LANCASTER PARKING STRATEGY
STRATEGY REPORT

SYSTRA

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<table>
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1. INTRODUCTION

1.1 General

1.1.1 SYSTRA Ltd (SYSTRA) has been commissioned by Lancaster City Council (the city council) to conduct a review of city council-operated parking facilities in Lancaster City Centre and develop an associated parking strategy.

1.1.2 The study incorporates a detailed assessment of existing off-street parking provision and high-level assessment of on-street parking provision (managed by Lancashire County Council) across the city centre. The study area has been identified in collaboration with the city council in recognition of its potential for development changes.

1.1.3 The spatial focus of the Parking Strategy is shown in Figure 1.

Figure 1.   Lancaster Study Area

Open Street Map Contributors 2022

1.1.4 The city council operates a large number of car parks across Lancaster, with 20 of these located within Lancaster City Centre. These city centre car parks provide a total of 1,545 spaces (including 82 spaces marked and signed for use by blue badge holders). This is complemented by limited on-street parking managed by Lancashire County Council and private off-street parking.

1.1.5 An assessment of existing parking provision across the city centre formed the first stage of this study. This included a review of the physical condition of car parks, levels of use, management and enforcement and revenue generation. An assessment of the potential impact that projected housing and employment growth will have upon future off-street car parking demand has also been undertaken.

1.1.6 The evidence collected through this work was combined in a single Baseline Report, summarising the current situation with respect to parking and highlighting key issues and opportunities.

1.1.7　　The second phase of the study is the strategy development, contained within this report. A set of key strategy objectives has been identified that aims to help optimise future car parking provision and management. Options are set out across ten broad themes, with consideration of which are most suitable to meet the strategy objectives. The most appropriate are then brought together to provide an overall strategy for Lancaster.

1.1.8　　Actions have been developed with consideration given to the overarching objective of Lancashire County Council's Lancaster Highways and Transport Masterplan to reduce car penetration into the city centre.

1.1.9　　A series of potential actions for the short, medium and long-term are detailed to provide the city council with a suggestion of what options may be taken forward depending on the area of prioritisation decided on:

- **Decide & Provide** (Sustainability / Climate Emergency), where priority is given to measures that are most likely to deliver environmental and sustainability benefits, encourage modal shift and promote public transport use in favour of private car use;
- **Predict & Provide**, ensuring sufficient parking capacity is provided to accommodate all predicted future growth in demand; and
- **Balanced Approach**, incorporating measures that best meet overall strategy objectives without significantly impacting upon competing wider city and county council policies and aims, including some options that would be taken forward as part of a Decide & Provide, or Predict & Provide, approach.

1.2　　Report Structure

1.2.1　　Following this introductory section, the remainder of this Strategy Report is structured as follows:

- **Section 2: Evidence Base** – Provides a high-level summary of the outputs from the Baseline Report that informs the development of the Strategy and Action Plan.
- **Section 3: Strategy Development Process** – Summarises identified issues, challenges and opportunities alongside key objectives for the Parking Strategy.
- **Section 4: Options Development** – Sets out the range of potential tools and scheme measures available to influence future car parking demand and both the quality and quantity of provision, highlighting those considered appropriate for Lancaster. These form the basis for the development of the Strategy and Action Plan.
- **Section 5: Action Plan** – Provides a plan for delivery of the Parking Strategy.

2. EVIDENCE BASE

2.1 Overview

2.1.1 This section provides an overview of the main outcomes of the baseline assessment work, and summarises the key issues and opportunities that have been identified. These have been utilised to formulate the overarching strategy objectives.

2.2 Baseline Review

2.2.1 A detailed assessment of current parking supply and associated demand, alongside the potential future impact of development proposals has been completed. This work encompassed:

- An overview of relevant current and emerging national, regional and local policy, legislation and strategy;
- A review of current transport conditions, with consideration given to the highway network, parking provision and locations, and public transport provision;
- Desktop-based and on-site audits of city council-operated parking stock;
- A review of current demand for parking through spot-count occupancy surveys;
- Development review of local policy documents to identify any changes to parking demand or supply which might take place in upcoming years; and
- An overview of current practices regarding management, enforcement and pricing.

