Prepared by Energy Systems Catapult, the Electric Vehicle (EV) section of the LCC Local Area Energy Plan (LAEP) was configured to be in line with the Lancashire and Blackburn with Darwen Electric Vehicle Infrastructure Strategy. The LAEP sets out a long-term vision for decarbonising the Lancaster district by 2040.

The LAEP described a need to deliver appropriate, accessible, and equitable EV charging provision in collaboration with commercial operators to meet the expected growth in EV usage and demand from residents, businesses and visitors, in particular those without access to off-street charging. It proposed a zonal distribution of home and EV public charging points across three potential EV uptake scenarios, in order to help facilitate the uptake of EVs throughout the district.

1.20 The Lancaster District Climate Change People's Jury (2020)

Commissioned by Lancaster City Council, this deliberative process brought together 30 demographically representative residents to make recommendations on addressing climate change locally.

Transport emerged as a central concern, with calls for more affordable and reliable public transport, reduced car dependency, support for active travel, and infrastructure investment.

The jury highlighted the social justice dimensions of climate policy, stressing that changes must be equitable and inclusive. Their recommendations provide democratic legitimacy for bolder sustainable transport initiatives and serve as a foundation for citizen-informed decision-making in the Council's climate and transport strategies.

1.21 Placemaking with Young Adults (2024)

This report details a British Academy-funded project exploring placemaking through engagement with young adults in the Lancaster District. It brought together 22 young people, 20 policymakers, and academics through workshops and interviews to co-develop sustainability-focused visions for the future.

Key themes included inclusive community spaces, active travel infrastructure, affordable housing, and renewable energy. The project emphasized co-creation, with young adults articulating a preference for walkable, safe environments, diverse transport options, and locally grounded sustainability initiatives.

The process fostered collaborative policymaking and integrated youth perspectives into the Local Plan, offering a model for participatory planning. The findings advocate for embedding young voices and transdisciplinary collaboration into transport and sustainability strategies.

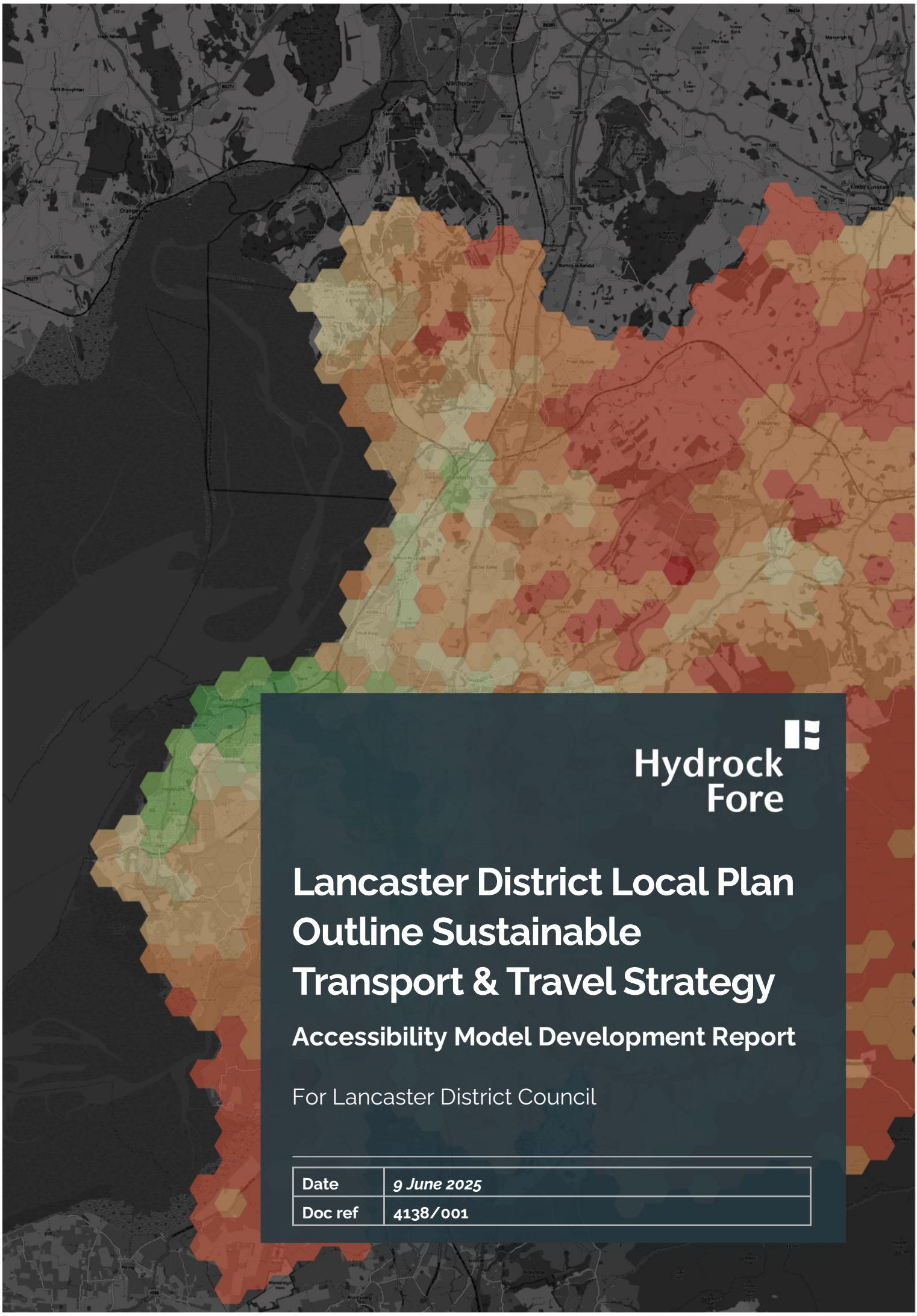
1.22 Sustainability in the Lancaster District (2023)

This ImaginationLancaster report analysed survey data from over 1,600 residents to understand transport behaviour and sustainability attitudes.

Most residents travel by car frequently, with over a third indicating that nothing would prompt them to reduce car use. However, significant support was found for improved, cheaper, and more frequent public transport, better walking routes, and safer cycling infrastructure.

Sustainable travel was also linked to better physical and mental health. Barriers identified include affordability, safety (especially at night), and inadequate rural transport. These insights inform a transport strategy aimed at behavioural change through better infrastructure, accessibility, and addressing health and equity outcomes.

Appendix B Accessibility Model Development Report



Hydrock Fore

Lancaster District Local Plan Outline Sustainable Transport & Travel Strategy

Accessibility Model Development Report

For Lancaster District Council

Date	***9 June 2025***
Doc ref	**4138/001**

Document control sheet

Issued by	Hydrock Fore	hydrock.com
Client	Lancaster District Council	
Project name	Lancaster District Local Plan Outline Sustainable Transport & Travel Strategy	
Title	Accessibility Model Development Report	
Doc ref	4138/001	
Project number	4138	
Status	Issue	
Date	09/06/2025	

Document production record		
Issue number	2	Name
Prepared by		Project Team
Checked by		Ashley Russell
Approved by		Andrew Bradshaw

Document revision record			
Issue number	Status	Date	Revision details
1	Final Draft	28/4/2025	Final Draft
2	Issue	09/06/2025	Final

Hydrock Fore has prepared this report in accordance with the instructions of the above named client for their sole and specific use. Any third parties who may use the information contained herein do so at their own risk.

Contents

1. Introduction

2. Accessibility Model Structure

2.1 Model Structure

3. Zoning

3.1 Defining the Zone System

4. Networks

5. Proximity Metrics

5.1 Introduction

5.2 Catchments

5.3 Scoring

5.4 Combined Proximity Score

6. Route Quality Metrics

6.1 Introduction

6.2 Combined Accessibility Score

6.3 Validation of the Combined Accessibility Score

7. Summary

1. Introduction

Hydrock, now Stantec are appointed to prepare an Outline Sustainable Travel & Transport Strategy (OSTTS) for the Lancaster District. Understanding the existing accessibility of the district in terms of access to jobs and services by sustainable modes of transport is a key prerequisite to the development of the strategy. To achieve this, a comprehensive accessibility model has been developed that is able to quantify the existing accessibility by sustainable modes across the district as well as to predict changes in accessibility in future year scenarios. The model has been developed to use as a tool to support the development of the Local Plan to ensure that the most sustainable transport outcomes are achieved.

This report sets out the development of the baseline accessibility model.

2. Accessibility Model Structure

2.1 Model Structure

A bespoke accessibility model has been developed specifically for this study. The model comprises four elements as follows:

- A network model built in Aimsun software that can be used for the calculation of journey times and journey quality between each zone.
- An accessibility model built in Excel that is used to determine accessibility scores for a range of different metrics using journey time and journey quality data from the Aimsun model.
- A QGIS project used for the presentation and analysis of outputs from the accessibility model and to enable sharing of outputs.
- An EV model used to determine the demand for EV charging infrastructure, built in Excel and QGIS.

The model structure is summarised in the flow chart in Figure 1, which shows the linkages and dependencies between the four model elements. Figure 2 to Figure 4 show the structure of the network, spreadsheet and GIS models in detail, including the inputs, processing tasks and outputs from each element of the model. The structure of the EV model is discussed in a separate report.

Figure 1: Overview of Accessibility Model Structure

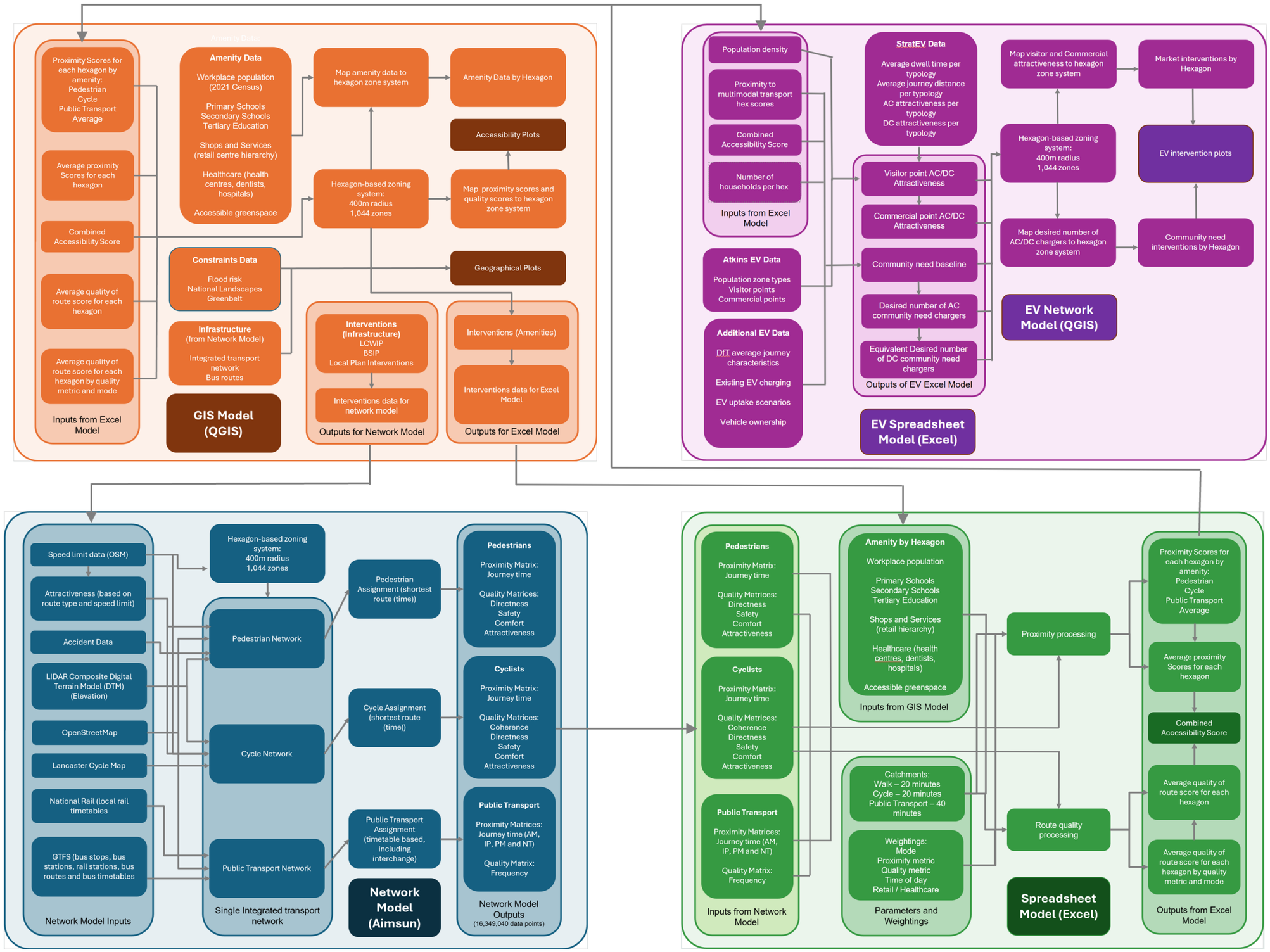


Figure 2: Network Model Structure

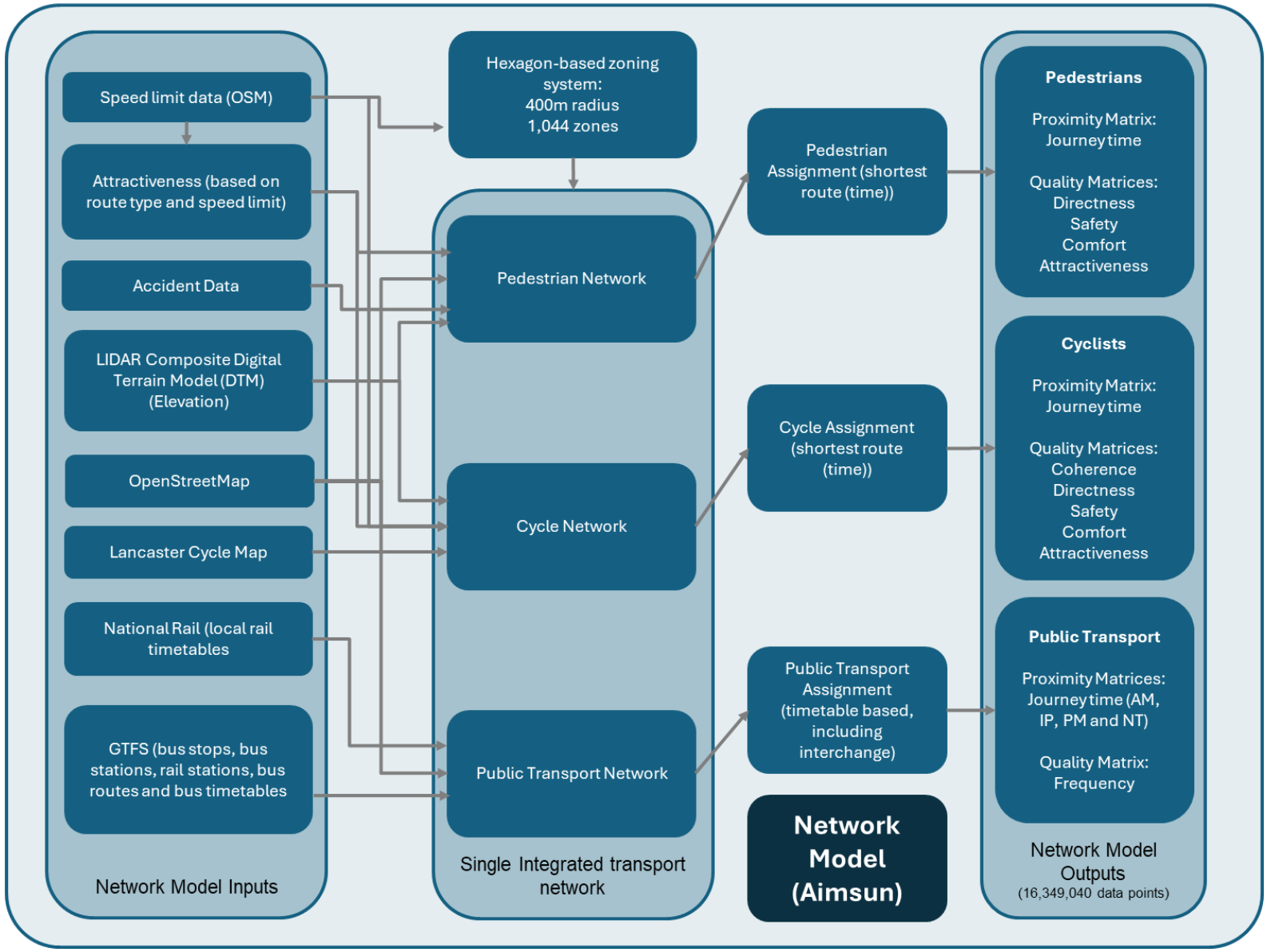


Figure 3: Spreadsheet Model Structure

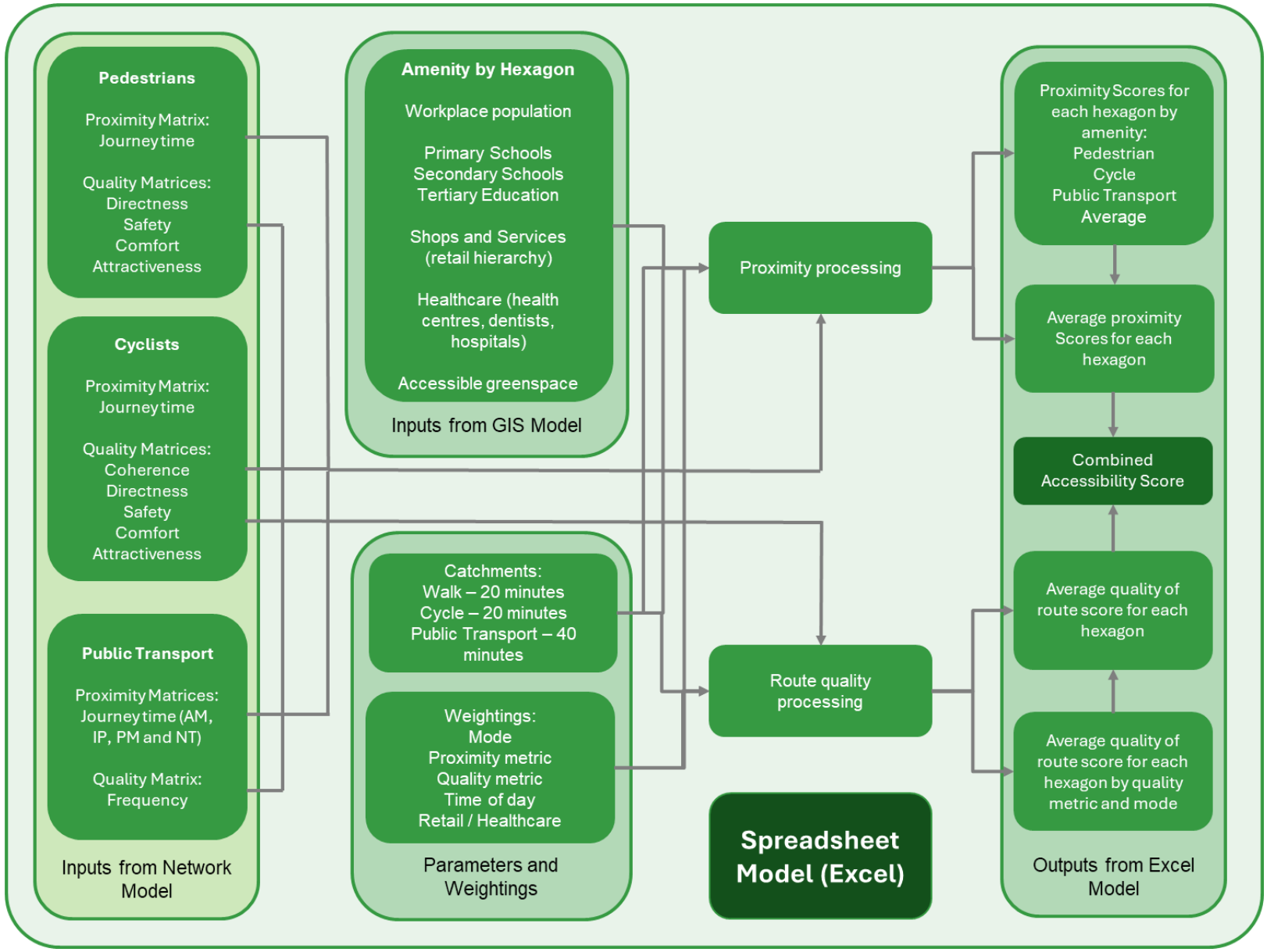
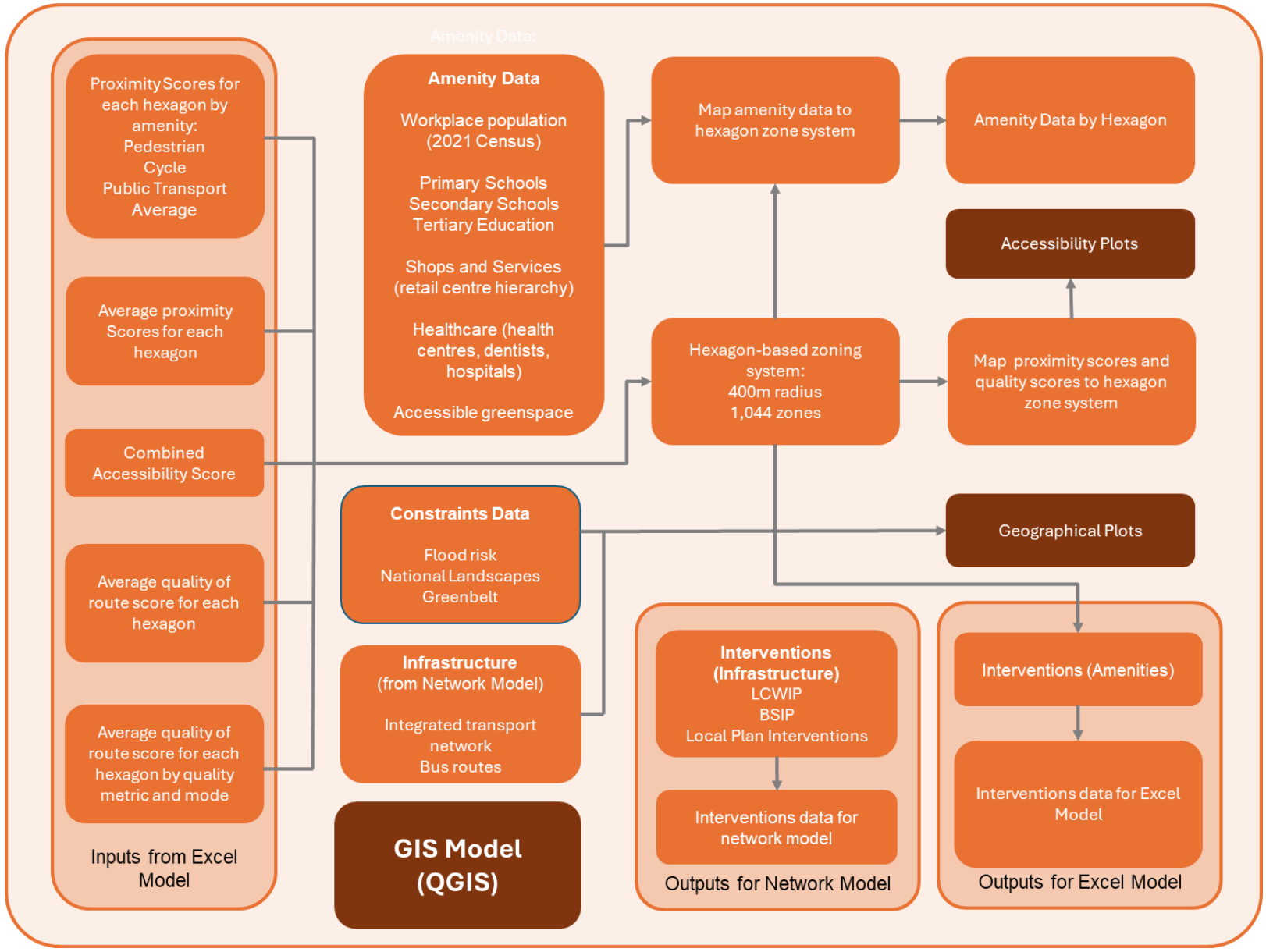