2.3 Policy, Legislation & Strategy Context

2.3.1 A comprehensive review of relevant current and emerging policy at national, regional and local levels has been undertaken to acquire a thorough understanding of the wider policy requirements, guidance and context within with the Parking Strategy sits. Particular attention has been paid to reviewing content, within regional and local policies and guidance documents, that relates to car and cycle parking provision and associated demand management.

2.4 Local Context

2.4.1 The City of Lancaster is a 576 sq km local government district that incorporates the towns of Lancaster, Morecambe, Heysham and Carnforth. The Parking Strategy focuses on Lancaster, which is the largest urban area within the district with a population of approximately 52,000.

2.4.2 Lancaster is home to Lancaster Castle, several museums and a pedestrianised historic centre. It is bordered by the River Lune to the north and extends in each direction into less densely developed areas. In 2018, the area generated in excess of £475 million within the local economy through visitor and tourism spend associated with approximately eight million tourist visits.

2.5 Transport Network

Public Transport Services

2.5.1 Lancaster is served by a comprehensive bus network, with a number of services stopping at Lancaster Bus Station. It is recognised that rural connectivity by bus is limited in places. Services provide connectivity to destinations including Lancaster University, Ridge, Preston City Centre, Bowerham, Morecambe and Heysham.

2.5.2 Lancaster station is serviced by Northern Rail, Avanti West Coast and Transpennine Express services to locations including Manchester, London Euston, Leeds, Edinburgh and Glasgow. The station provides car parking for 165 vehicles and cycle parking with capacity for a total of 188 cycles, with a proportion of this capacity sheltered and monitored by CCTV.

Pedestrian & Cycle Infrastructure

2.5.3 Traffic-free cycleways extend in all directions from the city centre and provide connectivity towards Morecambe in the northwest and to Lancaster University to the south. On-road cycleways run through the city centre and connect the area around the Royal Infirmary to the south to the River Lune and Skerton to the north.

2.5.4 Further cycleways are planned to connect the city centre to locations such as Greaves, Bowerham and Haverbreaks to the south.

2.5.5 A survey by the Department for Transport found that almost one third (31%) of adults in Lancaster walk for travel purposes at least once per week, with 59% walking for leisure at least once per week. Additionally, 6% of adults in Lancaster cycle for travel at least once per week and 12% at least once per week for any purpose. These are higher proportions than the Lancashire and England averages.

2.5.6 The city centre is partially pedestrianised, with special parking permissions granted upon request.

Highway Network

2.5.7 The centre of Lancaster is located approximately three kilometres from the M6 motorway. Local trunk roads A6, A588 and A589 provide important routes for people travelling to and from the city centre.

2.5.8 According to 2011 Census data, most residents of Lancaster work within the local authority. Over 12,000 people commuted into the Lancaster City Centre at the time of the 2011 Census, most of whom travel from other areas of Lancaster and Wyre. Local trunk roads A6, A588 and A589 therefore play an important role in transporting people to and from the city centre.

Car Ownership

2.5.9 Nearly one third of households (31%) in Lancaster do not own a car or van. This is a higher proportion than the northwest region average (not including Greater Manchester, or

Liverpool). Almost half (47%) of households own one vehicle (43% NW average), with 18% owning two vehicles, 3% three vehicles and 1% four or more vehicles.

Travel Patterns

2.5.10   In Lancaster, 49% of residents who travel to work drive a car or van to work, compared to 70% in Lancashire. Over one quarter (27%) of residents walk to work, whilst 6% cycle and 11% use public transport.

Electric Vehicle Charging Network

2.5.11   The city council is committed to providing electric vehicle charging points (EVCPs) for public use. Two types have been installed within city council-operated car parks for public use:

- **Fast Chargers**: Provided by the city council in partnership with BP Pulse and Charge My Street, electricity is provided for free with a connection fee charged. Users are required to pay any applicable parking tariffs; and
- **Rapid Chargers**: Four rapid chargers have been installed by Electric Blue (EB!) in three car parks within the district, including Spring Garden Street in the city centre. Use of these chargers is limited to one hour, with electricity charged for. However, users are able to park without payment whilst their vehicle is charging.

2.5.12   This provision is complemented by additional EVCPs managed by Lancashire County Council in partnership with BP Pulse located at the J34 Park & Ride facility. A hub with charging facilities for 18 vehicles is provided, comprising six fast chargers (each able to accommodate two vehicles) and six rapid chargers.

2.6   Parking Provision

Off-Street

2.6.1   As shown in Figure 2, the city council operates 20 off-street car parks in Lancaster, providing a total of 1,545 spaces alongside 82 spaces sized and marked for use by blue badge holders. This provision is complemented by a limited number of privately managed car parks. Three car parks (Bridget Street, Bulk Street and Windy Hill) are allocated for use by permit holders only.

2.6.2   Detailed car park audits were undertaken in May 2022 of all city council-operated car parks alongside strategic privately operated car parks. This has been complemented by desktop-based research and information provided by the city council. The audits provided a range of information about the size, condition, and accessibility of parking in Lancaster and identified a variance in the quality and safety of parking facilities operated by the city council.

Figure 2.   City Council-Operated Car Parks
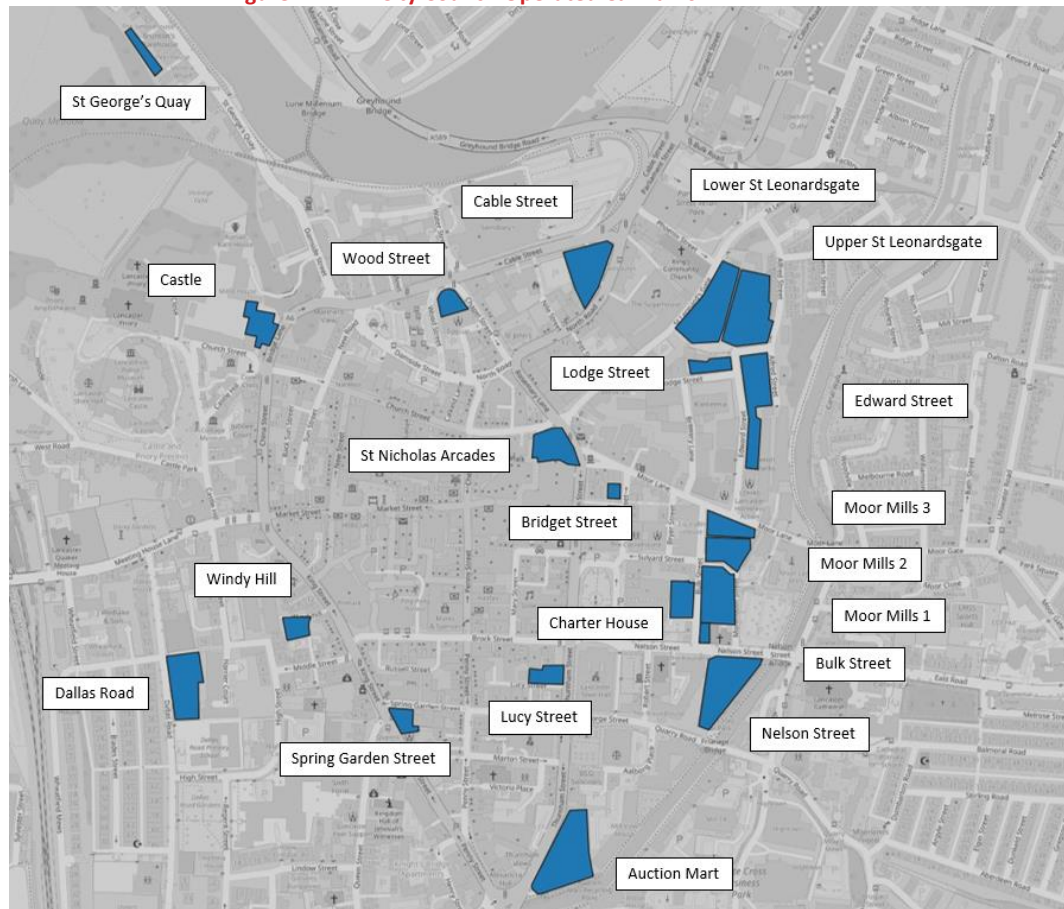
Open Street Map Contributors 2022

2.6.3   Details of these car parks are set out in Table 1, alongside current and predicted future occupancy levels. Future parking demand has been calculated using the latest version of TEMPro (v 7.2), whereby TEMPro growth factors (from 2022 to 2035) have been applied to current parking occupancy figures, calculated through spot-count occupancy surveys undertaken by SYSTRA.