Figure 4: GIS Model Structure

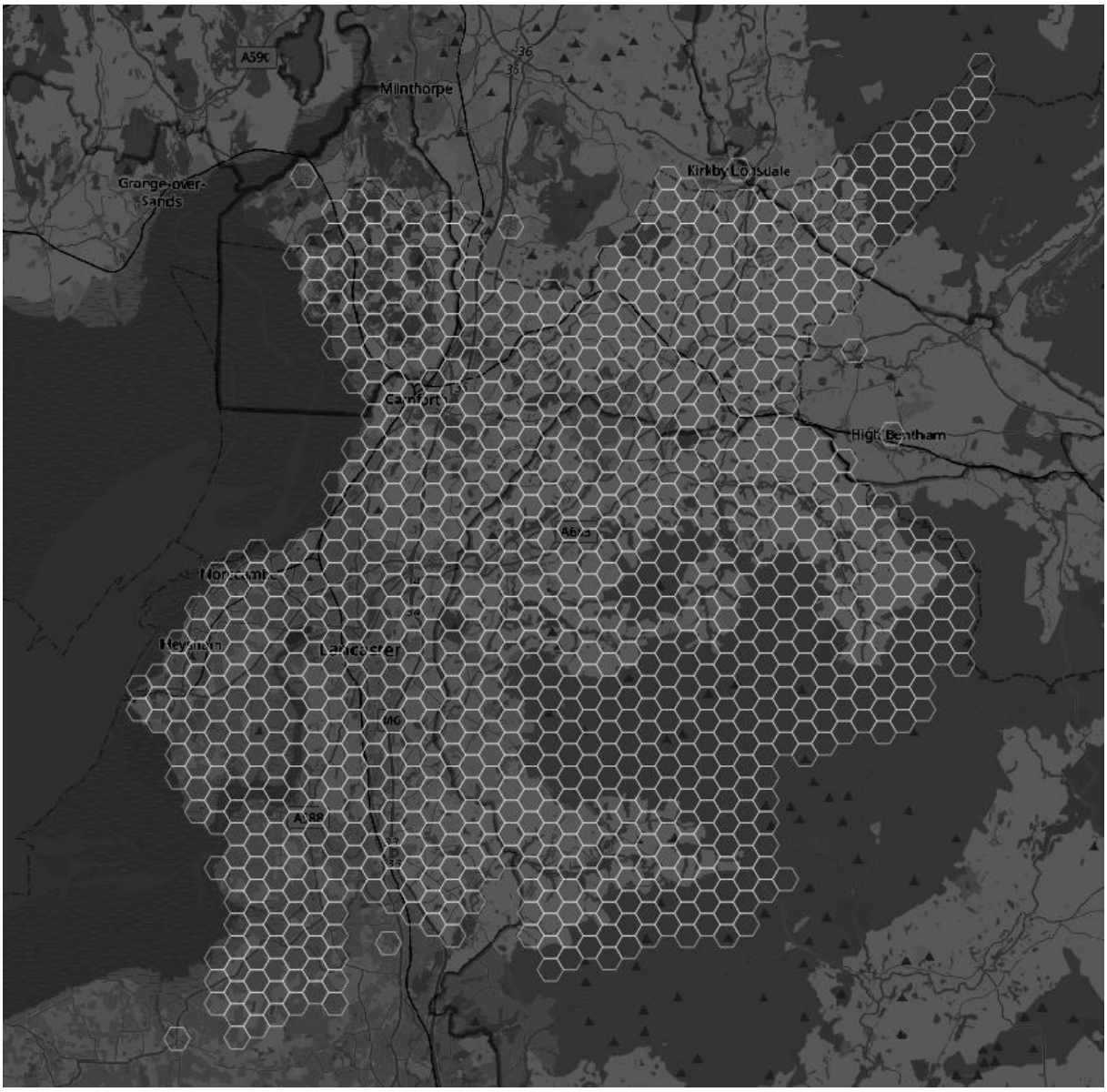


3. Zoning

3.1 Defining the Zone System

This study does not aim to identify individual sites but rather aims to identify the broad locations that have the potential to accommodate sustainable development and the interventions that would be required to facilitate sustainable development outcomes. As such, an abstract zoning system has been adopted that is based on a grid of 1,044 hexagons covering the Lancaster District, as shown in Figure 5.

Figure 5: Accessibility Model Zoning



A hexagon radius of 400m was chosen as this represents a typical maximum walking distance to a bus stop and therefore provides an appropriate scale for a strategic study of this nature.

In addition to the hexagons covering Lancaster District, a further seven hexagons are included in the zone structure to account for the nearby settlements of Arnside, Burton-in-Kendal, Kirkby Lonsdale, Burton in Lonsdale, High Bentham, Forton and Stake Pool. This allows for local facilities in these settlements to be taken into account in the accessibility analysis and thereby minimising edge effects in the model.

Zone centroids representing the geographic centre of each hexagon have been linked to the closest part of network using zone connectors. This means that the journey between the zone centroid and the network is based on a straight-line distance, although the rest of the journey will be based on actual travel distances. The use of the zone centroids means that journey times between hexagons is that between centre of each hexagon, meaning that some journeys will be longer and others shorter than represented in the model. However, this is considered adequate for the purposes of this strategic study.

The zone structure could be refined (e.g. to consider 200m radius hexagons or other forms of zoning) should this be considered necessary to support more detailed analysis over a smaller geographical area at a later stage.

4. Networks

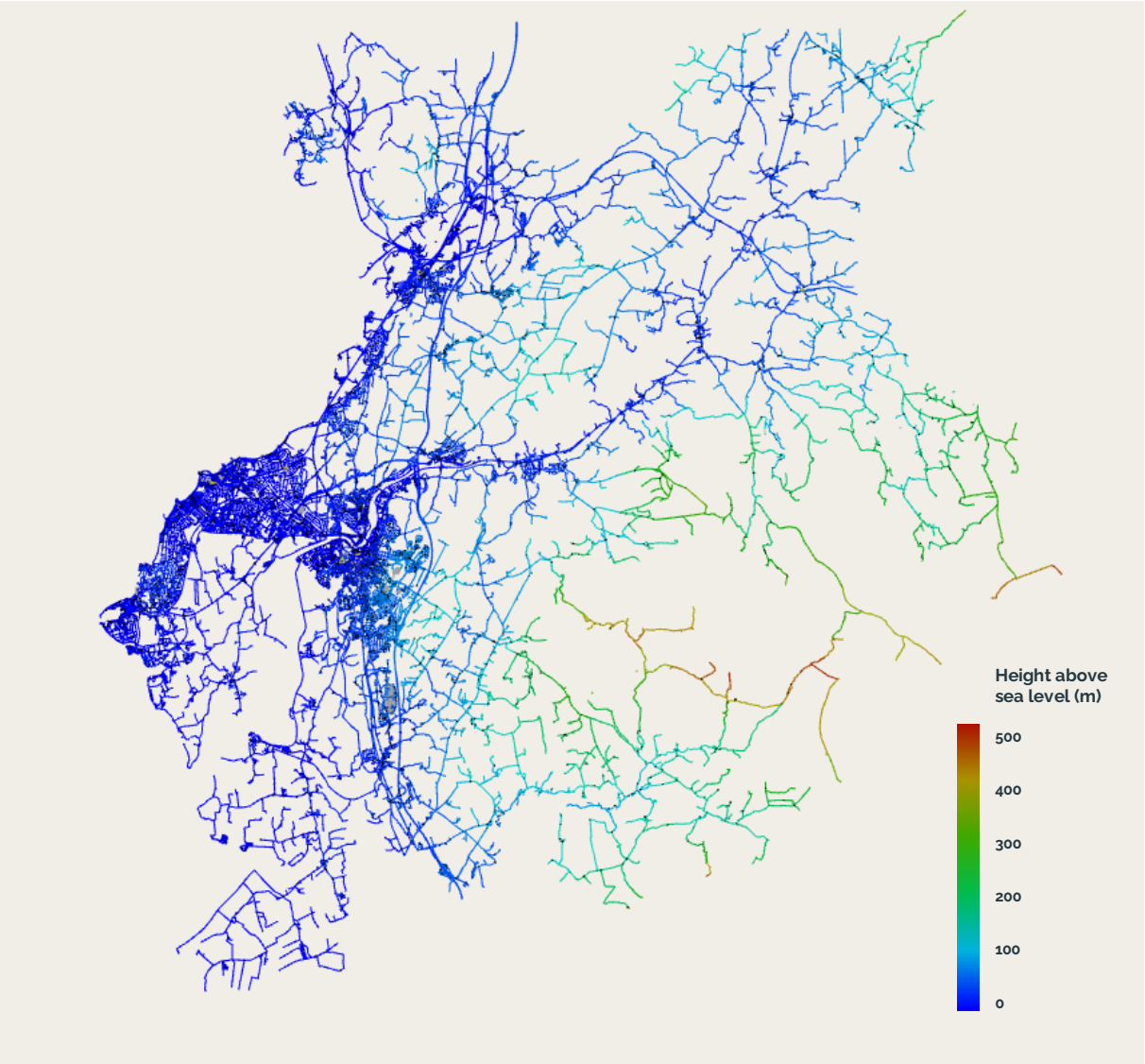
The network model has been developed using Aimsun software by importing network data from OpenStreetMap (OSM). This provides a single integrated network that can be used for traffic, walking, cycling and public transport assignment. Figure 6, below, shows an extract from the network model.

Figure 6: Extract from the Network Model

A LIDAR Digital Terrain Model (DTM)[1] has been used to determine the elevation of each point on the network allowing gradient to be taken into account. The coded networks, including elevation information, is shown on Figure 7.

[1] https://environment.data.gov.uk/dataset/13787b9a-26a4-4775-8523-806d13af58fc

Figure 7: Network and Elevation



4.1.1 Walking

The road network imported from OSM forms the basis of the walking network, with the exception of motorways and other routes where pedestrians are not permitted. The underlying assumption is that the road network is a reasonable proxy for the network of footways which typically run adjacent to the carriageway. The walking network also includes specific pedestrian only paths and shared-use cycleways. This simplified representation of the pedestrian network is considered suitable for a strategic study of this nature. However, further detail could be included in the model in due course, including footways and pedestrian crossings, should this be required for specific purposes.

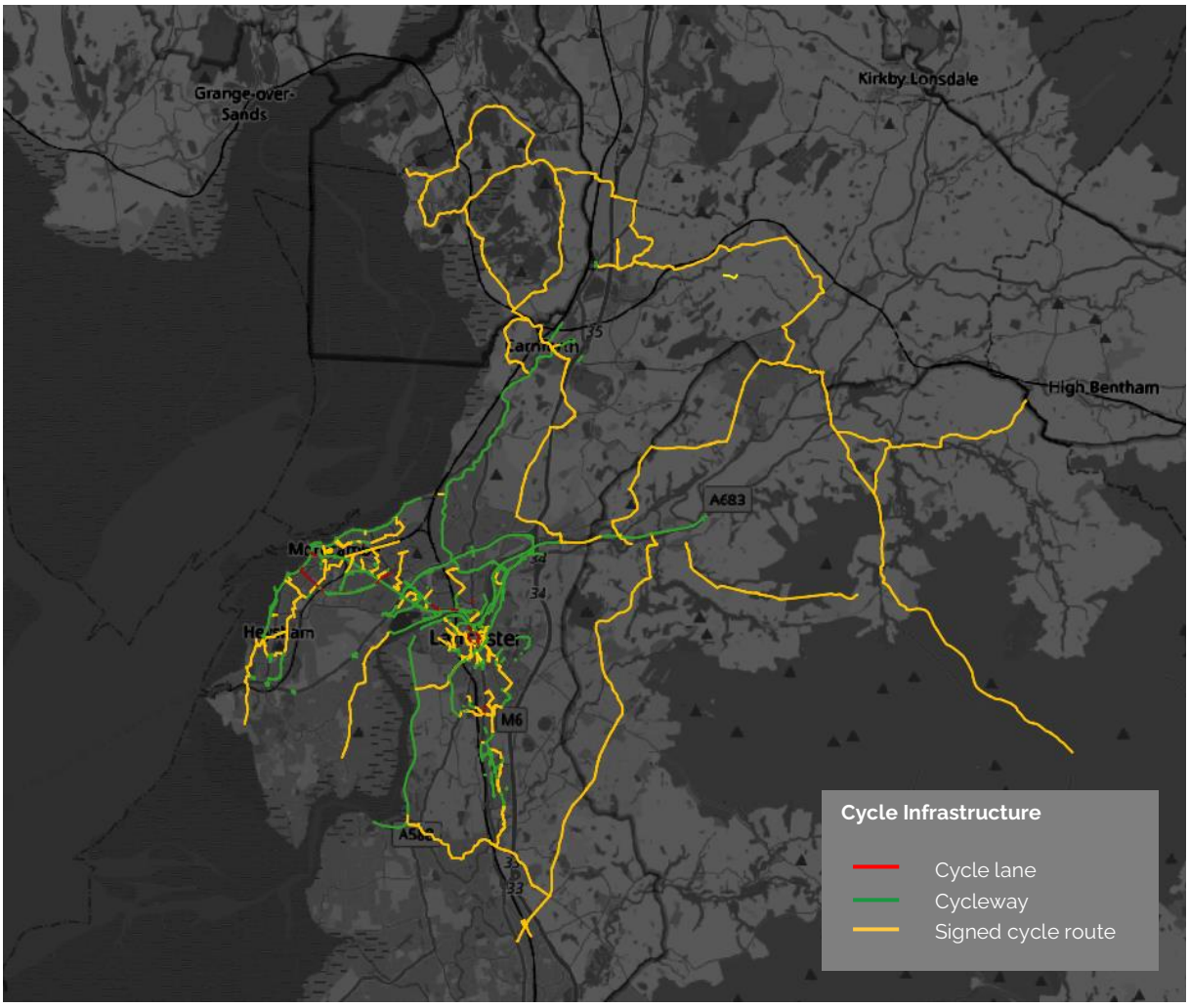
Pedestrians are modelled assuming an average walk speed of 4.8 km/h. In practice, it is acknowledged that pedestrians would have a range of walk speeds but the model is seeking to represent the average scenario. Alternative walk speeds can be sensitivity tested within the model should this be necessary. To account for gradient, journey times on foot are increased at a rate of 1 hour for every 600m climbed. Pedestrians are assigned to the network using all-or-nothing assignment, which assigns trips to the quickest route. Since elevation is taken into account in the calculation, trips could therefore be assigned to longer, flatter routes if these have a quicker journey time.

4.1.2 Cycling

The cycling network is also based on road and cycle networks imported from OSM. The Lancaster Cycle Map[2] has been used to supplement this network with additional information such as signed cycle routes, cycleways and cycle lanes. The cycle infrastructure included in the model is shown in Figure 8 and includes on road cycle lanes (both advisory and mandatory). cycle tracks and signed cycle routes.

Cyclists are modelled assuming an average cycle speed of 16 km/h, with a time penalty added to account for climbing at a rate of 1 hour for every 400m. Cyclists are assigned to the network using all-or-nothing assignment, which assigns trips to the quickest route. Since height climbed is taken into account in the calculation, trips could therefore be assigned to longer, flatter routes if these have a quicker journey time. As with pedestrians, cyclists may travel different speeds depending on their preferences and levels of fitness. However, the model aims to replicate the average scenario with the ability to sensitivity test other scenarios should that be required.

Figure 8: Dedicated Cycle Infrastructure and Signed Routes

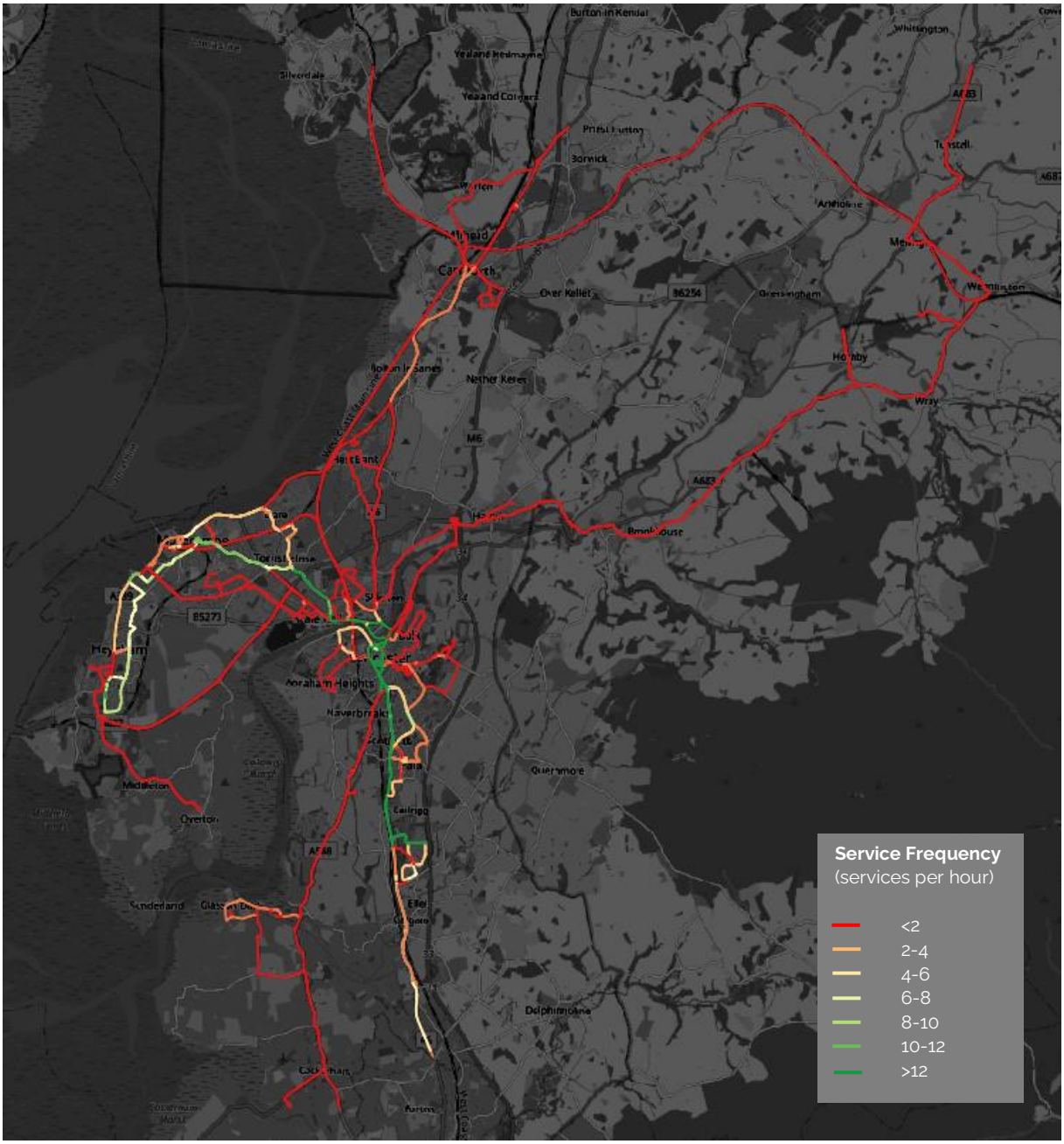


[2] https://www.lancaster.gov.uk/assets/attach/549/Cycling-routes.pdf

4.1.3 Public Transport

Public transport data has been imported into the model using the General Transit Feed Specification (GTFS) data[3]. This provides information on stop locations, routes and timetables ensuring a comprehensive representation of public transport in the model. This includes all weekday bus services as well as local rail services. National rail services have not been included in the model, as the model is assessing local accessibility within Lancaster District. The public transport services and frequencies in the model are illustrated in Figure 9 for the AM peak hour.

Figure 9: Public Transport Services and Frequencies | AM Peak Hour (0800 to 0900)



[3] https://data.bus-data.dft.gov.uk/timetable/download/ (Note: registered account required)

All bus stops and rail stations are modelled. It is assumed that all bus stops within a given hexagon can be accessed (i.e. all bus stops within 400m of the zone centroid). The straight-line distance between the zone centroid and the bus stop is used to calculate the access time to the bus stop, assuming a 4.8km/h walking speed. Similarly, all rail stations within 1.0km of a zone centroid are assumed to be within walking distance of that hexagon, with straight-line distances used to calculate the access time. Whilst the use of straight-line distances may not be suitable for considering access to public transport at a detailed local level, it is considered appropriate at the strategic level of the accessibility model. If necessary, straight-line walking distances could be overridden in the network model to reflect locally specific walking distances should be model be used in the future at a more local level.

The model allows for interchange between bus and rail at rail stations, and between buses at bus stations. Wait times at stops are assumed to be half of the headway or 5 minutes, which ensures that the effects of frequency are taken into account. The effect of public transport frequency is also considered within the journey quality assessments.

Public transport assignment is undertaken using all-or-nothing assignment based on timetable data. This means that trips are assigned to the quickest public transport option.

5. Proximity Metrics

5.1 Introduction

Proximity metrics seek to determine accessibility by sustainable modes having regard to the proximity of employment, education and local facilities. Proximity is not the only determinant of accessibility, and the quality of the routes is also considered, as set out in section 3.9.

5.2 Catchments

The accessibility model allows different journey time catchments to be defined for each mode, with the following assumptions being adopted for this study:

- Walking – 20 minutes
- Cycling - 20 minutes
- Public transport – 40 minutes

A 20 minute walk catchment was selected as this represents a journey length of 1.6km, which is approximately two hexagons in the accessibility model zoning system. For walking and cycling, the catchment also reflects the concept of 20 minute neighbourhoods, where all facilities required on a daily basis are within an easy travel distance by sustainable modes.

For public transport, a longer catchment (40 minutes) has been adopted following sensitivity testing in the model. As the public transport journey time includes walking, waiting and interchange, a longer journey time catchment is required to capture common public transport journeys.

When considering proximity metrics, journeys that exceed these journey time catchments are excluded from the analysis. The catchments used in the model are therefore maximum catchments and are intended to represent the maximum time that someone would be prepared to travel by a given mode. These are not intended to be definitions of high accessibility, and, in practice, it may be preferable to design for shorter catchments to achieve the best sustainable outcomes. This is captured in the model through the scoring, which prioritises shorter distances and is discussed below.

5.3 Scoring

This section identifies the proximity metrics used in the accessibility modelling and the scoring that has been applied to those metrics. In determining the scoring, hexagons were initially ranked based on the metric and assigned to a decile, which was then equated to a score of between 1 and 10 (with 0 used for no proximity). This ranking was then used to inform the absolute scoring set out in this section. An absolute scoring system is necessary to be able to determine the impact of interventions against the baseline.