Table 1. City Council Car Parks

CAR PARK	NO. STANDARD SPACES	CURRENT OCCUPANCY	FUTURE PREDICTED (2035)
Auction Mart	98	81%-100%	Full
Bridget Street (Permit)	12	41%-60%	41%-60%
Bulk Street (Permit)	8	21%-40%	21%-40%
Cable Street	80	61%-80%	61%-80%
Castle	271	0%-20%	0%-20%
Charter House	40	61%-80%	61%-80%

CAR PARK	NO. STANDARD SPACES	CURRENT OCCUPANCY	FUTURE PREDICTED (2035)
Dallas Road	84	Full	Full
Edward Street	85	41%-60%	41%-60%
Lodge Street	30	41%-60%	41%-60%
Lower St Leonardsgate	66	41%-60%	41%-60%
Lucy Street	18	81%-100%	Full
Moor Mills 1+2	102	61%-80%	81%-100%
Moor Mills 3	37	61%-80%	61%-80%
Nelson Street	112	41%-60%	41%-60%
Spring Garden Street	19	61%-80%	61%-80%
St George's Quay	44	41%-60%	41%-60%
St Nicholas Arcades	277	41%-60%	41%-60%
Upper St Leonardsgate	127	21%-40%	21%-40%
Windy Hill (Permit)	22	41%-60%	41%-60%
Wood Street	13	81%-100%	81%-100%
Total	1,545	41%-60%	41%-60%

2.6.4   Private car parks, particularly those provided in conjunction with retail stores or shopping centres, make a significant contribution to off-street parking capacity. Table 2 overleaf details the largest privately managed car parks in Lancaster including their capacity.

2.6.5   The largest privately managed car park in Lancaster is associated with a Sainsbury's supermarket unit and is intended for use by store customers only, with parking free of charge for a maximum of two hours subject to a minimum spend in-store. However, the car park may be used by drivers who then visit other locations in Lancaster whilst parked within this two hour maximum stay period.

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Table 2. Lancaster Strategic Private Car Parks

NAME	CAPACITY	TARIFF / OPERATION
Sainsbury's, Cable Street	270	Free, customers only, maximum stay two hours.
Lancaster Station	165	Free up to 20 minutes, Daily: £12.00, Saturday: £4.00, Sunday: £4.00, Monthly: £166.00, Quarterly: £374.00, Annual: £1,200.00
Marketgate Shopping Centre	127	Mon-Sat: 08:00-18:00, Sun: 10:00-17:00. 0-1 hours: £2, 1-2 hours: £3, 2-3 hours: £4, 3-4 hours: £5, 4-6 hours: £10, 6-24 hours: £20
Kingsway Retail Park	91	Free, customers only
Aldi, Aldcliffe Road	80	Free, customers only, maximum stay 90 minutes. Mon-Sat: 08:00-22:00, Sun: 10:00-16:00. No restrictions outside these hours
Kings Yard	47	Up to 1 hour: £1.75, up to 3 hours: £3.00, up to 5 hours: £4.50, up to 10 hours: £6.50, up to 24 hours: £11.00. Maximum Stay 24 hours.
Damside Street	22	1 hour: £1.00, 2 hours: £2.00, 3 hours: £2.50, 12 hours: £6.00.

Park & Ride

2.6.6 Lancaster is also served by a Park & Ride facility located at the junction of Caton Road and the M6 motorway (J34). It is approximately three kilometres from the city centre and operated by Kirkby Lonsdale Coach Hire on behalf of Lancashire County Council, who fund the scheme's operation.

2.6.7 Parking capacity for 650 vehicles is provided, which can be used without charge. Fares are charged for utilising the bus service (£1.70 return, £7.00 weekly return for an adult), which operates every 15 minutes between the hours of 06:05 and 21:05, Monday to Saturday, with the last bus departing from the city centre at 21:20. The parking facility is open 24 hours a day, seven days a week.

2.6.8 Bus services route to and from the Park & Ride facility via Caton Road. No bus priority measures are provided on Caton Road, limiting journey time benefits for customers compared to those travelling into the city centre via private car.

2.6.9 It is noted that the parking strategy for Eden Project North, granted planning permission in January 2022 and financial support through the Levelling Up Fund in January 2023, incorporates the change of use of approximately 400 spaces at the Park & Ride facility

into dedicated parking for visitors to the attraction, reducing overall parking capacity for those travelling to and from the city centre via the Park & Ride service.

2.6.10 Passenger numbers have increased in the period to July 2022, as summarised in Table 3, with a peak average daily passenger number of 222 reached in June 2022.

Table 3. Park & Ride Usage (July 2021-July 2022)

PERIOD	PASSENGER NUMBERS	AVERAGE PASSENGER NUMBERS PER DAY
25/07/21 - 21/08/21	3,915	163
22/08/21 - 18/09/21	4,476	187
19/09/21 - 16/10/21	4,439	185
17/10/21 - 13/11/21	4,244	177
14/11/21 - 11/12/21	4,302	179
12/12/21 - 08/01/22	2,789	147
09/01/21 - 05/02/22	4,224	176
06/02/22 - 05/03/22	4,088	170
06/03/22 – 02/04/22	4,397	183
03/04/22 – 30/04/22	4,173	190
01/05/22 – 28/05/22	5,002	217
29/05/22 – 25/06/22	4888	222
26/06/22 – 23/07/22	5208	217

2.6.11 A second Park & Ride facility at J33 of the M6 motorway, located to the south of the city centre, is being considered by Lancashire County Council, alongside the delivery of supporting bus priority measures.

On-Street

2.6.12 Off-street car parking is complemented by limited on-street parking provision within the city centre which provides a mixture of both short-term (Pay & Display) and long-term (permit holder) parking opportunities. On-street parking is managed by Lancashire County Council and is available on:

- Castle Hill;
- Church Street;
- Dalton Square;
- Friar Street;
- George Street;
- High Street;
- Marton Street;
- New Road;
- Penny Street;
- Phoenix Street;

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O Quarry Road;

O Queen Street;

O Robert Street; and

O St Mary's Parade.

Blue Badge Parking

2.6.13 At present, blue badge parking spaces comprise 5% of the city council's total off-street parking capacity, with provision ranging from 13% (in Lodge Street) to 0% (in four car parks). A figure of 5% of total capacity is the standard benchmark used for off-street blue badge parking provision. Three quarters of city centre car parks operated by the city council (15 of 20) meet the recommended threshold for blue badge bays.

2.6.14 Vehicles displaying a valid blue badge are also able to park in any standard parking bay in all city council-operated car parks without charge or time limit.

2.6.15 Lancashire County Council offers free on-street parking for blue badge holders displaying a valid badge, for stays of up to three hours.
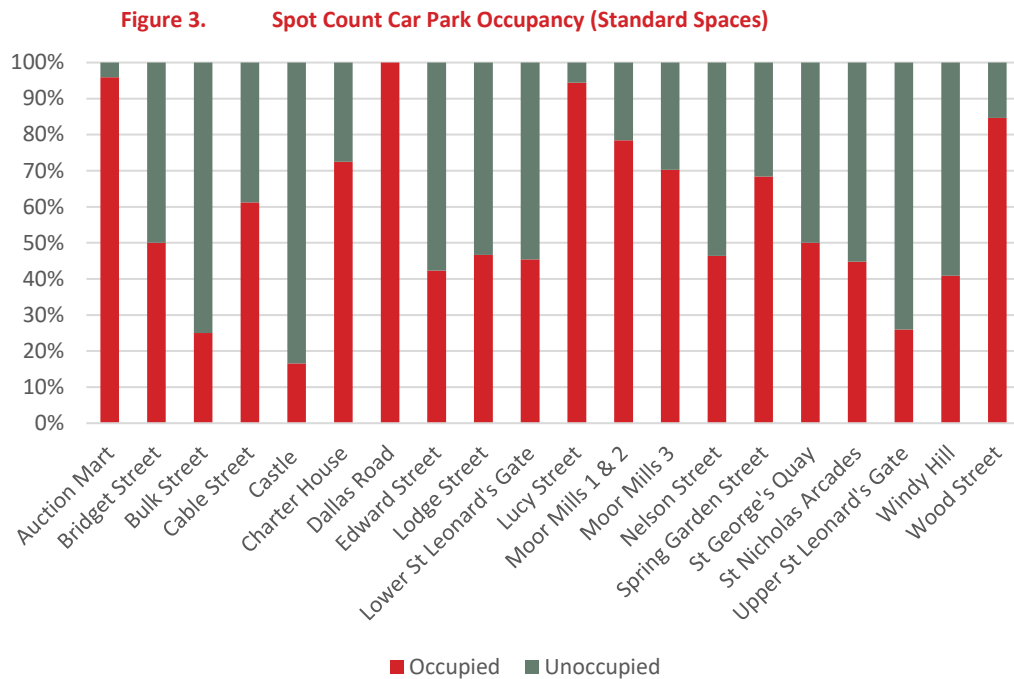
Motorcycle Parking