5.3.1 Access to Employment

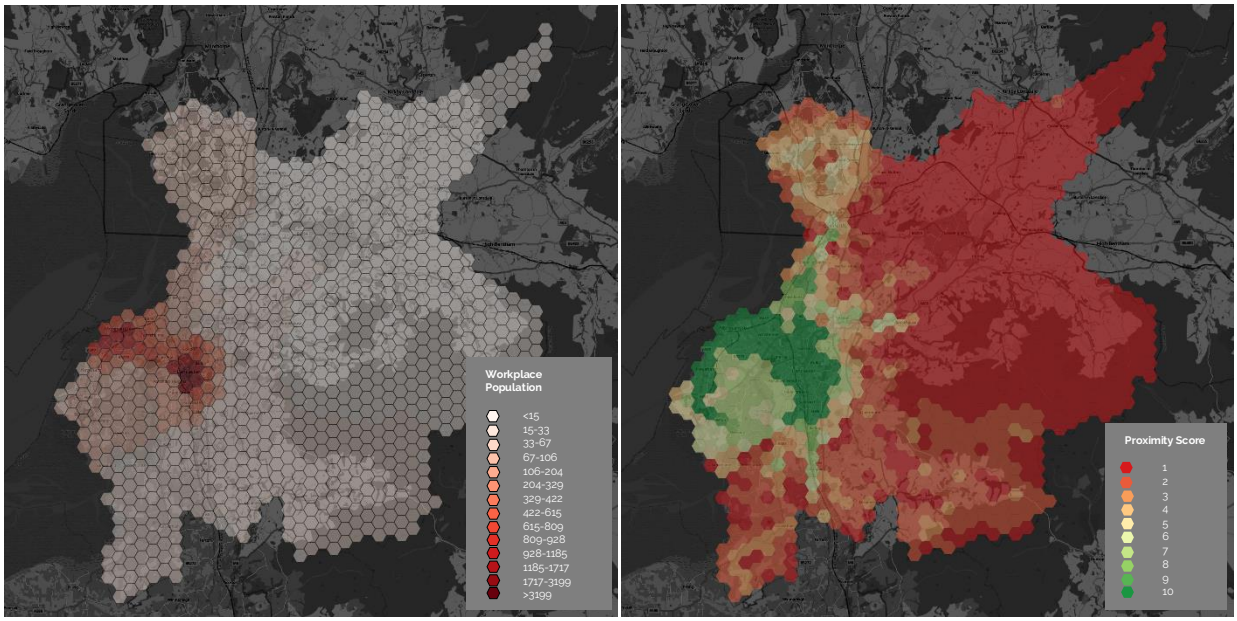
A large proportion of trips, particularly during the peak hours, are associated with commuting to work and therefore locating development within easy access of employment opportunities by sustainable modes of transport is fundamental to a sustainable transport strategy. It is considered that more trips would be made by sustainable modes of transport if there are more jobs available within the catchment for those modes rather than just considering proximity to employment locations.

In order to consider access to employment, the workplace population for Lancaster District from the 2021 Census (as a proxy for the number of jobs) has been mapped onto the hexagon zones, as shown in Figure 4. The left image in Figure 10 shows the outcome of this process, and represents the workplace population in each hexagon. The total workplace population within the journey time catchment for each mode has then been summed to determine the total workplace population within the catchment of each hexagon by mode and assigned a score, as set out in Table 1, with the combined score across all modes also shown in Figure 10.

Table 1: Access to Employment

Workplace Population within catchment (people)			Score
Walking	Cycling	Public Transport	
3,000	12,000	24,000	10
2,700	10,800	21,600	9
2,400	9,600	19,200	8
2,100	8,400	16,800	7
1,800	7,200	14,400	6
,1500	6,000	12,000	5
1,200	4,800	9,600	4
900	3,600	7,200	3
600	2,400	4,800	2
300	1,200	2,400	1
0	0	0	0

Figure 10: Proximity to Employment



Workplace Population *Proximity to Workplace Population (all modes)*

5.3.2 Access to Education

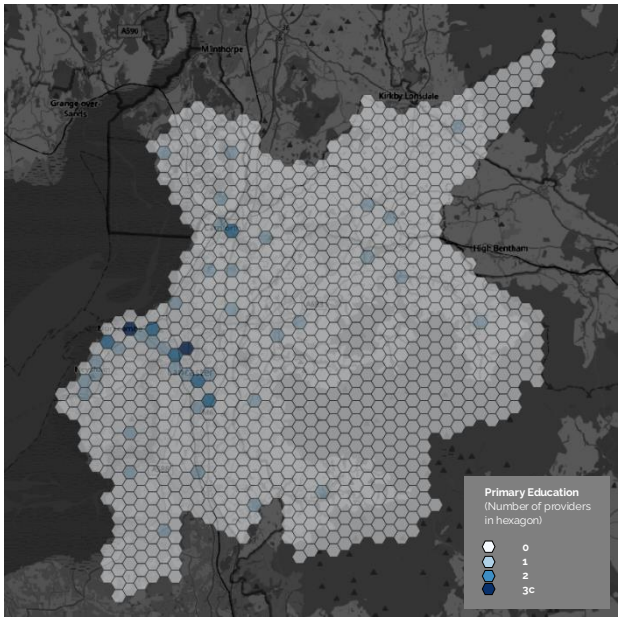
Travel to school, college or university is a daily occurrence for many people in the district and locating development where these facilities can be accessed by sustainable modes of transport will be important. Access to primary, secondary and tertiary education has therefore been considered by plotting the locations of schools, colleges and universities and assigning these to hexagons.

The distance to the nearest education facility in each category has been determined and used to assign a proximity score, as set out in Table 2. As these are combined with the catchments, hexagons with facilities within 15 minutes walk or cycle would score 10 and those with facilities within 20 minutes walk or cycle would score 9. Hexagons that required a walk or cycle of more than 20 minutes would score zero, despite the scoring in Table 2. Since bus catchments can be up to 40 minutes, scores of between 5 and 10 are available for this mode.

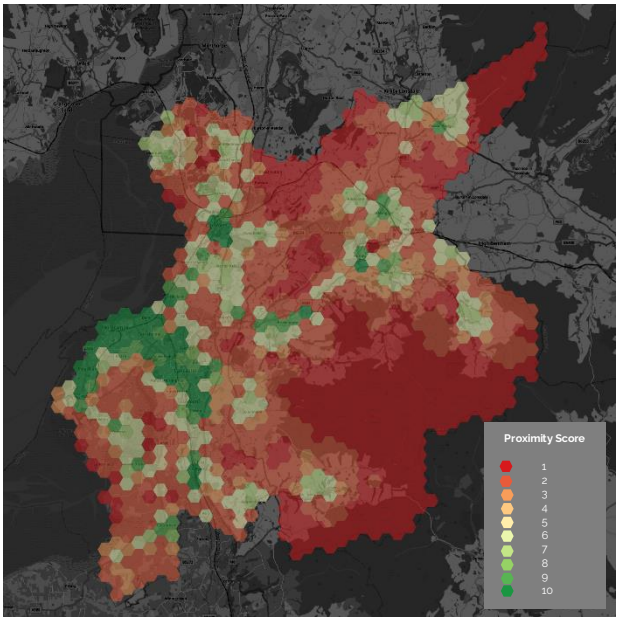
Table 2: Access to Education

Travel time to education facility (minutes)			Score
Walking	Cycling	Public Transport	
5	5	15	10
10	10	20	9
15	15	25	8
20	20	30	7
25	25	35	6
30	30	40	5
35	35	45	4
40	40	50	3
45	45	55	2
50	50	60	1
>50	>50	>60	0

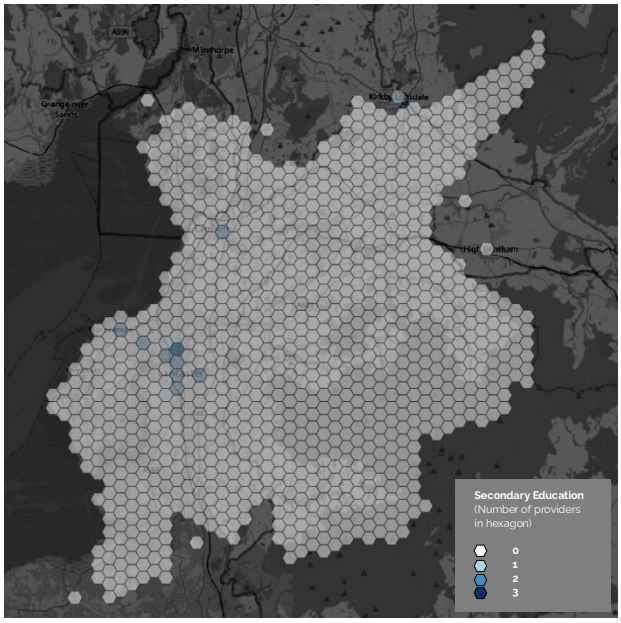
Figure 11: Proximity to Education



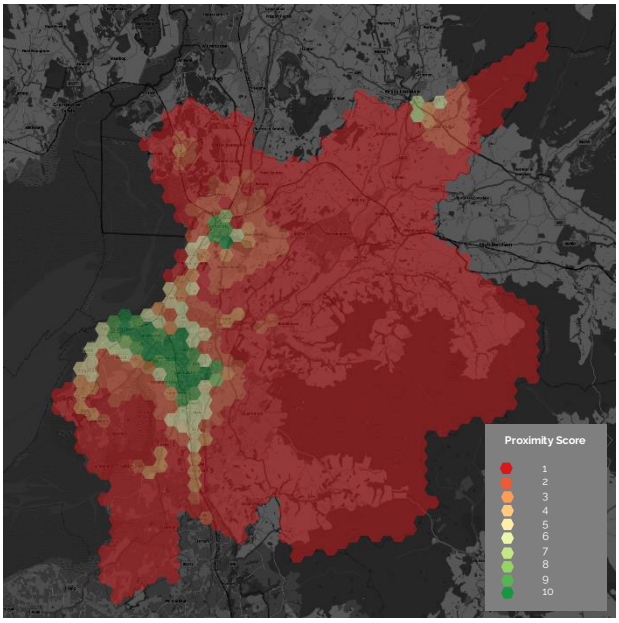
Location of Primary Schools



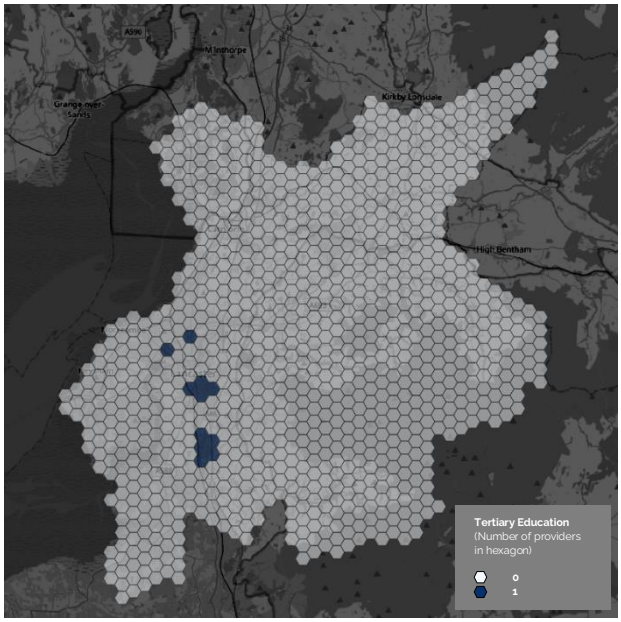
Proximity to Primary Education (all modes)



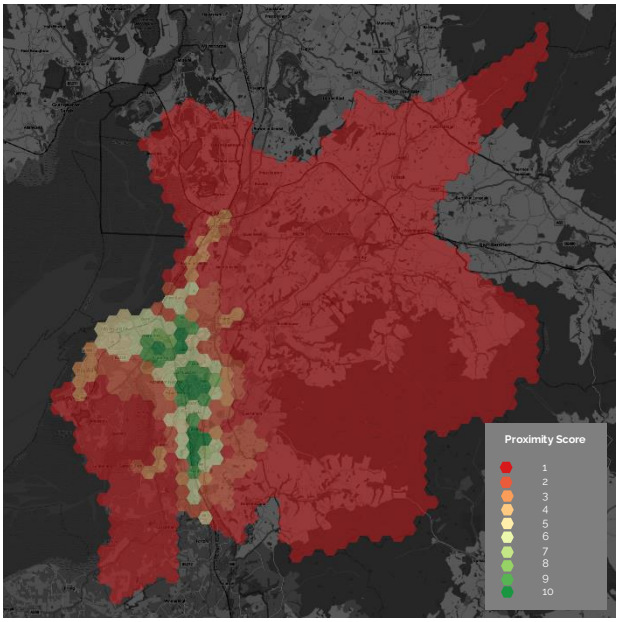
Location of Secondary Schools



Proximity to Secondary Education (all modes)



Location of Colleges and Universities



Proximity to Tertiary Education (all modes)

5.3.3 Access to Shops and Services

The range of shops and services within the journey time catchments provides a good indicator of the ability for an area to encourage trips to these by sustainable modes. In this case, retail centres have been identified within the categories set out in Table 3 and mapped and assigned to hexagons. These retail centres are used as proxy for shops, services and leisure uses, although further such uses may be available outside of these centres, such as individual food stores. The number of retail centres within the journey time catchment for each sustainable mode have then been summed, weighted by the values in Table 3.

Table 3: Retail Hierarchy Waiting

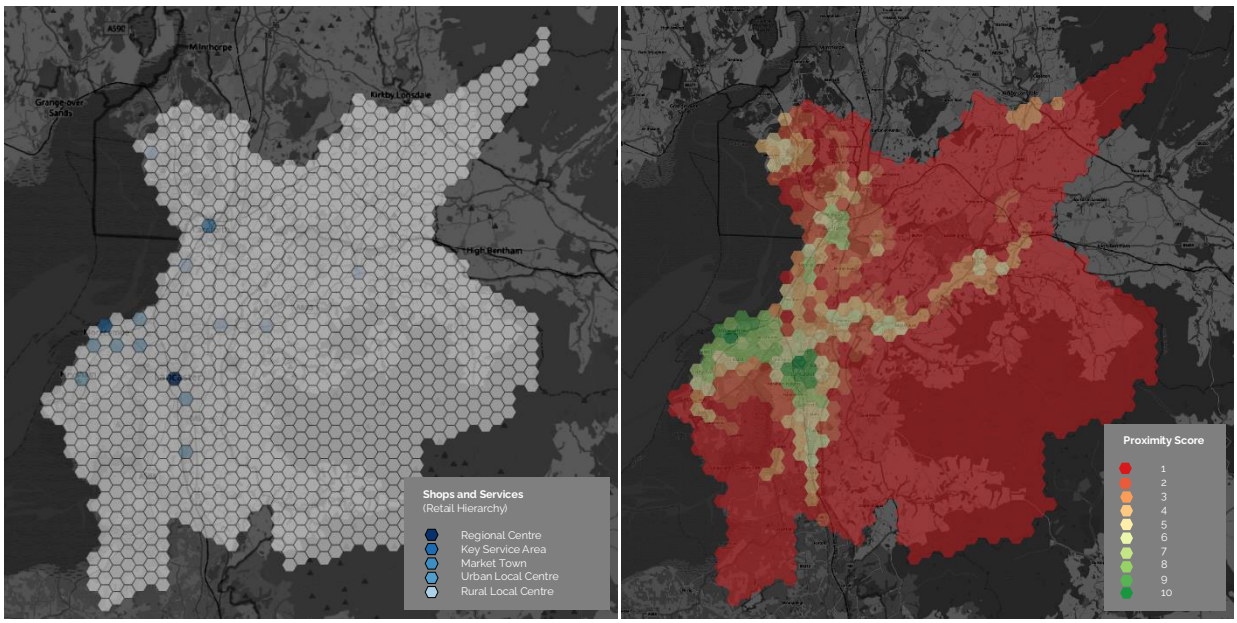
Retail Hierarchy	Weighting
Regional Centre	10
Key Service Centre	5
Market Town	5
Urban Local Centre	1
Rural Local Centre	1

The overall number of retail destinations, adjusted by the retail hierarchy, within the catchments of each hexagon are then used to determine the accessibility to shops and services based on the scoring set out in Table 4. Using the overall (weighted) number of retail destinations reflects that more sustainable locations have access to a greater range of shops and services, allowing people to better meet their daily needs by sustainable transport modes. However, to reflect that some access to shops and services is significantly better than none, the scoring starts at 3 ,4 and 5 for public transport, cycling and walking respectively. The combined proximity score across all modes is also shown in Figure 12.

Table 4: Access to Shops and Services

Number of retail centres with catchment weighted by retail hierarchy			Score
Walking	Cycling	Public Transport	
6	12	24	10
5	10	20	9
4	8	16	8
3	6	12	7
2	4	8	6
1	2	4	5
-	1	2	4
-	-	1	3
-	-	-	2
-	-	-	1
0	0	0	0

Figure 12: Proximity to Shops and Services



Location of Shops and Services *Proximity to Shops and Services (all modes)*

Source: Adopted Policies Map, July 2020, Lancaster City Council

5.3.4 Access to Healthcare

Whilst access to healthcare is not a daily occurrence for most people, being able to access health centres, dentists and hospitals by sustainable modes will assist with not needing to own a car. Healthcare facilities have been identified within the categories set out in Table 5 and mapped and assigned to hexagons. The number of retail centres within the journey time catchment for each sustainable mode have then been summed, weighted by the values in Table 5.

Table 5: Retail Hierarchy Waiting

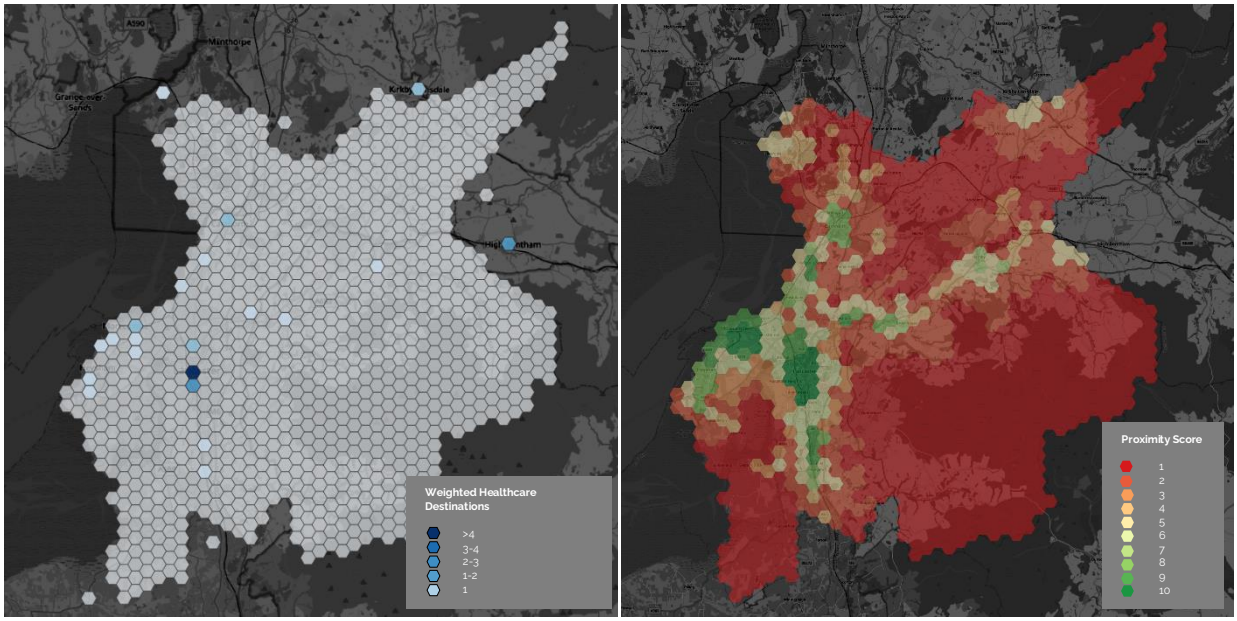
Retail Hierarchy	Weighting
Health Centre	5
Dentist	5
Hospital	1

The overall number of healthcare destinations within the catchments of each hexagon are then used to determine the accessibility to healthcare based on the scoring set out in Table 6, with the combined score across all modes also shown in Figure 13. Considering the number of healthcare destinations within the catchment reflects that more accessible areas will have access to a wider range and choice of healthcare.

Table 6: Access to Healthcare

Number of healthcare destinations within catchment (weighted)			Score
Walking	Cycling	Public Transport	
16	32	64	10
13	26	52	9
10	20	40	8
7	14	28	7
4	8	16	6
1	2	4	5
-	1	2	4
-	-	1	3
-	-	-	2
-	-	-	1
0	0	0	0

Figure 13: Proximity to Healthcare



Location of Healthcare Facilities

Proximity to Healthcare (all modes)

Source: Hydrock Fore analysis of healthcare facilities

5.3.5 Access to Accessible Green Spaces

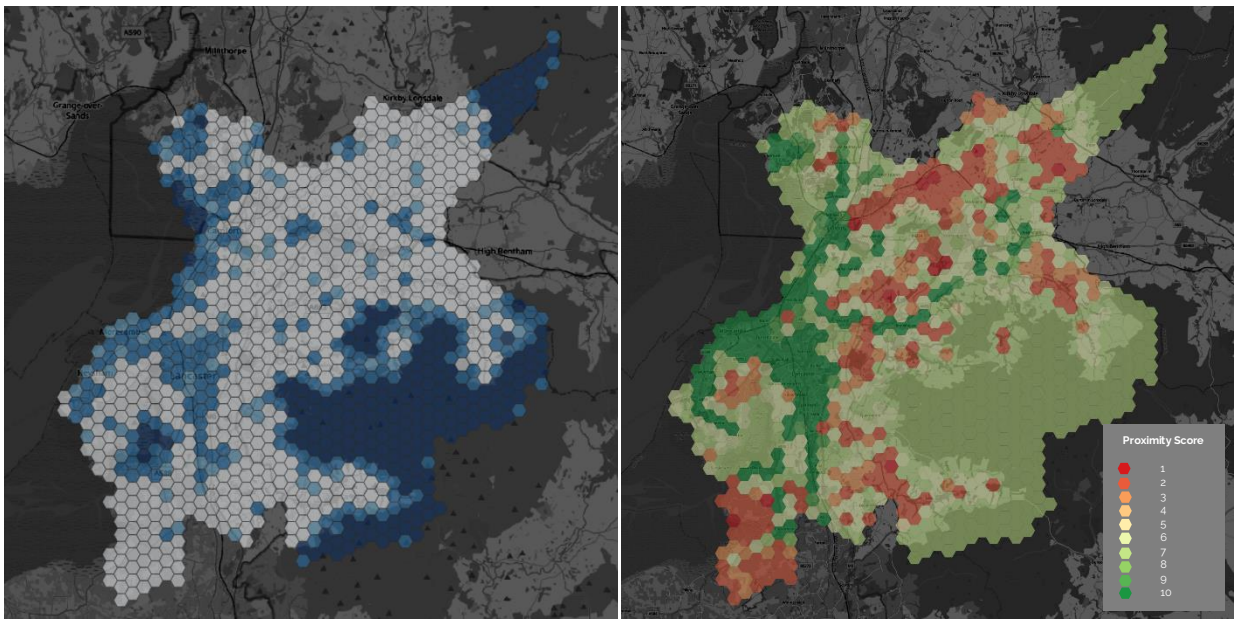
Being able to easily get to accessible green space is important for leisure activities, exercise and mental health and therefore is a daily requirement for many people. Access to these areas has therefore been considered by plotting the locations of accessible green space and assigning these to hexagons. Accessible green space is defined as that can be accessed by the general public. This includes any parks, play areas, sports facilities and community spaces such as allotments and cemeteries. The data also includes nature reserves and any land identified within the Countryside and Rights of Way (CRoW) Act. Woodland and Water Courses have been excluded from the data.