2.6.16 Motorcycles (two wheelers) are able to park without charge, or time limit in city council-operated car parks. There are dedicated motorcycle parking hoops located in Cable Street, close to the main pedestrian exit, and St Nicholas Arcades. Motorcycles can be parked in any parking bay within city council-operated car parks, with the exception of blue badge bays. They can also be parked in other areas of the car park, as long as they do not obstruct vehicle or pedestrian movement.

2.6.17 Parking charges are implemented for motorcycles in on-street Pay & Display / Pay by Phone bays (managed by Lancashire County Council), with maximum stay durations applicable to motorcycles as for other vehicle types.

2.7   Current Parking Demand

2.7.1 Occupancy spot counts were undertaken of all city council car parks in November 2022, with the number of parked vehicles recorded in each car park and split by parking type (standard, blue badge, electric vehicle). The results of the spot counts are set out in Figure 3 overleaf for standard spaces.

2.7.2 As previously detailed, Bridget Street, Bulk Street and Windy Hill are permit car parks and can be used by allocated permit holders only.

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Figure 3. **Spot Count Car Park Occupancy (Standard Spaces)**

2.7.3 The spot counts demonstrate a range of occupancy levels exist within city council-operated car parks across Lancaster, with an average occupancy of standard spaces of 50% recorded across surveyed car parks.

2.7.4 Dallas Road, Auction Mart, Lucy Street and Wood Street recorded the highest occupancy levels at 100%, 96%, 94% and 85% respectively.

2.7.5 The recorded usage of blue badge bays (Figure 4) was generally higher than standard spaces. This suggests there to be potential for the repurposing of some standard spaces to increase the capacity for these specialist parking types.

![SYSTRA]