The travel time to the nearest accessible green space has been determined and used to determine a proximity score, as set out in Table 7, with the combined score across all modes also shown in Figure 14.

Table 7: Access to Accessible Green Spaces

Travel time to nearest accessible green space (minutes)			Score
Walking	Cycling	Public Transport	
15	15	15	10
20	20	20	9
25	25	25	8
30	30	30	7
35	35	35	6
40	40	40	5
45	45	45	4
50	50	50	3
55	55	55	2
60	60	60	1
>60	>60	>60	0

Figure 14: Proximity to Accessible Green Space



Location of Accessible Green Space *Proximity to Accessible Green Space (all modes)*

Source: Green and Blue Infrastructure (England), Natural England

5.4 Combined Proximity Score

The scores determined for each hexagon for each of the seven accessibility metrics identified above have been combined to give a combined proximity score, weighting these by the mode-based factors in Table 8 and the metric-based factors in Table 9. The modes have been weighted equally and the proximity indicators have also been weighted equally, when education is combined as a single category. Whilst different weightings could be applied, the application of equal weighting was found to provide reasonable proximity scores that could explain existing levels of mode share, as set out in section 6.3.

Table 8: Mode Weightings

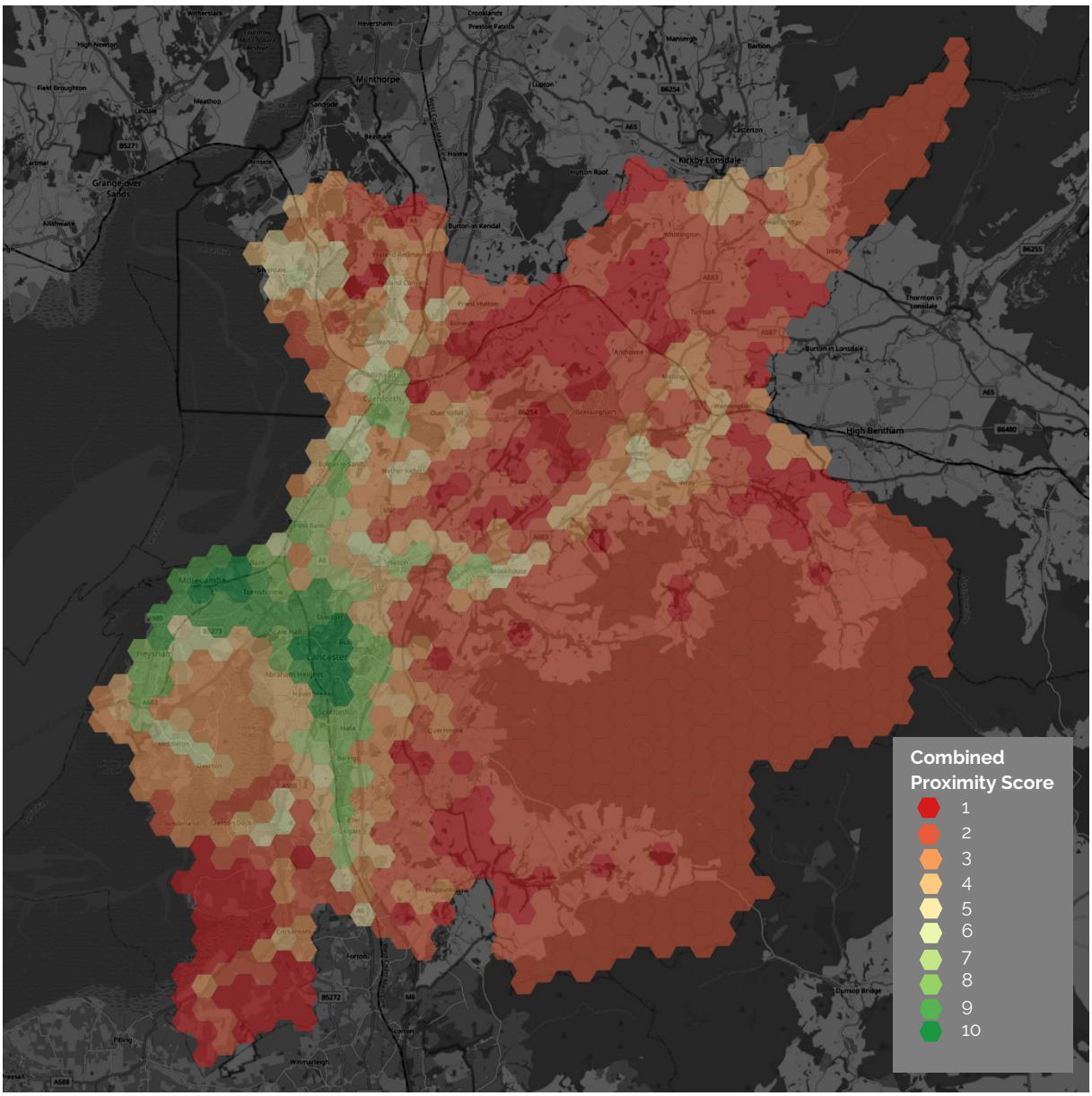
Mode	Weighting
Walking	40%
Cycling	25%
Public Transport	35%

Table 9: Proximity Metric Weightings

Proximity Metric	Weighting
Workday Population	**20%**
Education, comprising:	**20%**
- Primary Education	7%
- Secondary Education	7%
- Tertiary Education	7%
Shops and Services	**20%**
Accessible Greenspace	**20%**
Healthcare	**20%**

The combined proximity scores for each hexagon are shown in Figure 15. This shows that areas with the greatest proximity to existing facilities are concentrated within Lancaster and Morecambe, with the highest scores in and around Lancaster City Centre, as would be expected.

Figure 15: Combined Proximity Score



Source: GIS analysis of accessibility model outputs

6. Route Quality Metrics

6.1 Introduction

Route quality metrics seek to determine accessibility by sustainable modes having regard to the quality of routes between each hexagon pair and therefore the attractiveness of these routes by mode. It is important to recognise that these quality metrics are applied at a macro scale and that more detailed consideration will need to be given to the quality of routes serving to any individual development.

6.1.1 Walking and Cycling

LTN1/20 sets out core design principles for people wishing to travel by cycle or on foot. These principles state that networks and routes should be:

- Coherent – routes should allow people to reach their day-to-day destinations easily, along routes that connect, are simple to navigate and are of a consistently high quality.
- Direct- routes should provide the shortest and fastest way of travelling from place to place.
- Safe – routes should be safe and also should also be perceived to be safe.
- Comfortable – routes should have good quality, well-maintained smooth surfaces, adequate width for the volume of users, minimal stopping and starting, avoiding steep gradients, excessive or uneven crossfall and adverse camber.
- Attractive - Cycling and walking provide a more sensory experience than driving. People are more directly exposed to the environment they are moving through and value attractive routes through parks, waterfront locations, and well-designed streets and squares.

These core design principles have therefore been used as inspiration for determining the attractiveness of walking and cycling routes between each hexagon, but adopting a more macro and strategic approach, as set out below. It is important to note that this is not intended to be a full audit of LTN1/20 compliance and more detailed analysis would need to be undertaken at a local level.

Coherence

The proportion of cycle routes using dedicated cycle infrastructure has been determined from the model for each route, as a proxy for coherence. For the purposes of this, dedicated cycle infrastructure includes cycle lanes, cycle paths and on-road cycle routes. Coherence is expressed as a percentage of the total route and converted into a score for the route as set out in Table 10. Given the levels of coherence achieved in the network, equating greater than 50% coherence to a score of 10 enables the best performing routes to be identified. Similarly, routes that do not use any dedicated cycle infrastructure score zero.

Table 10: Coherence Scoring

Coherence (Percentage of route using dedicated cycle facilities)	Score
>50%	10
40-45%	9
40-45%	8
35-40%	7
30-35%	6
20-30%	5
20-25%	4
15-20%	3
10-15%	2
5-10%	1
<5%	0

Note: The lower bound is included in the interval and the upper bound is not included.

Directness

The ratio of actual route length compared to the straight-line distances is used as a proxy for directness and is expressed as a percentage. These are converted into scores, as shown in Table 11, below. Routes that are more than twice as long as the straight-line distance score zero.

Table 11: Directness Scoring

Directness (Distance as a proportion of straight-line distance)	Score
100-110%	10
110-120%	9
120-130%	8
130-140%	7
140-150%	6
150-160%	5
160-170%	4
170-180%	3
180-190%	2
190-200%	1
>200%	0

Note: The lower bound is included in the interval and the upper bound is not included.

Safety

Personal injury accidents over the last five years have been plotted and assigned to links in the network. The number of accidents per kilometre encountered along the route is then used as a proxy for safety, with scoring set out in Table 12.

Table 12: Safety Scoring

Safety (Accidents per kilometer)	Score
0-0.01	10
0.01-0.02	9
0.02-0.03	8
0.03-0.04	7
0.04-0.05	6
0.05-0.06	5
0.06-0.07	4
0.07-0.08	3
0.08-0.09	2
0.09-0.1	1
>0.1	0

Note: The lower bound is included in the interval and the upper bound is not included.

Comfort

The cumulative height climbed along the route is used as a proxy for comfort. Other aspects of comfort are captured within the metrics for attractiveness. The scoring used for comfort is summarised in Table 13, below.

Table 13: Comfort Scoring

Total Height Climbed (m)	Score
0-5	10
5-10	9
10-15	8
15-20	7
20-25	6
25-30	5
30-35	4
35-40	3
40-45	2
45-50	1
50+	0

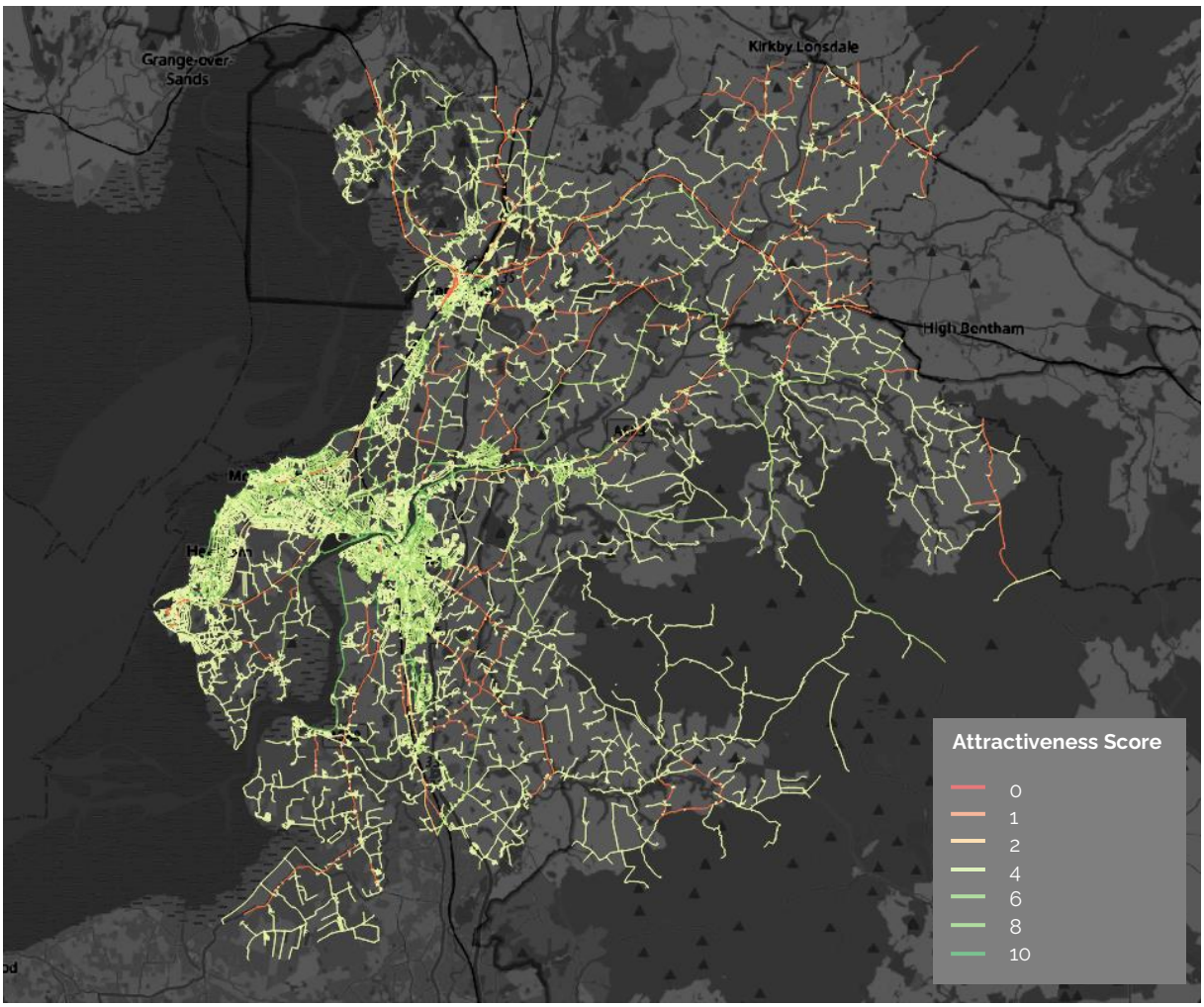
Attractiveness

Each link in the network has been assigned an attractiveness of between 0 and 10, based on the speed and nature of the link. Average attractiveness is then determined for the route, expressed as a value between 0 and 10, based on the scoring in Table 14, which forms the score for that route. Routes that are not possible by cycle or on foot (e.g. along motorways) score zero. The attractiveness score assigned to each link is shown in Figure 16.

Table 14: Attractiveness Scoring

Route Type / Speed (km/h)	Score
Pedestrianised Area / Footpath	10
Cycleway	10
<32	8
32-48	6
48-64	4
64 – 80	2
80 – 100	1
> 100	0

Figure 16: Attractiveness by Link



6.1.2 Public Transport

The attractiveness of public transport for each route is based on the frequency of services available for the route. In this way, frequent services that service key destinations such as Lancaster City Centre will score high for attractiveness. For routes where there is no public transport provision, a score of zero is applied. The scoring applied is set out in Table 15. To reflect the fact that low frequency public transport provision is significantly better than none, the scoring starts at 3.

Table 15: Public Transport Attractiveness Scoring

Cumulative Frequency (services per hour)	Score
>12	10
10-12	9
6-10	8
6-8	7
2-4	6
1-2	5
0-1	4
<1	3
0	0

Note: The lower bound is included in the interval and the upper bound is not included.

6.1.3 Combined Quality Score

The quality scores for the individual components have been combined to give an overall combined quality score for both walking and cycling modes using the weightings set out in Table 16. These have weightings have been chosen to produce an appropriate spread of overall quality scores, enabling distinctions to be drawn between routes and hexagons. For example, "safety" is given a relatively low rating of 5%. This reflects the fact that whilst safety is undeniably important, this quality metric is based on actual accidents which occur very rarely. More important for walking and cycling is the perception of safety, which is captured in the attractiveness metric. Similarly, since "comfort" is also given a relatively low weighting. This is because the metric is based on height climbed whereas traffic speed is also a major factor. However, since traffic speed is considered under "attractiveness", comfort is afforded a lower weighting.

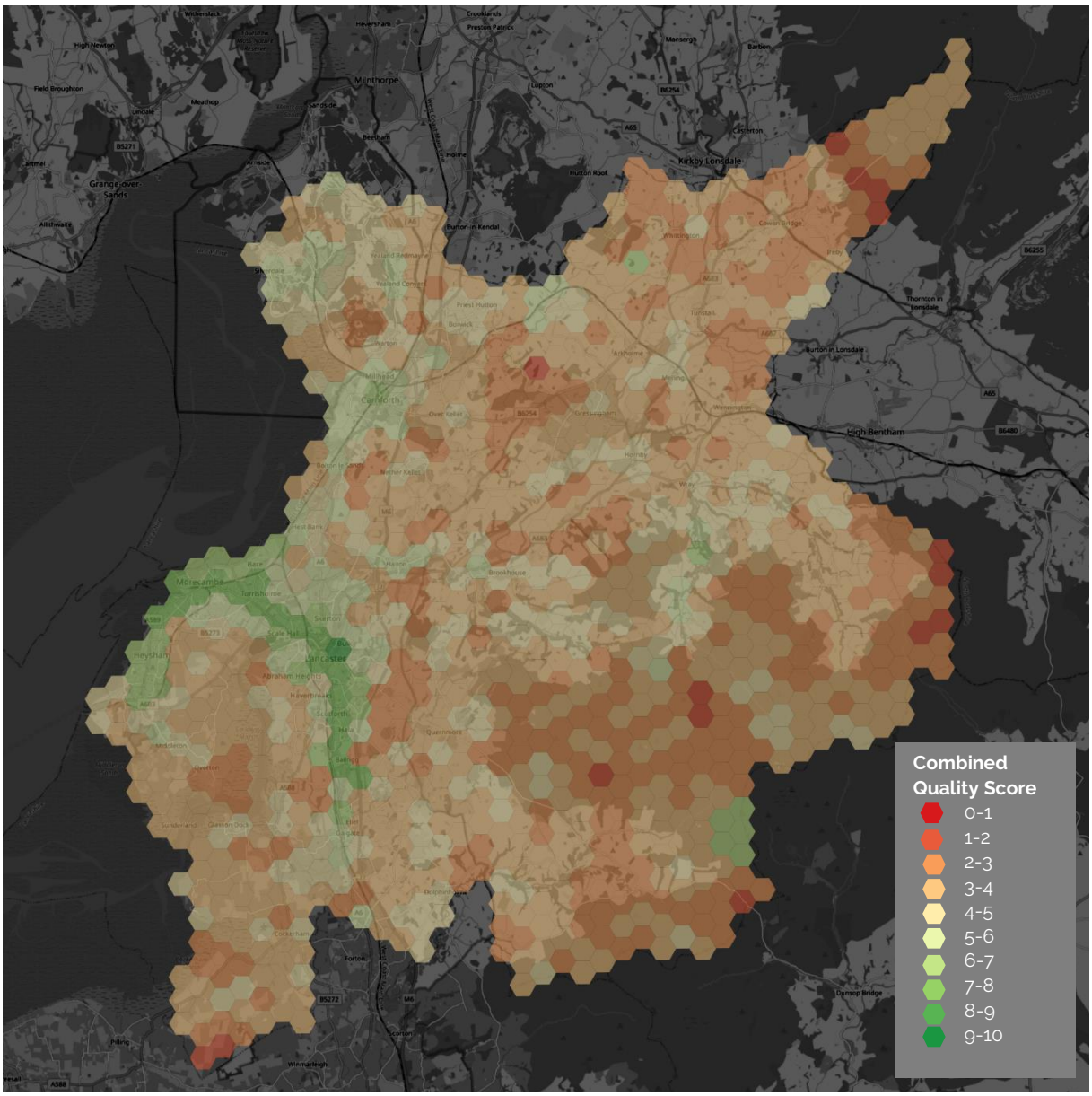
Table 16: Walking and Cycling Quality Score Weightings

Quality Component	Walking	Cycling
Attractiveness	45%	30%
Coherence	0%	30%
Comfort	5%	5%
Directness	45%	30%
Safety	5%	5%
Total	100%	100%

Similarly, public transport frequencies for the AM peak, interpeak, PM peak and evening are combined with equal waiting to give an overall public transport quality score.

To generate a combined quality score for each hexagon, the quality scores for each individual mode are combined with equal weighting to provide an overall quality score for each hexagon, as shown in Figure 17.

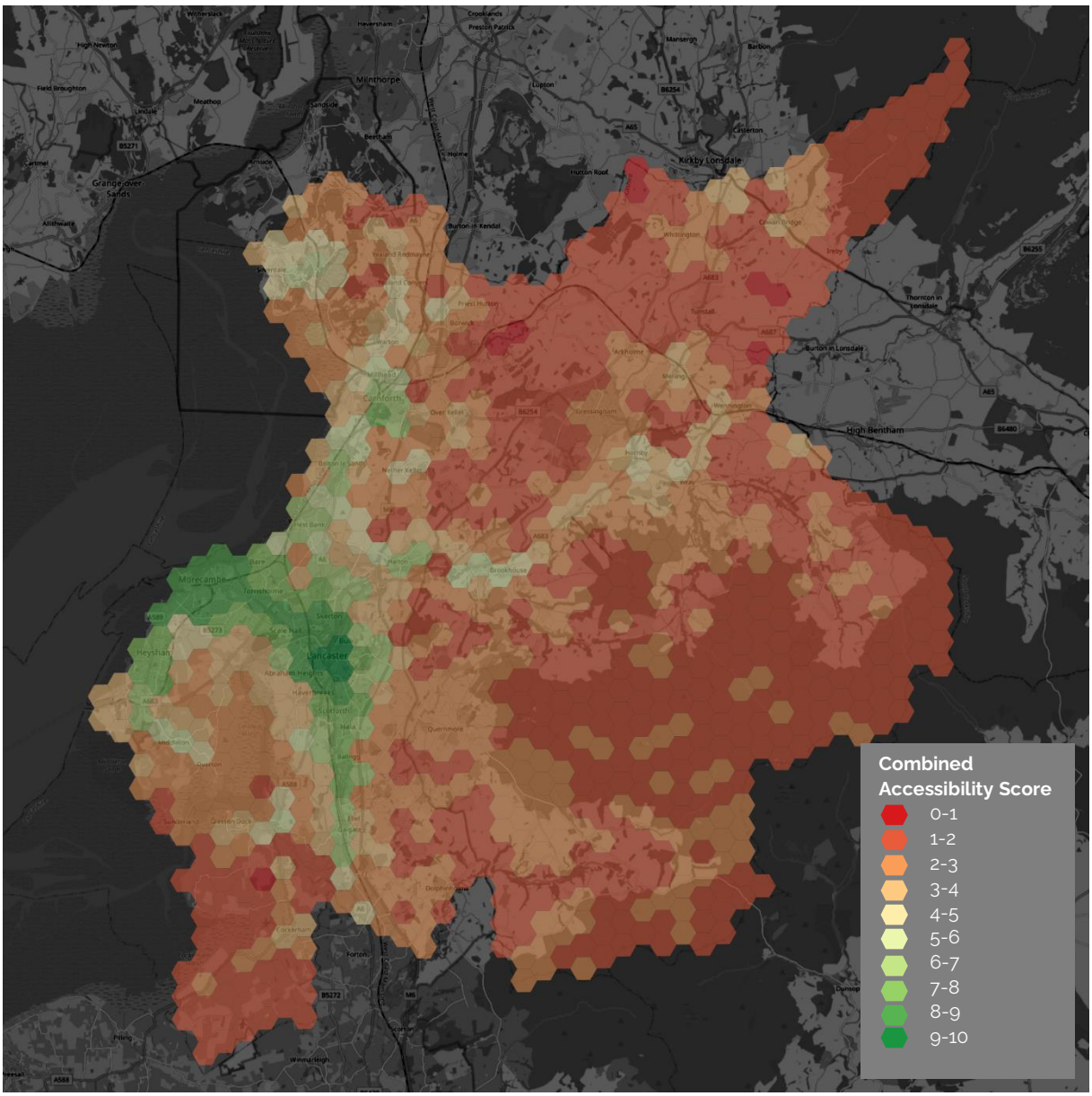
Figure 17: Overall Quality Score



6.2 Combined Accessibility Score

The combined proximity score and combined route quality score have been collated together to give a combined accessibility score, with a weighting of 75% and 25% to proximity and route quality, respectively. The combined accessibility score is shown in Figure 6 of this report. This shows that the areas with highest accessibility are within Lancaster and Morecambe and also along the corridor between those two areas. Reasonable levels of accessibility are also shown along the A6 corridor south towards the University and Galgate. The settlements of Bolton le Sands, Carnforth, Caton, Halton and Hest Bank also show higher levels of accessibility relative to most of the district, but these settlements are less accessible than Lancaster and Morecambe.

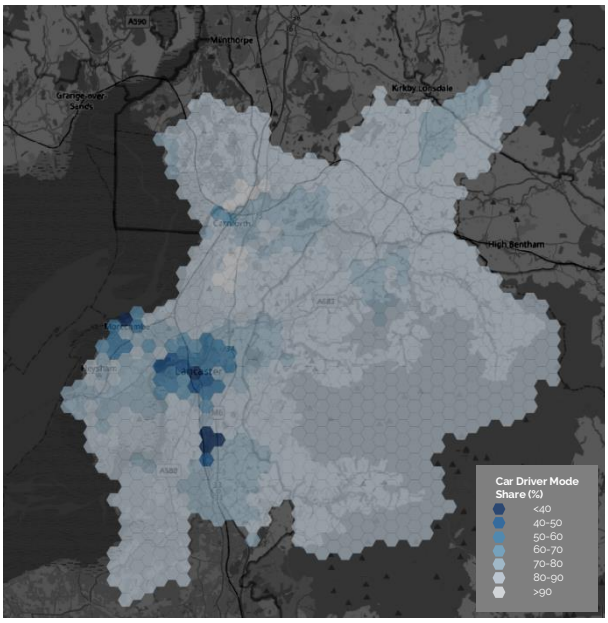
Figure 18: Combined Accessibility Score



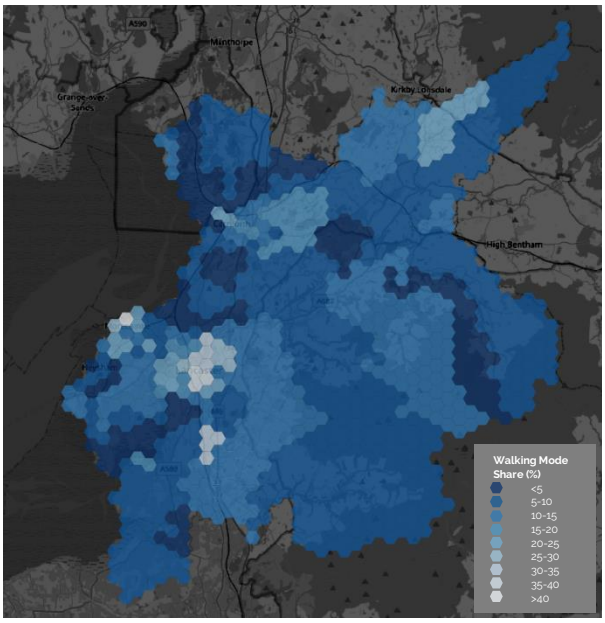
6.3 Validation of the Combined Accessibility Score

In order to validate the combined accessibility score, 2011 Census travel to work mode share data for each output area has been mapped to the hexagon zone system. Whilst the 2011 Census data is dated it is considered that this will provide a more accurate representation of mode share than the 2021 data, which was collected whilst COVID-19 restrictions were in place. The data is plotted in Figure 19, below.

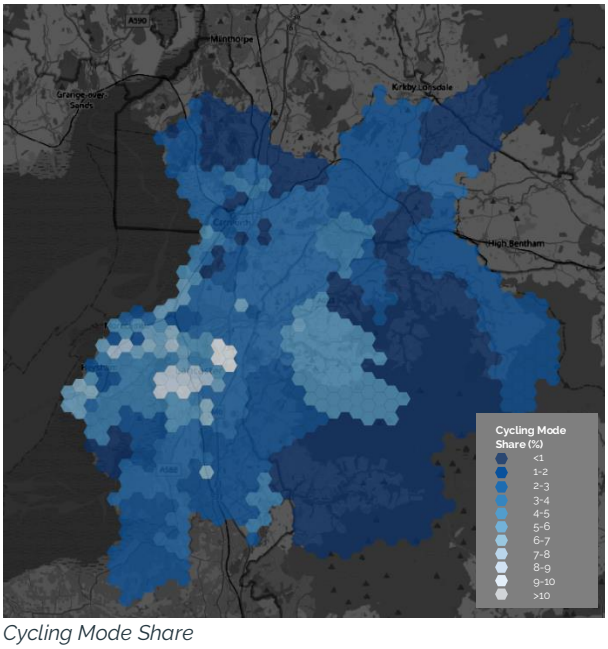
Figure 19: 2011 Census Travel to Work Mode Share



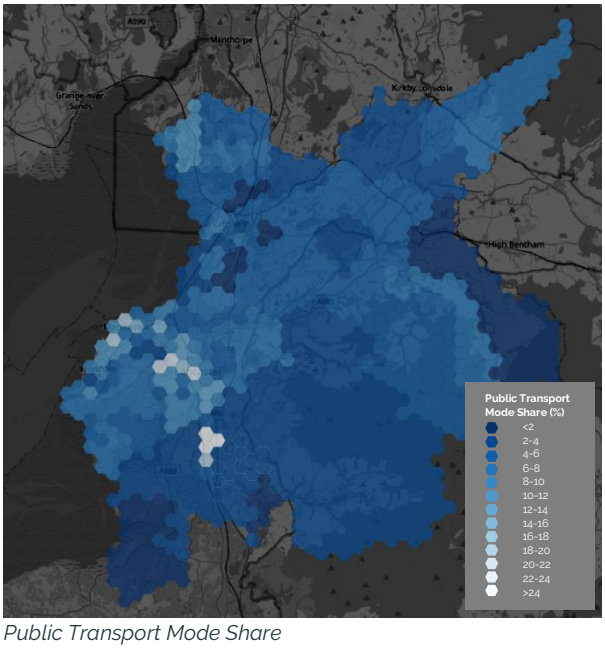
Car Driver Mode Share



Walking Mode Share



Cycling Mode Share



Public Transport Mode Share

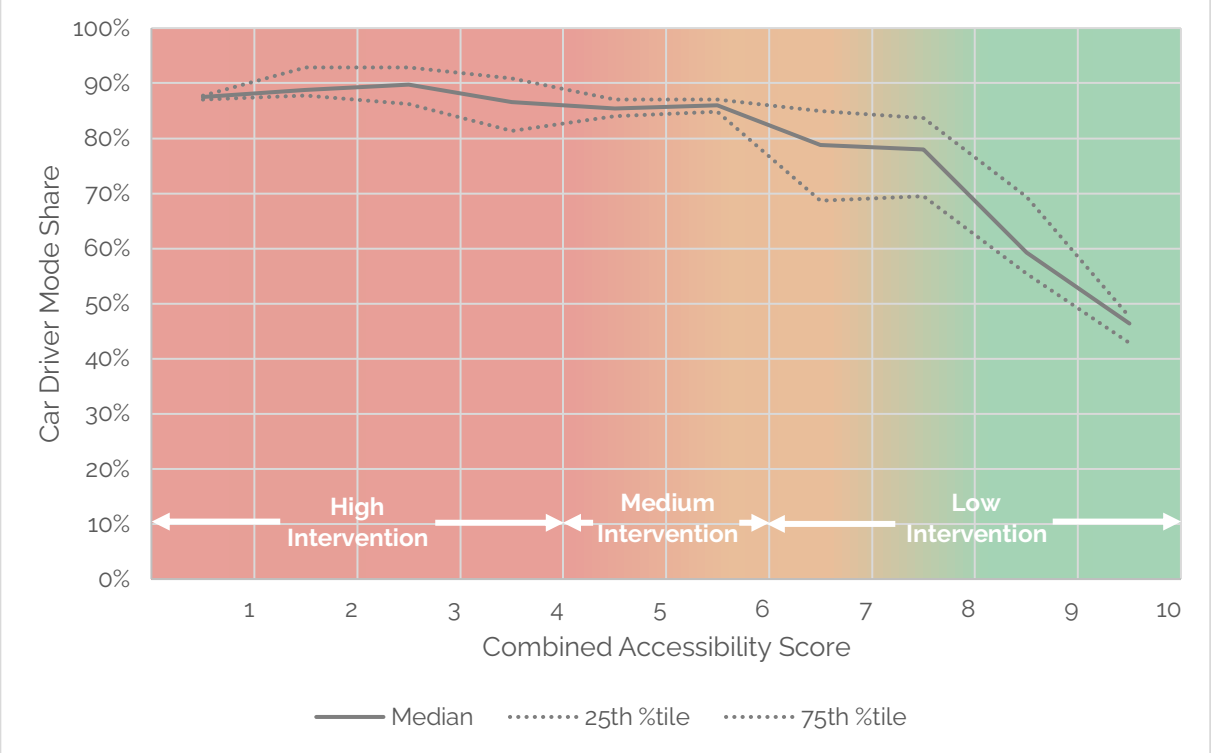
The plots show that car driver mode share is generally lowest within central Lancaster, around the Lancaster University campus and within Morecambe. Similar patterns are seen for walking and cycling and public transport mode shares, with these being higher where car driver mode share is lower.

The patterns broadly reflect the combined accessibility score; however, a perfect match would not be expected for the following reasons:

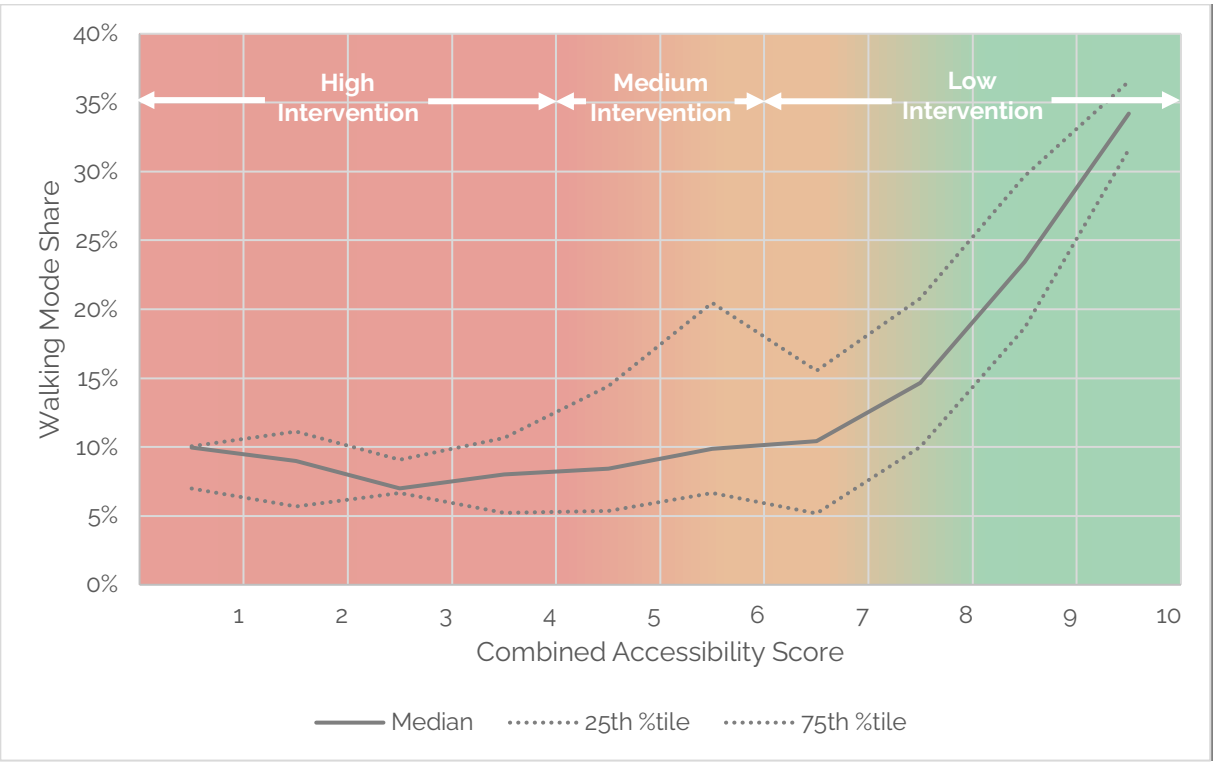
- The Census data dates from 2011 and there will have been subsequent changes to the configuration of the local transport network.
- The Census data only covers travel to work trips whereas the combined accessibility score considers travel for a wide range of purposes including work, health, education and leisure.
- Since output areas represent areas of broadly equal population, these provide fine grained detail in urban areas where population is dense. However, they can be quite large in more rural areas. This can have the effect of averaging over a wider geographical area meaning that some of the more nuanced accessibility of smaller villages can be lost.

Notwithstanding the above, an exercise has been undertaken to determine whether the combined accessibility score can be used as a proxy to determine mode share. This has been done by calculating the median, 25th percentile and 75th percentile mode share for each accessibility score and plotting these as shown in Graph 1 to Graph 4.

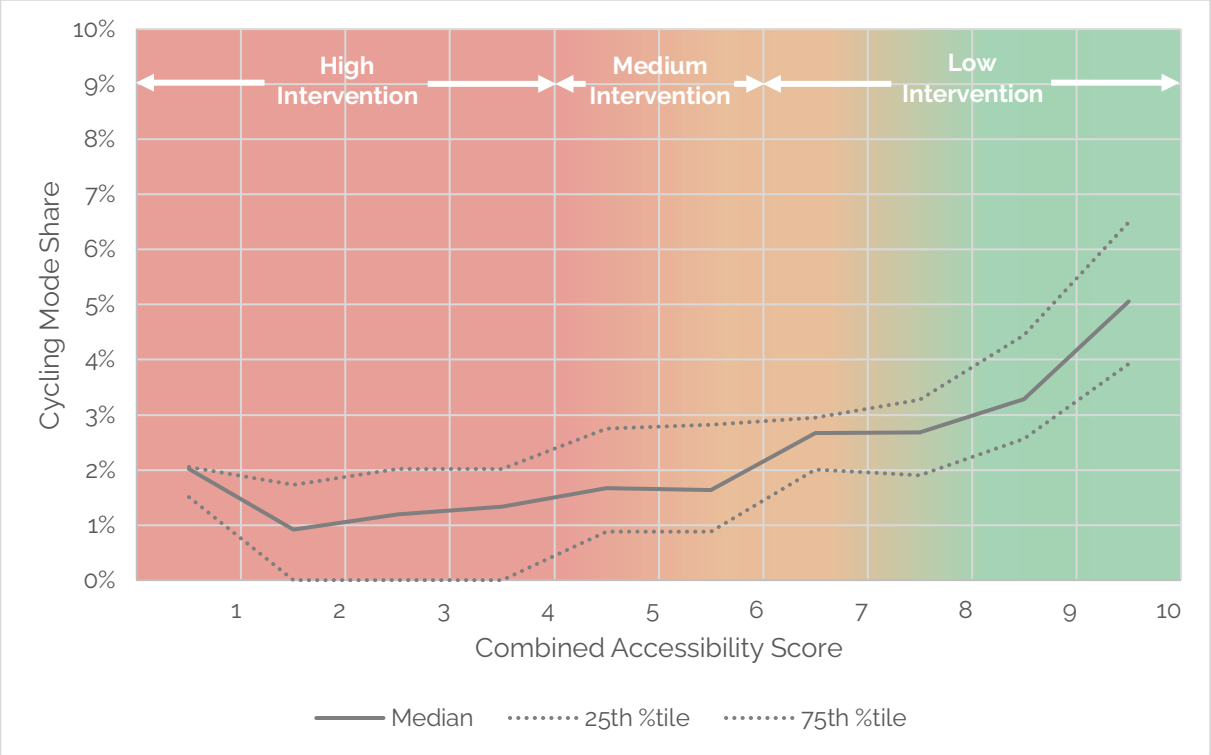
Graph 1: Car Driver Mode Share vs Combined Accessibility Score



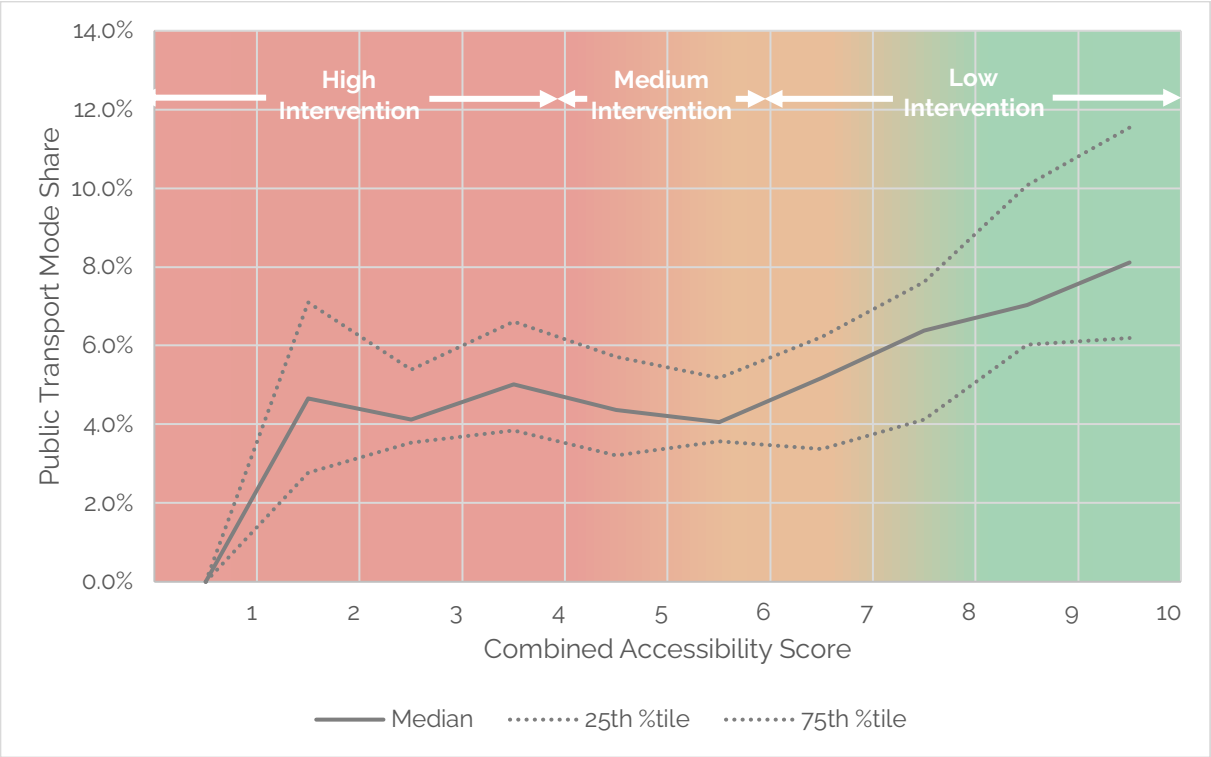
Graph 2: Car Driver Mode Share vs Combined Accessibility Score



Graph 3: Cycling Mode Share vs Combined Accessibility Score



Graph 4: Public Transport Mode Share vs Combined Accessibility Score



The graphs show a clear correspondence between the combined accessibility score and the mode share across the different modes. In particular:

- For values of the combined accessibility score of eight or more, the car driver mode share is relatively low with higher levels of walking, cycling and public transport use. Small changes in accessibility can drive meaningful changes in mode share. For areas with these scores, a low level of intervention can result in a significant increase in accessibility.
- For values of the combined accessibility score of six and seven, the mode share starts to change, with increases in walking, cycling and public transport use and reductions in the car driver mode share. A medium level of intervention is likely to be required to increase the combined accessibility score to eight and above and result reductions in car driver mode share.
- For values of the combined accessibility score of less than six, there is very little change in mode share as a function of the combined accessibility score. This trend is very clear for the car driver mode share. For the other modes, the graphs show some variation, for the reasons set out in relation to the 2011 Census mode share data. This suggests that for areas with a combined accessibility of score of less than six, a high level of intervention is likely to be required to achieve high levels of accessibility and low car driver mode shares.

7. Summary

A comprehensive accessibility model has been developed that is able to quantify the existing accessibility by sustainable modes across the Lancaster District as well as to predict changes in accessibility in future year scenarios. The model has been developed to use as a tool to support the development of the Local Plan to ensure that the most sustainable transport outcomes are achieved.

The model comprises four elements which work together as the overall accessibility model:

- A network model built in Aimsun software that can be used for the calculation of journey times and journey quality between each area.
- An accessibility model built in Excel that is used to determine accessibility scores for a range of different metrics using journey time and journey quality data from the Aimsun model.
- A QGIS project used for the presentation and analysis of outputs from the accessibility model and to enable sharing of outputs.
- An EV model used to determine the demand for EV charging infrastructure, built in Excel and QGIS.

This report has set out the development of the baseline accessibility model, including the data and assumptions that have been used. The key output from the model are plots showing the combined accessibility score, which measures the accessibility of an area both in terms of proximity to local amenities by different modes but also in terms of the quality of the routes to those amenities.

The model has been validated by comparing the combined accessibility score to the 2011 Census travel to work mode share data. This exercise shows a clear correspondence between the combined accessibility score and the mode share across the different modes. Importantly, the analysis shows that significant reductions in car driver mode share are only seen for areas with higher accessibility scores, suggesting that mode shift towards sustainable transport modes is only likely in the most accessible areas.

Appendix C Hexagon Summary Sheet Guide

HEX SUMMARY SHEET - GUIDE

ACCESS TO PRIMARY, SECONDARY + TERTIARY EDUCATION

Above: the average score based on proximity (by available routes) to the nearest relevant facility (e.g. a school or college) by walking, cycling and public transport.
Below: the proximity (by available routes) by walking, cycling and public transport to the nearest relevant facility (e.g. a school or college).

	1	2	3	4	5	6	7	8	9	10
Walking proximity	60+ mins	55 mins	50 mins	45 mins	45 mins	35 mins	30 mins	25 mins	20 mins	15 mins
Cycling proximity	60+ mins	55 mins	50 mins	45 mins	45 mins	35 mins	30 mins	25 mins	20 mins	15 mins
Public transport proximity	60+ mins	55 mins	50 mins	45 mins	45 mins	35 mins	30 mins	25 mins	20 mins	15 mins

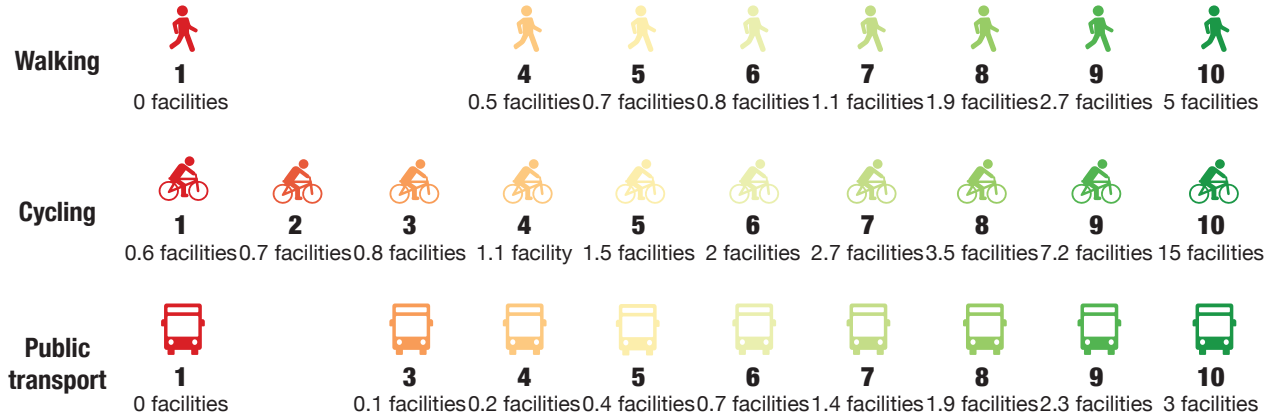
ACCESS TO SHOPS AND SERVICES

Above: the average score based on the number of shops and services accessible via walking, cycling and public transport, within a travel time of 20 minutes by walking or cycling, or 40 minutes by public transport.
Below: the number of shops and services accessible within a travel time of 20 minutes by walking or cycling, or 40 minutes by public transport (using available routes).

	1	3	4	5	6	7	8	9	10
Walking	0 facilities			1 facility	2 facilities	3 facilities	4 facilities	5 facilities	6+ facilities
Cycling	0 facilities		1 facility	2 facilities	4 facilities	6 facilities	8 facilities	10 facilities	12 facilities
Public transport	0 facilities	1 facility	2 facilities	4 facilities	8 facilities	12 facilities	16 facilities	20 facilities	24 facilities

ACCESS TO GREEN SPACES

Above: the average score based on the number of green spaces accessible via walking, cycling and public transport, within a travel time of 20 minutes by walking or cycling, or 40 minutes by public transport.
Below: the number of green spaces accessible within a travel time of 20 minutes by walking or cycling, or 40 minutes by public transport (using available routes).



ACCESS TO HEALTHCARE

Above: the average score based on the number of healthcare facilities accessible via walking, cycling and public transport, within a travel time of 20 minutes by walking or cycling, or 40 minutes by public transport.
Below: the number of healthcare facilities accessible within a travel time of 20 minutes by walking or cycling, or 40 minutes by public transport (using available routes).

WALKING

Above: the average score for route quality based on the attractiveness, comfort, directness and safety scores for local walking routes.

ATTRACTIVENESS	Based on the speed limit of the road and/or whether pedestrian only routes are present.
COMFORT	Based on the height climbed along the route.
DIRECTNESS	Based on the ratio of the length of the actual route compared to the shortest route.
SAFETY	Based on the number of collisions involving people walking per kilometre along the route over the last 5 years.

CYCLING

Above: the average score of route quality based on the attractiveness, comfort, directness and safety scores for local cycling routes.

ATTRACTIVENESS	Based on the speed limit of the road and/or whether cycle infrastructure is present.
COHERENCE	Based on the percentage of the route that comprises dedicated cycle infrastructure.
COMFORT	Based on the height climbed along the route.
DIRECTNESS	Based on the ratio of the length of the actual route compared to the shortest route.
SAFETY	Based on the number of collisions involving people cycling per kilometre along the route over the last 5 years.

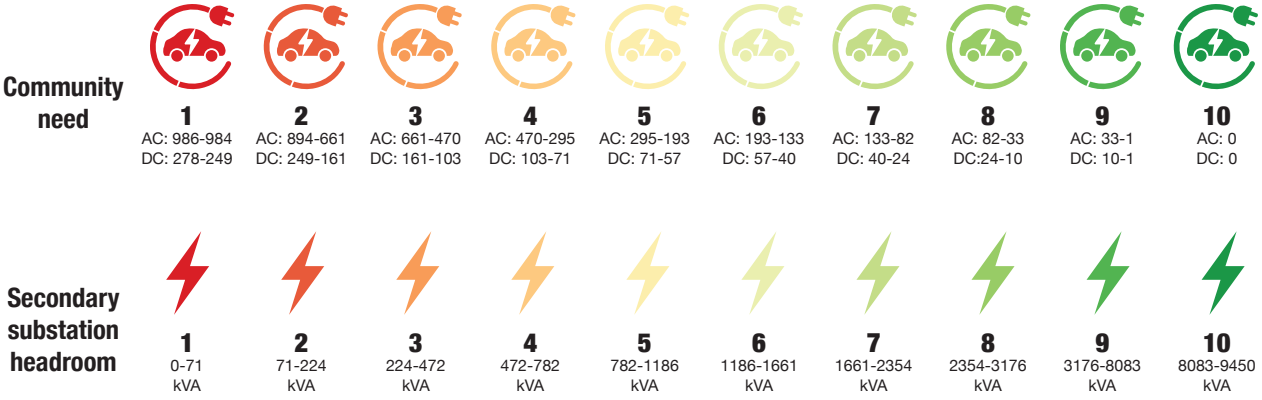
PUBLIC TRANSPORT

Above: the average score for route quality based on the frequency of bus services.

EV

Community need is a measure of the required number of EV chargers to meet the residential EV demand in community need areas by 2040, following our Combined Industry Projections (CIP) EV uptake forecast. The community need score takes the maximum of the AC and DC requirement scores.

Secondary substation headroom is a measure of the available demand capacity on the secondary electrical network for the installation of EV chargers.



Appendix D Hexagon Summary Sheets

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 341

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

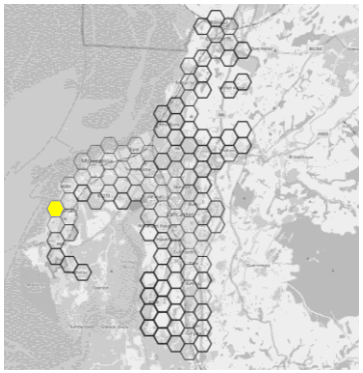
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Improve bus service provision and frequency to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Improve bus service provision and frequency to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 342

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

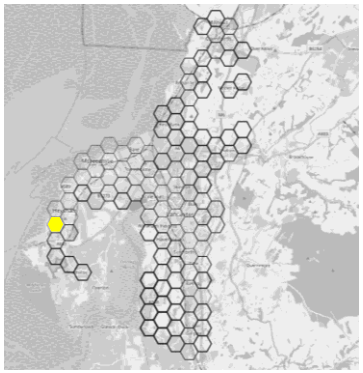
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Improve bus service provision and frequency to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 343

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

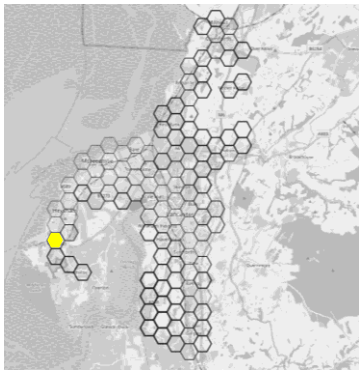
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 344

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

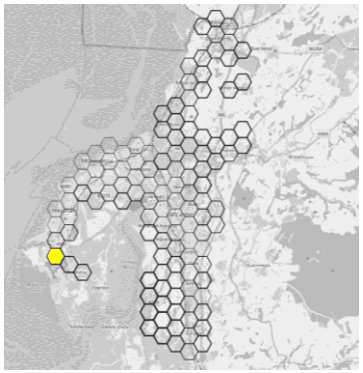
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Improve bus service provision and frequency to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 385

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

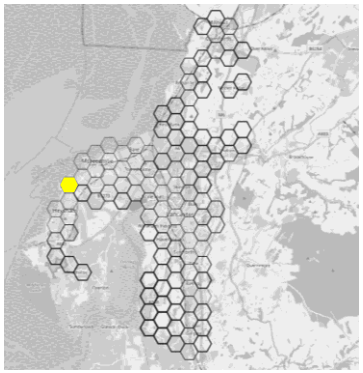
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 386

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

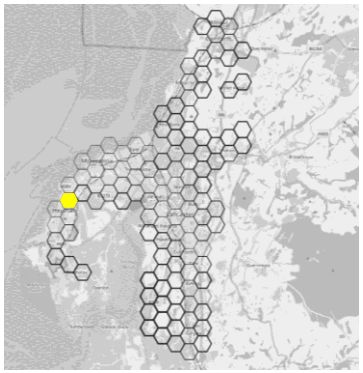
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 387

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

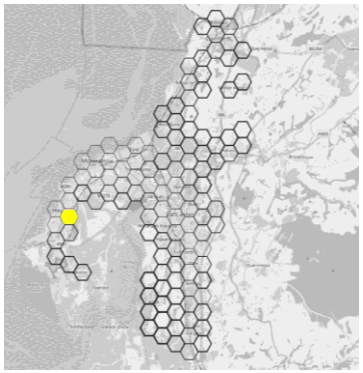
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 388

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

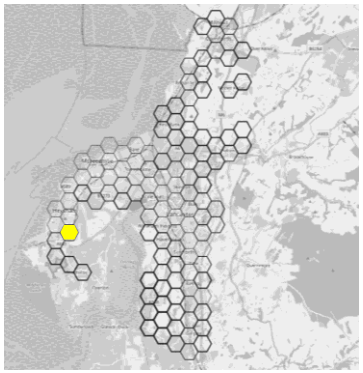
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Improve bus service provision and frequency to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No specific recommendations

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 390

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

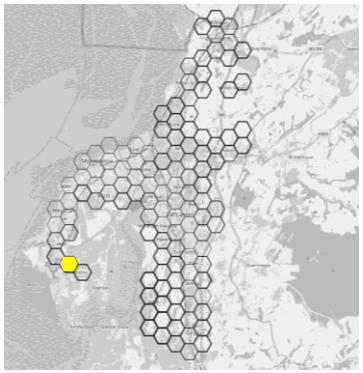
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Improve bus service provision and frequency to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 428

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

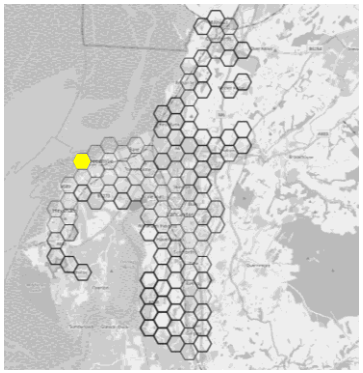
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 429

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

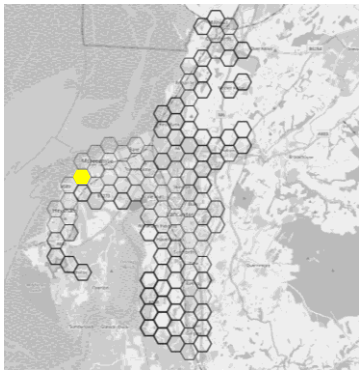
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 430

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

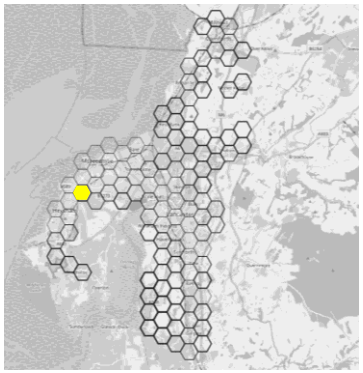
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

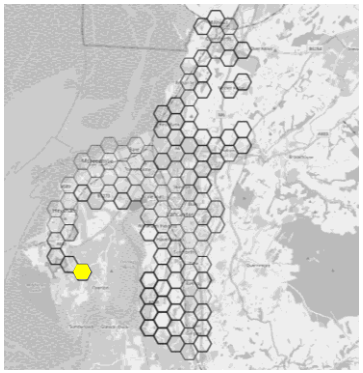
HEX 435

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Corridor Concentration

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Improve bus service provision and frequency to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 473

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

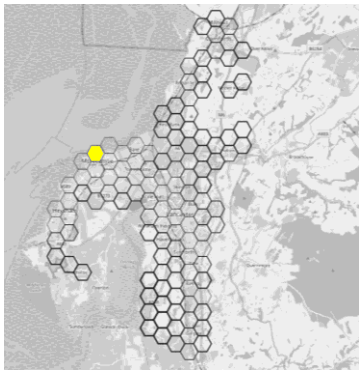
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

PUBLIC TRANSPORT

• No specific recommendations

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 750

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

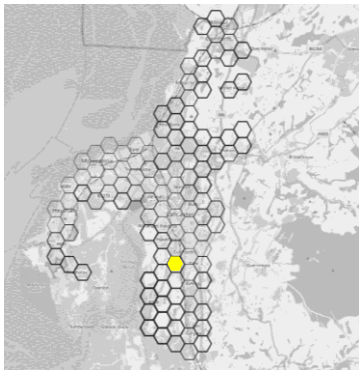
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 474

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

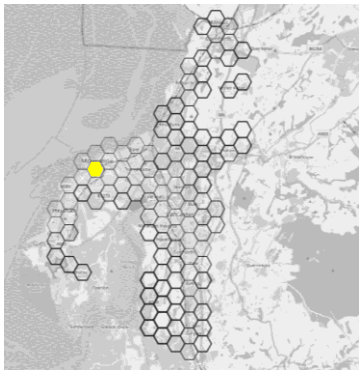
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No specific recommendations

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 475

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

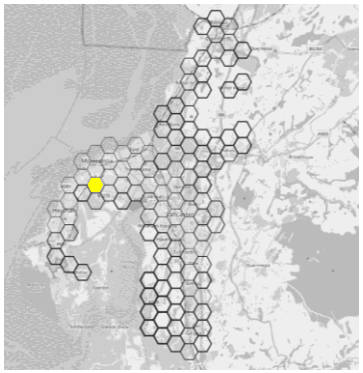
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of Multiple market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 517

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

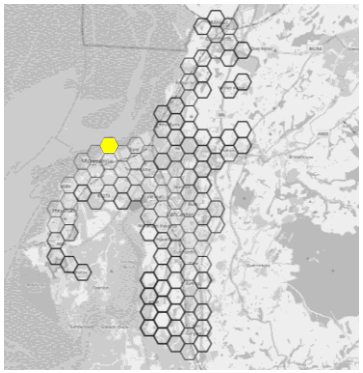
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 518

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

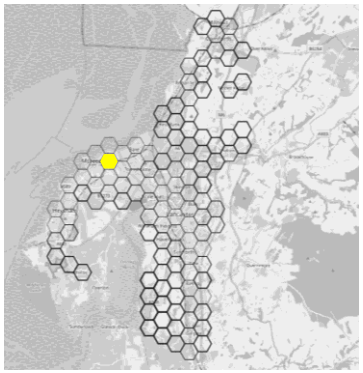
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 519

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

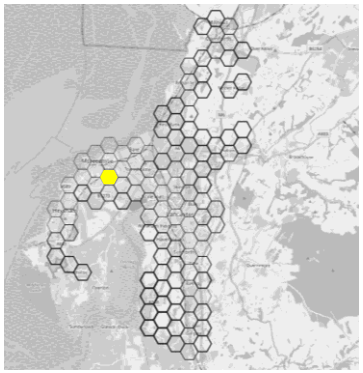
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 520

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

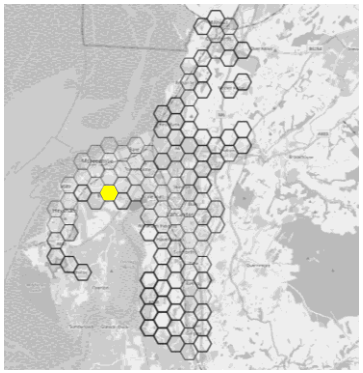
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 563

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

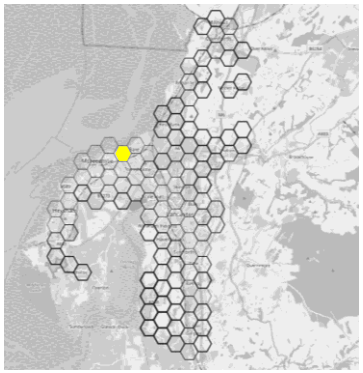
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

PUBLIC TRANSPORT

• No specific recommendations

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 564

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

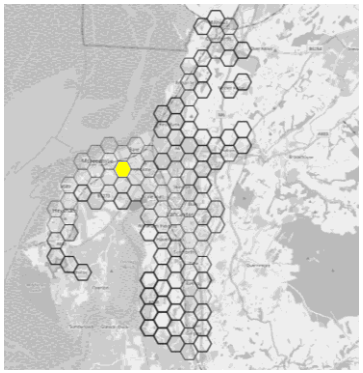
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

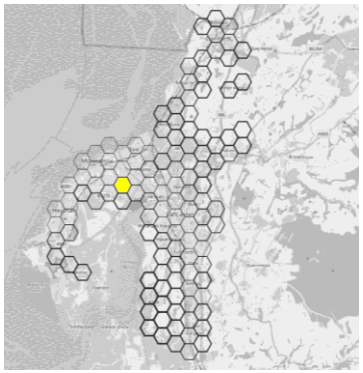
HEX 565

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Low

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 566

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

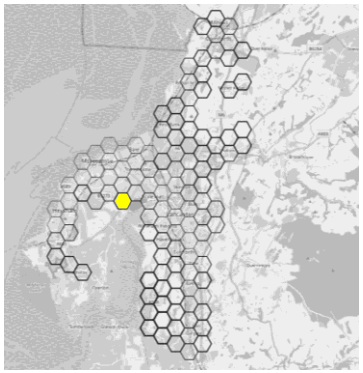
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

- Provide new green space within a 20 minute walk
- Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

- Provide additional healthcare services and facilities within a 20 minute walk.
- Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

- Provide a new primary school within a 20 minute walk.
- Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

- Provide a new secondary school within a 20 minute walk.
- Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

- Provide a new tertiary education within a 20 minute walk.
- Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

- Provide additional shops and services within a 20 minute walk.
- Provide new bus service provision to existing shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

- No existing LCWIP walking routes
- No proposed LCWIP walking interventions

CYCLING

- Existing LCWIP cycling routes
- No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

- No existing bus route(s)
- Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

- Very Low / No requirement for community EV infrastructure intervention
- Headroom is greater than Community EV infrastructure requirement
- In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 607

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

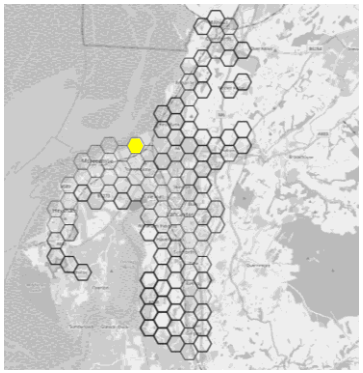
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 608

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

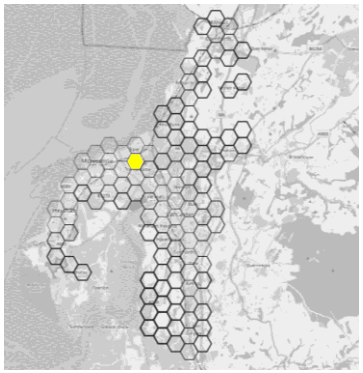
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 609

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

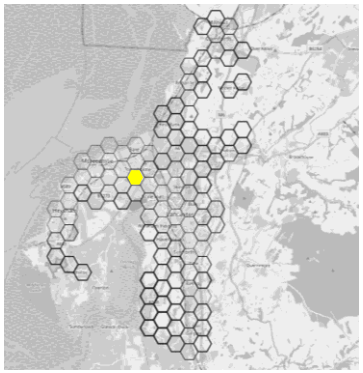
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 610

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

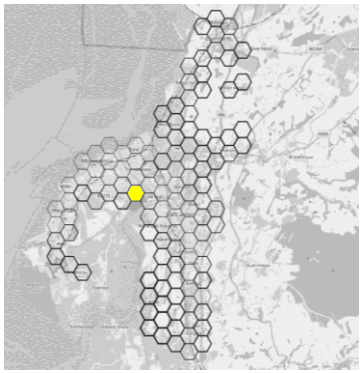
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 652

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

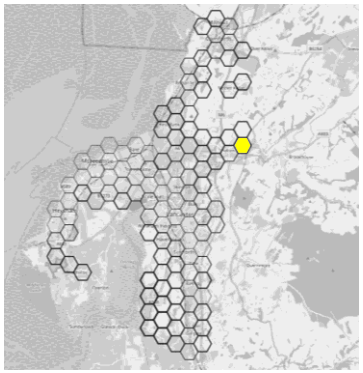
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 653

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

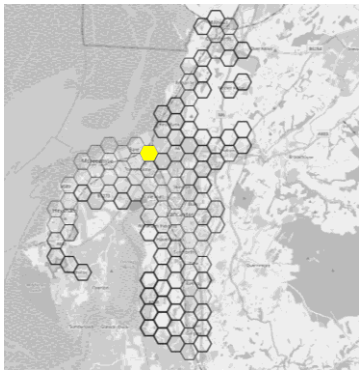
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 654

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

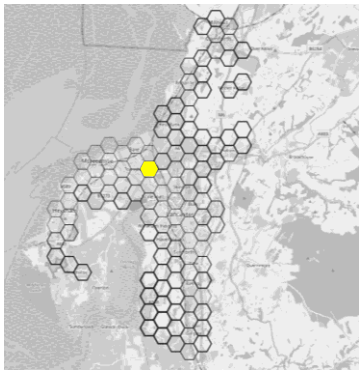
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Improve bus service provision and frequency to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 655

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

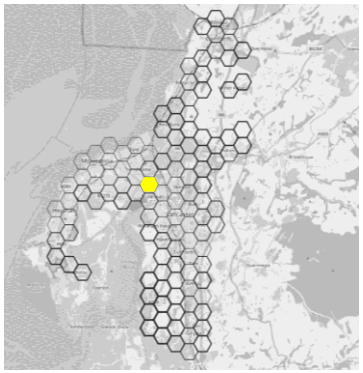
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 656

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

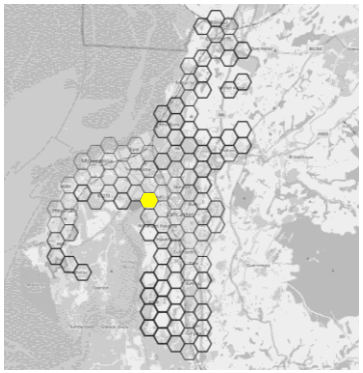
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 657

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

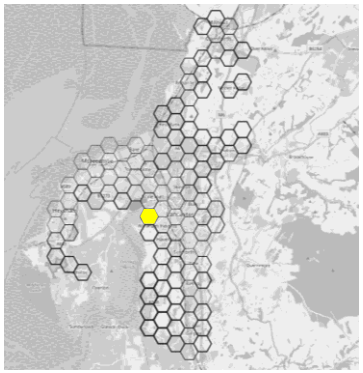
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 658

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

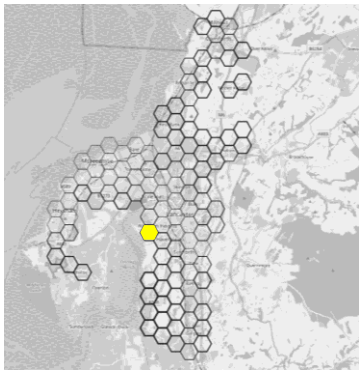
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 661

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

New Settlement

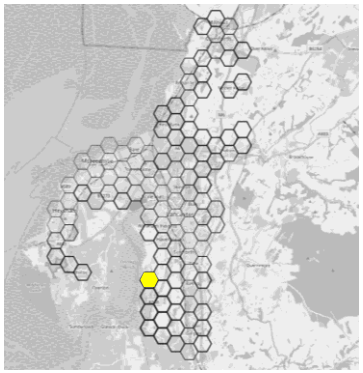
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide improved cycle routes to existing primary schools.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 662

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

New Settlement

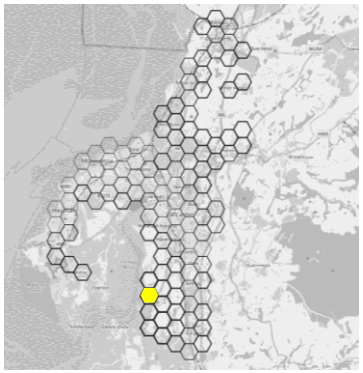
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• No existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 663

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

New Settlement

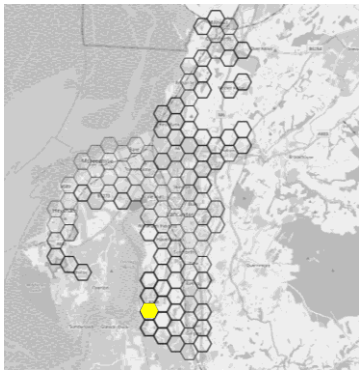
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Improve bus service provision and frequency to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• No existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of AC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 664

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

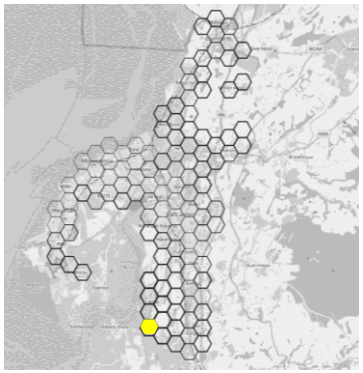
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 695

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

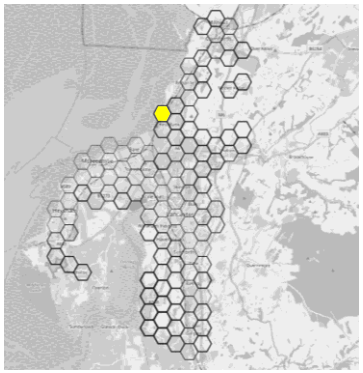
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of AC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

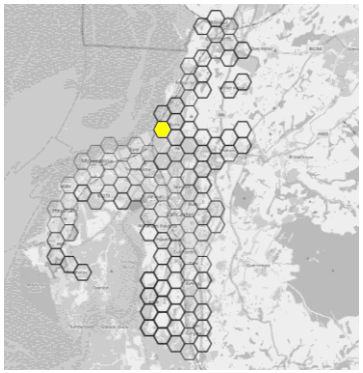
HEX 696

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 698

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

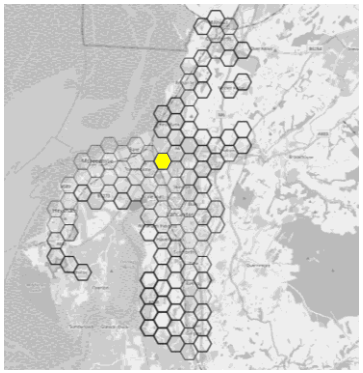
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

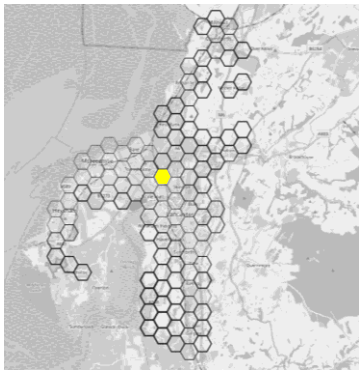
HEX 699

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Low

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 700

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

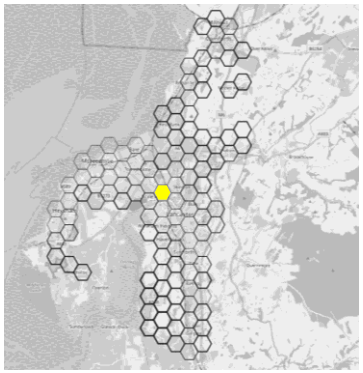
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 701

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

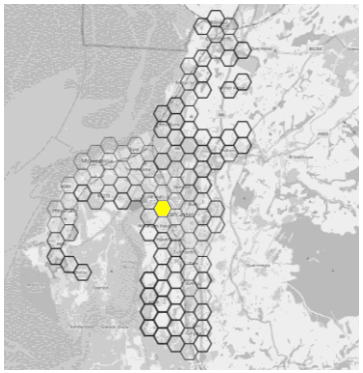
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 702

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

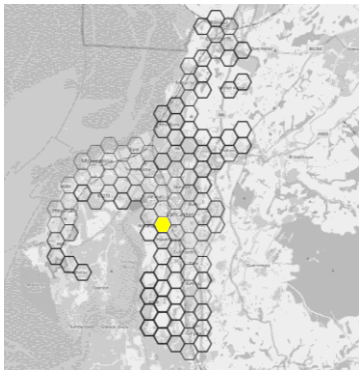
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 703

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

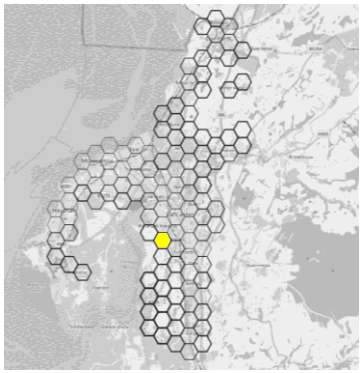
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

- Provide new green space within a 20 minute walk
- Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

- Provide additional healthcare services and facilities within a 20 minute walk.
- Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

- Provide a new primary school within a 20 minute walk.
- Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

- Provide a new secondary school within a 20 minute walk.
- Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

- Provide a new tertiary education within a 20 minute walk.
- Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

- Provide additional shops and services within a 20 minute walk.
- Provide new bus service provision to existing shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

- No existing LCWIP walking routes
- No proposed LCWIP walking interventions

CYCLING

- Existing LCWIP cycling routes
- No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

- No existing bus route(s)
- Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

- Very Low requirement for community EV infrastructure intervention
- Headroom is less than Community EV infrastructure requirement
- In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 704

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

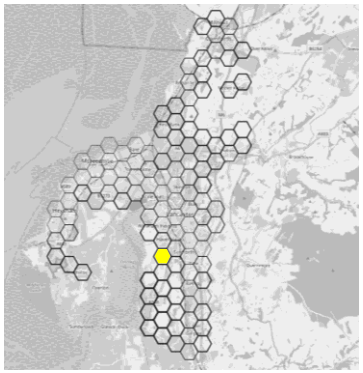
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

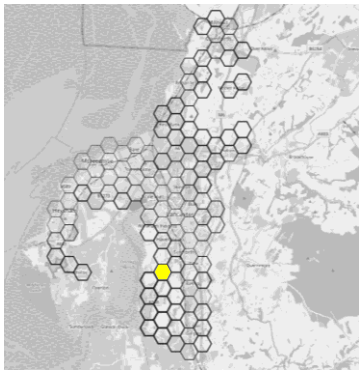
HEX 705

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Corridor Concentration

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 706

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

New Settlement

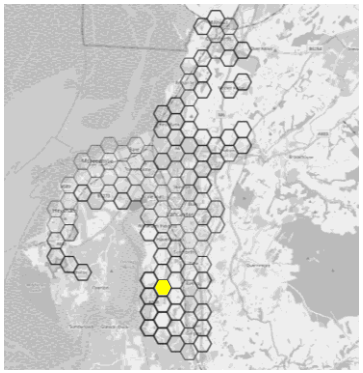
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Provide new/extend existing bus services at suitable frequencies to serve key destinations
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 707

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

New Settlement

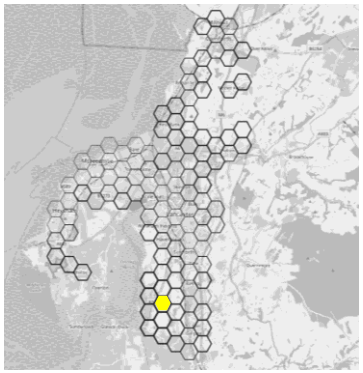
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 708

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

New Settlement

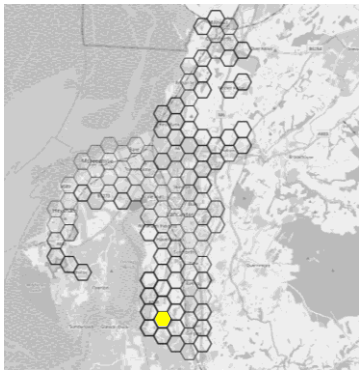
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• No existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 709

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

New Settlement

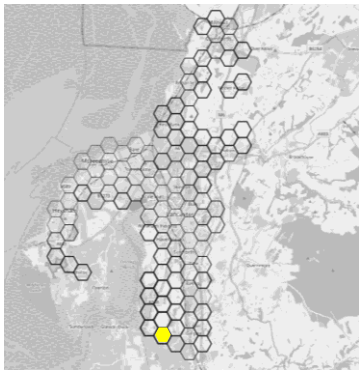
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 740

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

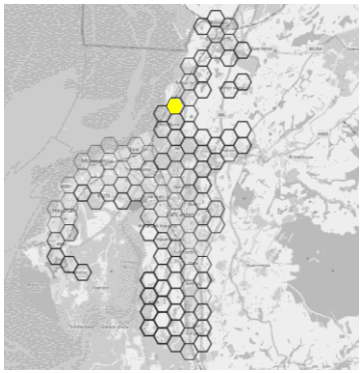
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

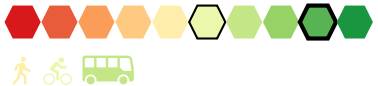
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE



• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 741

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

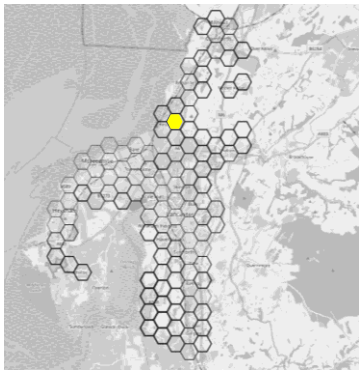
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

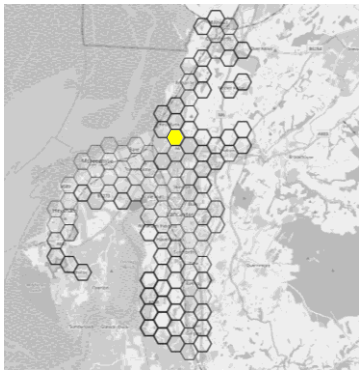
HEX 742

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Corridor Concentration

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 743

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

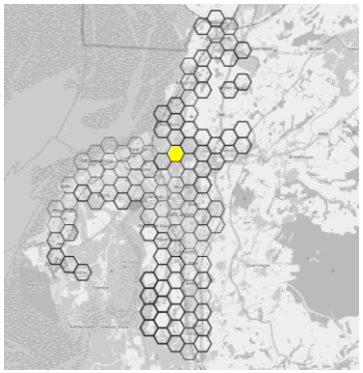
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 744

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

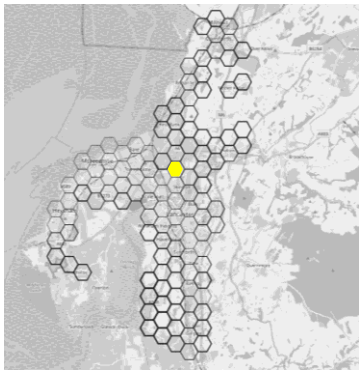
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 745

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

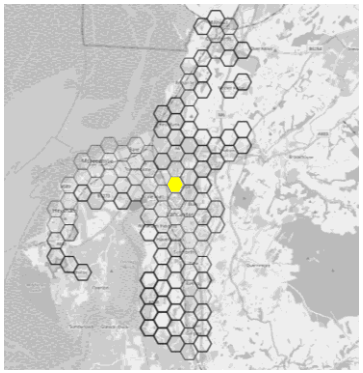
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 746

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

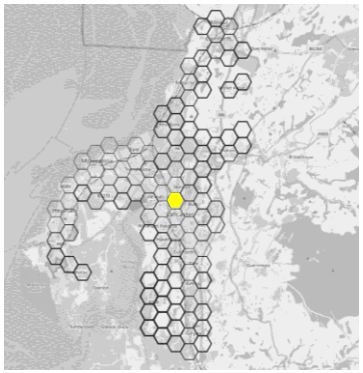
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

PUBLIC TRANSPORT

• No specific recommendations

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 747

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

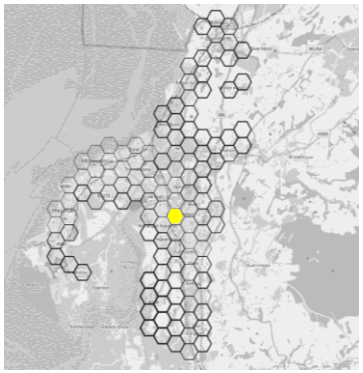
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Multiple market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 748

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

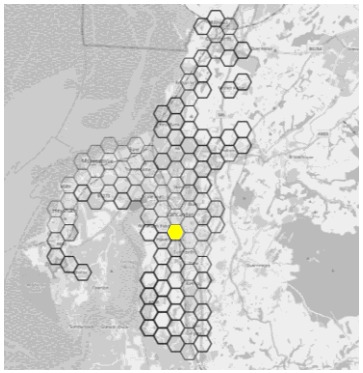
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

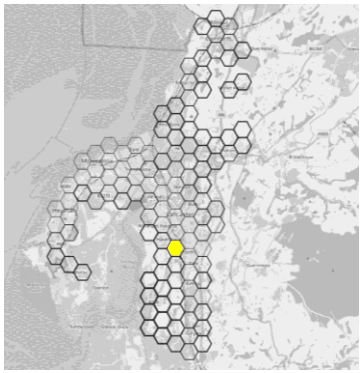
HEX 749

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Low

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 750

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

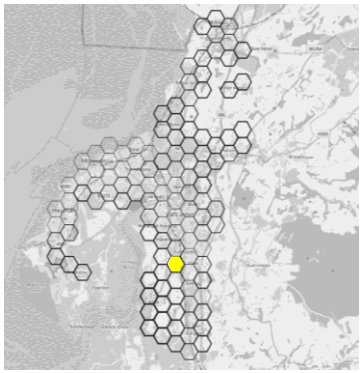
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

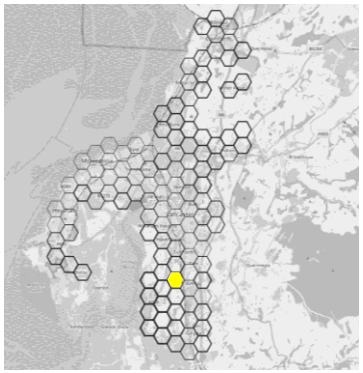
HEX 751

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 752

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

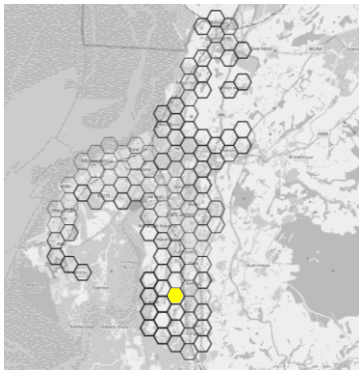
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 753

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

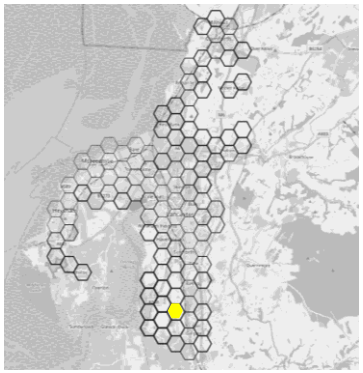
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 754

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

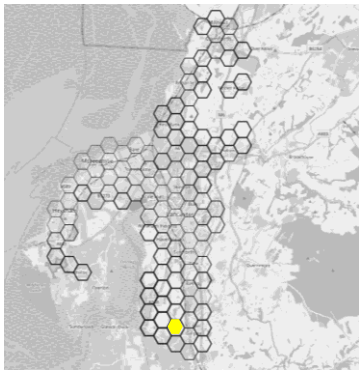
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 755

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

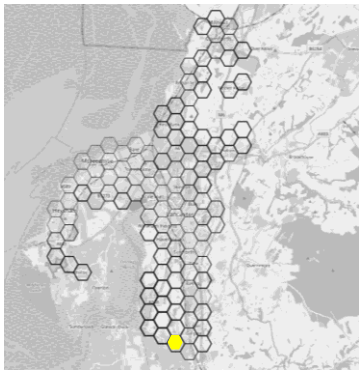
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 782

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

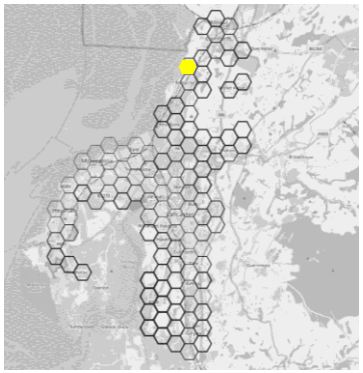
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Improve bus service provision and frequency to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of AC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 783

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

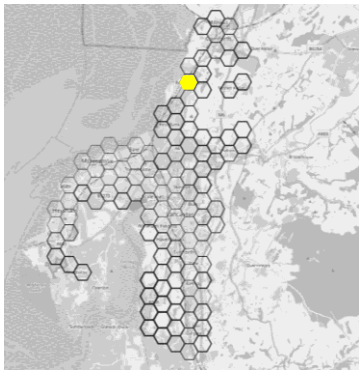
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of AC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 784

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

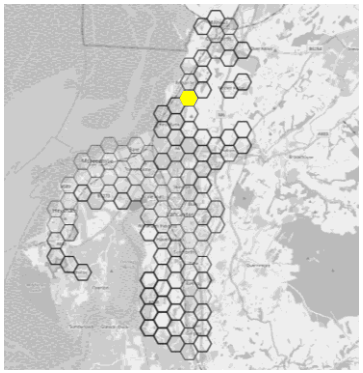
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 785

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

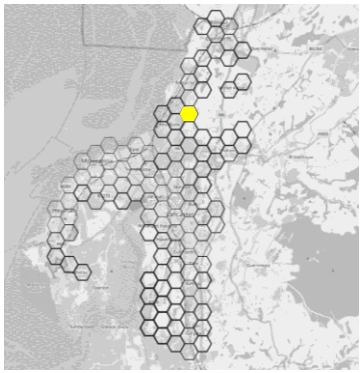
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 786

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

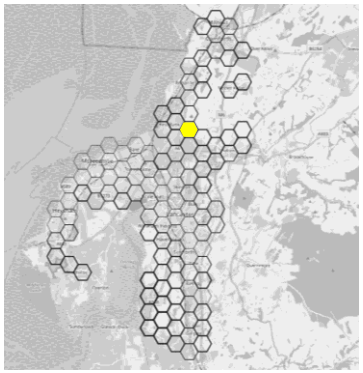
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of AC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 787

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

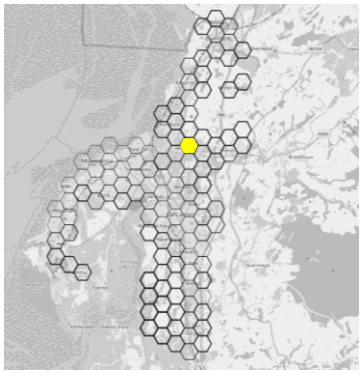
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 788

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

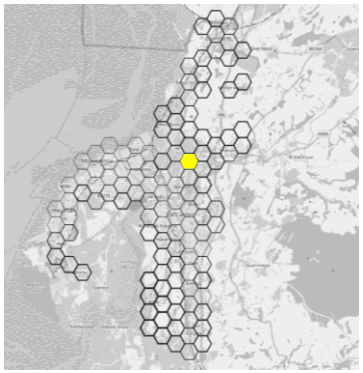
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 789

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

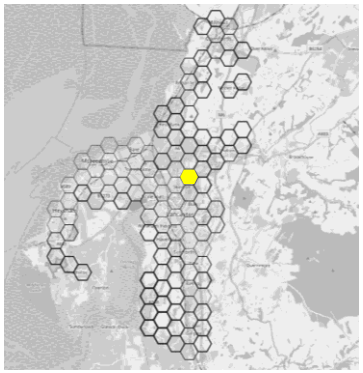
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 790

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

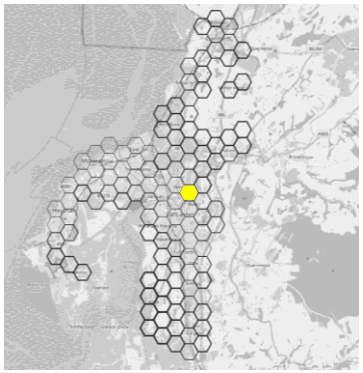
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 791

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

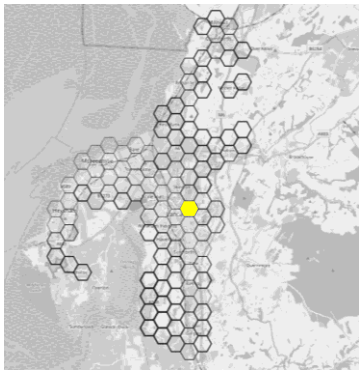
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 792

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

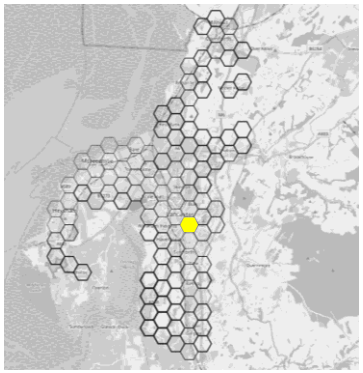
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• No specific recommendations.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Error requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 793

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Infill

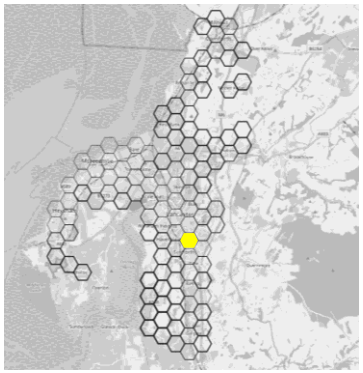
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 794

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

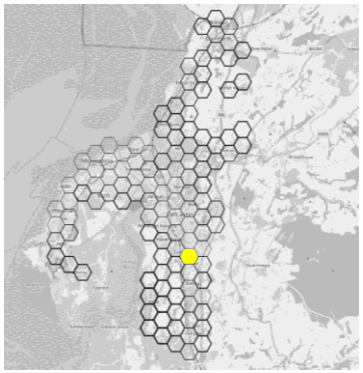
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 795

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

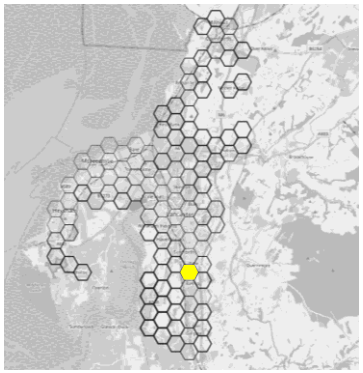
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 796

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

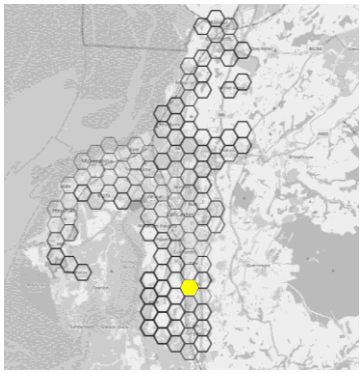
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops
and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking
interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very Low / No requirement for community EV infrastructure
intervention
• Headroom is greater than Community EV infrastructure
requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

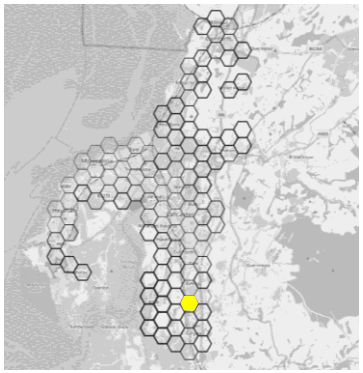
HEX 797

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Low

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops
and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking
interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very Low / No requirement for community EV infrastructure
intervention
• Headroom is greater than Community EV infrastructure
requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

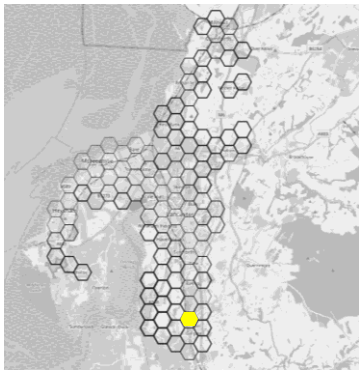
HEX 798

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops
and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking
interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very Low / No requirement for community EV infrastructure
intervention
• Headroom is greater than Community EV infrastructure
requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

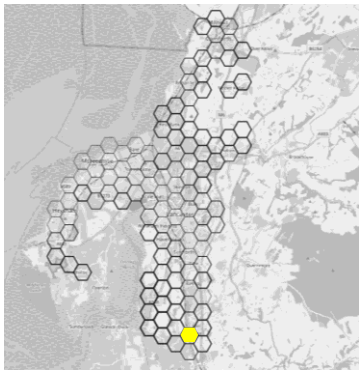
HEX 799

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops
and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking
interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure
requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 800

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

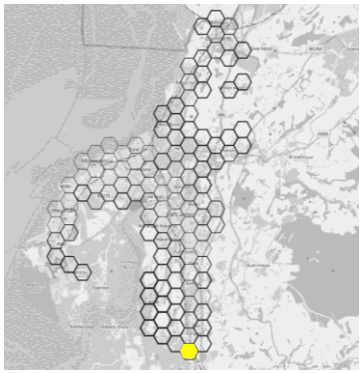
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Improve bus service provision and frequency to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 825

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

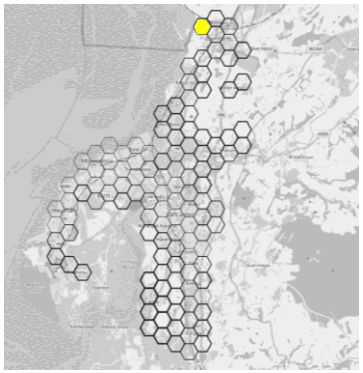
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Improve bus service provision and frequency to existing green spaces.

ACCESS TO HEALTHCARE

• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 827

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

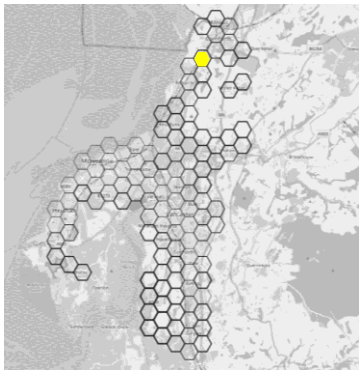
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops
and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking
interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure
intervention
• Headroom is greater than Community EV infrastructure
requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 828

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

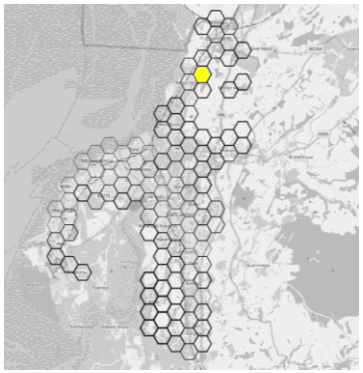
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide improved cycle routes to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 829

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

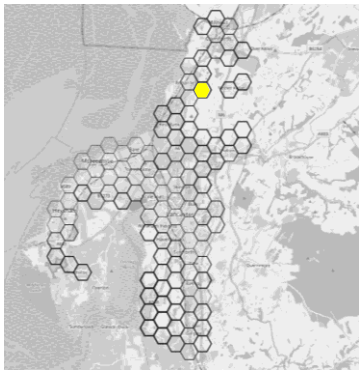
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 832

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

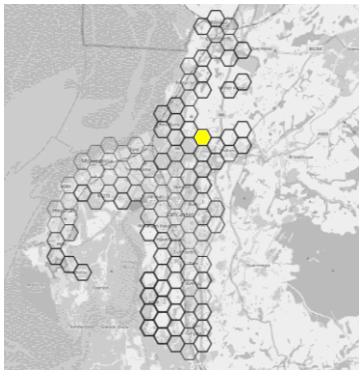
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• No existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 833

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

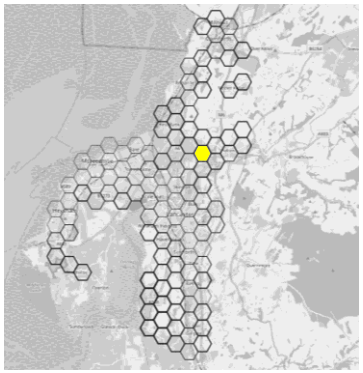
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 834

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

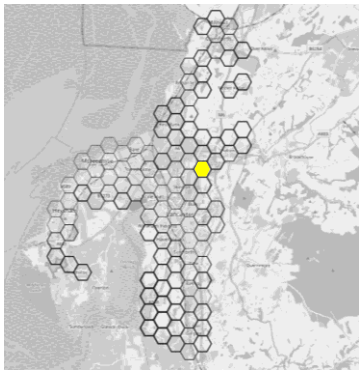
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 835

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

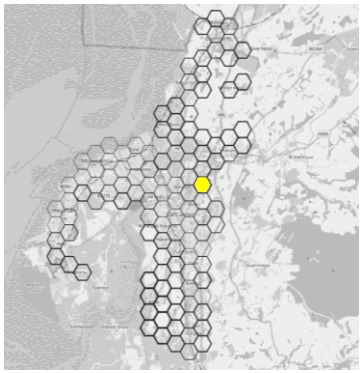
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 836

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

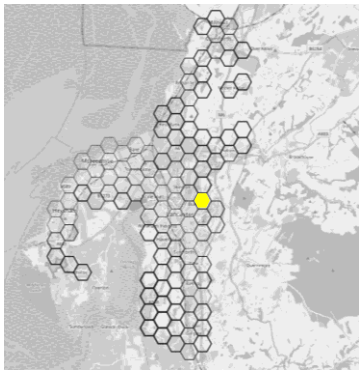
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 837

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

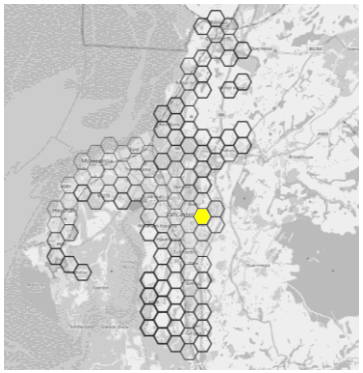
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• High requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

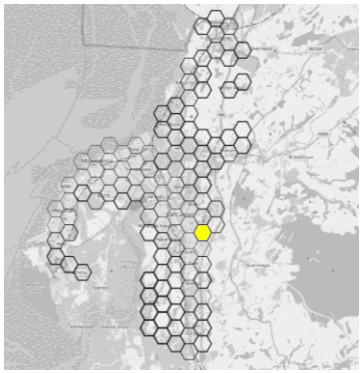
HEX 838

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

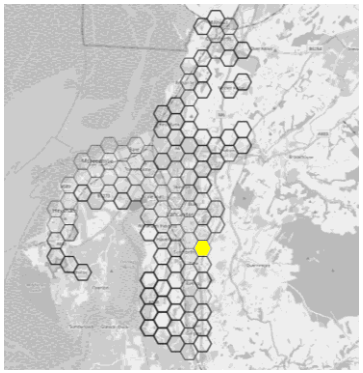
HEX 839

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Low

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

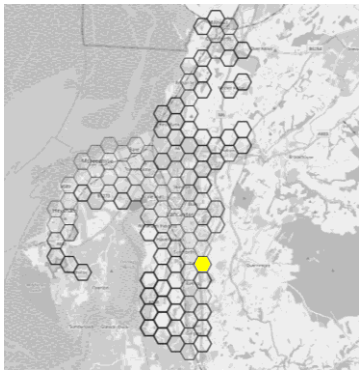
HEX 840

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of AC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 841

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

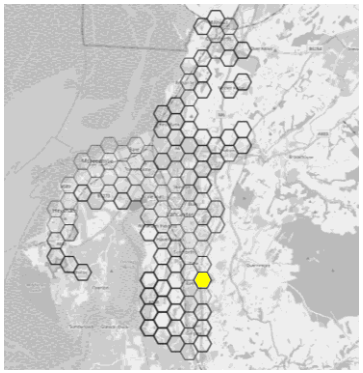
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

- Provide new green space within a 20 minute walk
- Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

- Provide additional healthcare services and facilities within a 20 minute walk.
- Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

- Provide a new primary school within a 20 minute walk.
- Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

- Provide a new secondary school within a 20 minute walk.
- Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

- Provide a new tertiary education within a 20 minute walk.
- Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

- Provide additional shops and services within a 20 minute walk.
- Provide improved cycle routes to existing shops and services within a 20 minute walk.
- Provide new bus service provision to existing shops and services within a 20 minute walk.

QUALITY METRICS

WALKING

- No existing LCWIP walking routes
- No proposed LCWIP walking interventions

CYCLING

- Existing LCWIP cycling routes
- No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

- No existing bus route(s)
- Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

- Very Low / No requirement for community EV infrastructure intervention
- Headroom meets Community EV infrastructure requirement
- In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

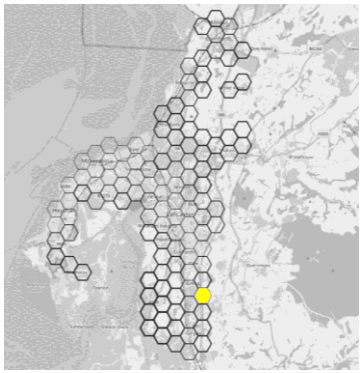
HEX 842

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• No existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• No specific recommendations

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 843

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

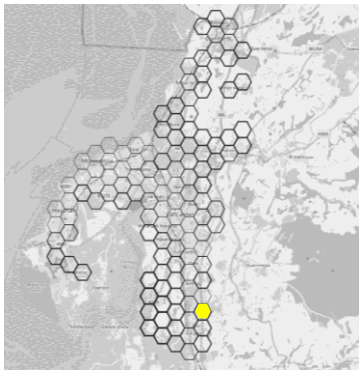
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 844

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

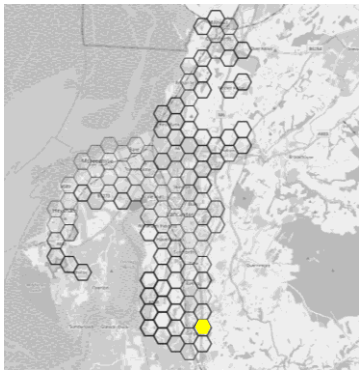
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 845

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

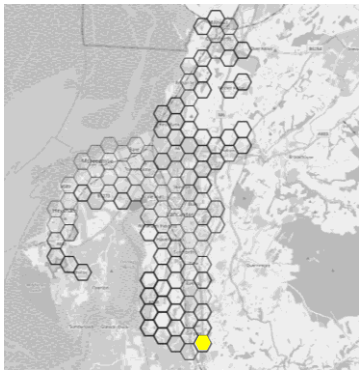
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of DC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 869

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

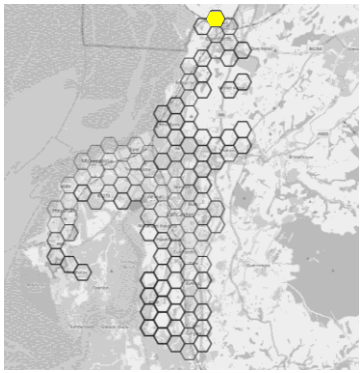
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Improve bus service provision and frequency to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 870

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

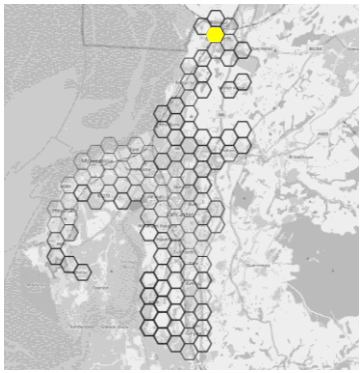
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Improve bus service provision and frequency to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Improve bus service provision and frequency to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 871

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

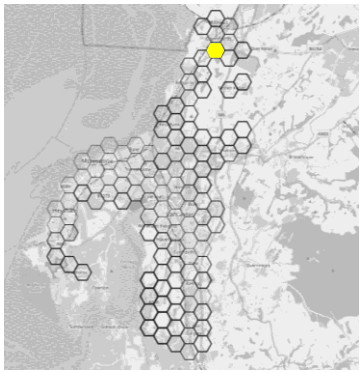
INTERVENTION LEVEL

Low

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Improve bus service provision and frequency to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 877

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

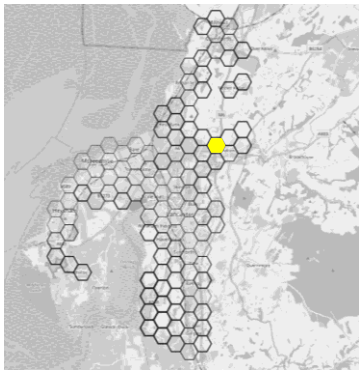
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 878

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

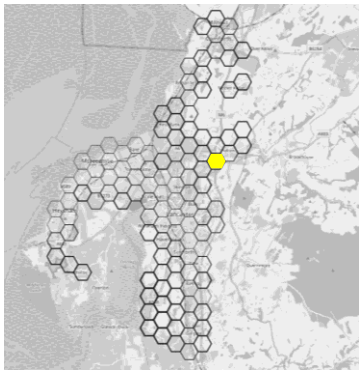
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.
• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

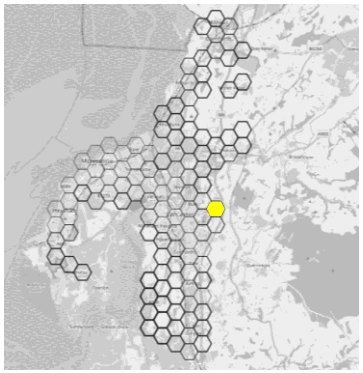
HEX 881

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of Mixed market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

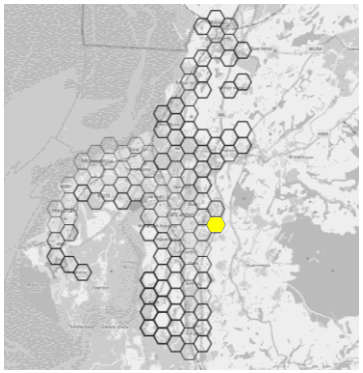
HEX 882

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Urban Extension

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• No specific recommendations.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

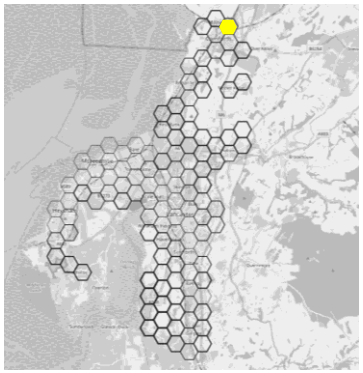
HEX 915

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE
Corridor Concentration

INTERVENTION LEVEL
Medium

SCENARIO
Baseline
Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Improve bus service provision and frequency to existing secondary schools.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Improve bus service provision and frequency to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is less than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 916

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

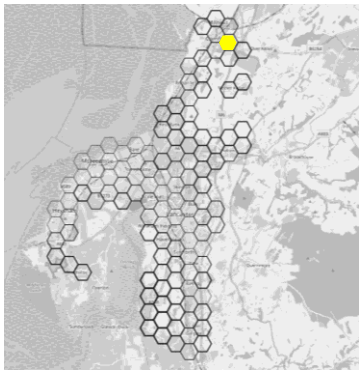
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Improve bus service provision and frequency to existing secondary schools.

QUALITY METRICS

WALKING

• Existing LCWIP walking routes
• Proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Improve bus service provision and frequency to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Medium requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 917

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

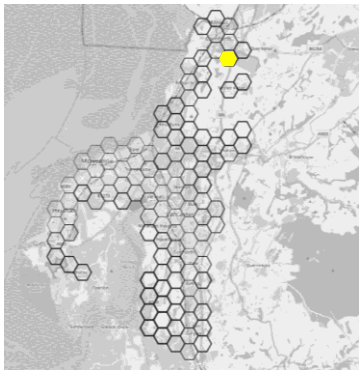
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Improve bus service provision and frequency to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• No specific recommendations.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 919

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

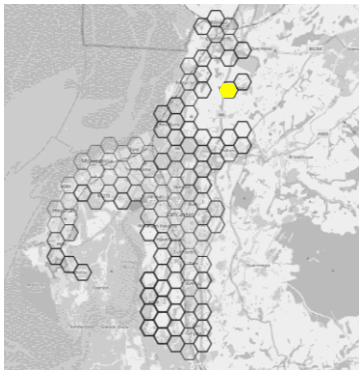
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Improve bus service provision and frequency to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• No existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 922

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

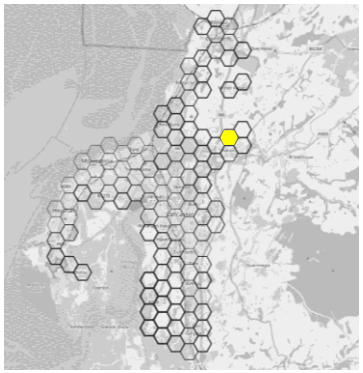
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• No existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 923

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

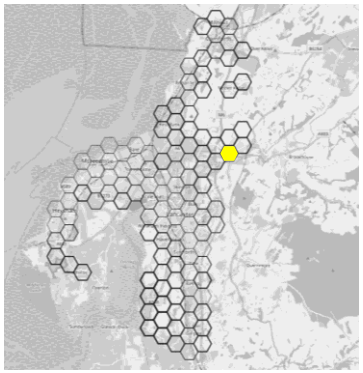
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide a new primary school within a 20 minute walk.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• Proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Improve bus service provision and frequency to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 961

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

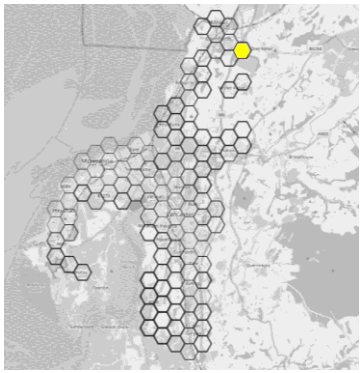
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 963

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

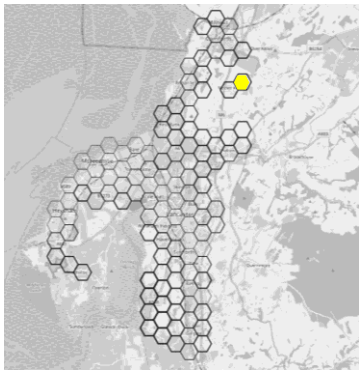
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• Provide additional healthcare services and facilities within a 20 minute walk.
• Improve bus service provision and frequency to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Improve bus service provision and frequency to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• No existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of AC market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 966

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Corridor Concentration

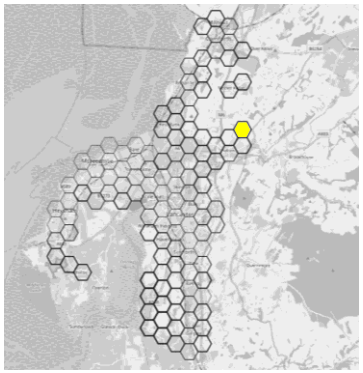
INTERVENTION LEVEL

High

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• Provide new bus service provision to existing green spaces.

ACCESS TO HEALTHCARE

• Provide new bus service provision to existing healthcare services and facilities.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• Provide new bus service provision to existing primary schools.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.
• Provide new bus service provision to existing secondary schools.

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Provide new bus service provision to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services
within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.
• Provide new bus service provision to existing shops and services
within a 20 minute walk.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• No existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

PUBLIC TRANSPORT

• No existing bus route(s)
• Provide new/extend existing bus services at suitable frequencies to serve key destinations.

EV

• Very Low / No requirement for community EV infrastructure intervention
• Headroom meets Community EV infrastructure requirement
• In an area of zero market intervention.

Lancaster Sustainable Travel Strategy // Hex Summary Sheet

HEX 967

OVERALL ACCESSIBILITY SCORE

DEVELOPMENT TYPE

Urban Extension

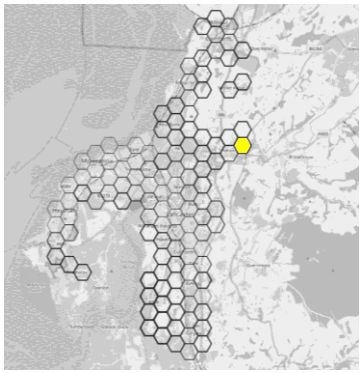
INTERVENTION LEVEL

Medium

SCENARIO

Baseline

Intervention



ACCESS TO GREEN SPACE

• No specific recommendations.

ACCESS TO HEALTHCARE

• No specific recommendations.

PROXIMITY METRICS

ACCESS TO PRIMARY EDUCATION

• No specific recommendations.

ACCESS TO SECONDARY EDUCATION

• Provide a new secondary school within a 20 minute walk.
• Provide improved cycle routes to existing secondary schools.

QUALITY METRICS

WALKING

• No existing LCWIP walking routes
• No proposed LCWIP walking interventions

CYCLING

• Existing LCWIP cycling routes
• No proposed LCWIP cycling interventions

ACCESS TO TERTIARY EDUCATION

• Provide a new tertiary education within a 20 minute walk.
• Provide improved cycle routes to existing tertiary eductation.
• Improve bus service provision and frequency to existing tertiary eductation.

ACCESS TO SHOPS AND SERVICES

• Provide additional shops and services within a 20 minute walk.
• Provide improved cycle routes to existing shops and services within a 20 minute walk.

PUBLIC TRANSPORT

• Existing bus route(s) pass through
• Improve frequency of existing bus services.

EV

• Very Low requirement for community EV infrastructure intervention
• Headroom is greater than Community EV infrastructure requirement
• In an area of zero market intervention.

Stantec

Stantec is a global leader in sustainable engineering, architecture, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

Stantec Fore Limited
Riverside West, Whitehall Road
Leeds
LS1 4AW
UNITED KINGDOM
stantec.com