Figure 4. **Spot Count Car Park Occupancy (Blue Badge Spaces)**

Legend: ■ Spaces Occupied ■ Spaces Unoccupied
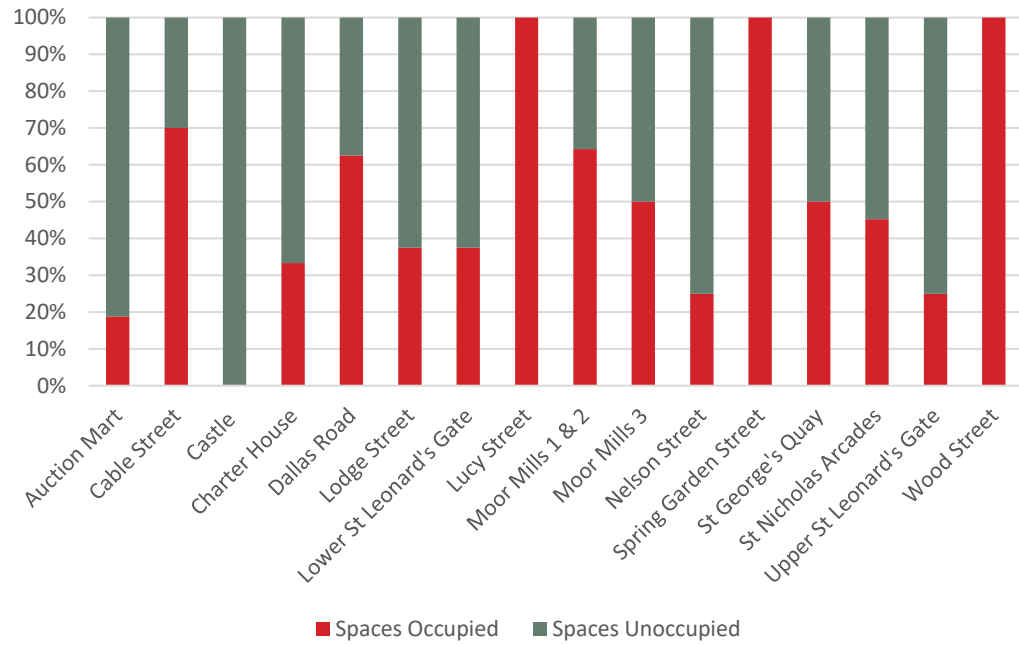
3. STRATEGY DEVELOPMENT PROCESS

3.1 Key Issues & Opportunities

3.1.1 A number of key issues and opportunities have been identified during the baseline assessment process. These are detailed in turn below.

3.1.2 Whilst the general condition of most city council-operated car parks is fair, there are a number of locations where small-scale improvements could be made in order to provide a high quality, safe and secure environment. Six city centre city council-operated car parks have been awarded the Park Mark Standard; interventions could be made to secure this standard for other car parks within Lancaster. This may help to improve user experience and promote usage of currently under-utilised locations.

3.1.3 There are considerable variances in occupation between car parks; whilst some city centre car parks currently operate close to or at capacity, others currently experience significant levels of spare capacity.

3.1.4 Projected future residential, commercial and employment growth has the potential to increase parking demand within the city centre, including visitor parking as the cultural, leisure and tourism offer within the city centre and surrounding areas is strengthened.

3.1.5 On-street parking provides additional short-term parking around the city centre and complements off-street supply. It is important that neither on-street or off-street parking is considered in isolation. The interplay of on and off-street provision is an important consideration prior to any redevelopment of car parks or changes to on-street parking supply implemented as part of other strategies. The two forms of supply will inevitably interact and an overall reduction in off-street car parking provision may result in changes in behaviour for on-street car parking.

3.1.6 The city council's objective of encouraging use of car parks in favour of on-street parking is recognised through maximum durations of stay and higher charges on-street.

3.1.7 Pricing tariffs within off-street car parks were revised in April 2022. Low levels of parking occupancy in certain locations suggests changes to classification of car parks, the maximum stay times implemented, or tariffs charged may be appropriate.

3.1.8 It is noted that some minor issues currently exist with systems utilised for the collection of back-office data, particularly in terms of ticket sales information. However, the city council also operates a significant parking data dashboard that can provide a wealth of information concerning the usage and operations of its parking stock. Working to improve systems, alongside where appropriate the introduction of enhanced back-office technologies, could be utilised to improve the user experience of car parking as well as improve management and enforcement practices.

3.1.9 Appropriate provision for blue badge parking is important, with a figure of 5% of total provision the standard benchmark used for such provision. At present, 15 of the 20 city centre car parks operated by the city council meet the recommended threshold for blue badge bays, with provision ranging from 13% (in Lodge Street) to 0% (in four car parks).

Average recorded occupancy of blue badge-only bays is higher than standard provision, which suggests changes to parking types may be appropriate in some locations.

3.1.10   Similarly, the city council is committed to expanding its network of electric vehicle charging infrastructure within its parking stock; it is considered that scope exists for increased provision in a number of car parks.

3.1.11   Improved wayfinding and signage infrastructure can help to improve navigation for visitors and help to identify the location of all car parks, whilst real-time information concerning parking availability within individual car parks can provide an enhanced user experience and minimise vehicle dwell times and potential congestion. This can be supported by enhanced marketing and communication practices, to promote the use of city council-operated car parks.

3.1.12   Effective enforcement can help to improve the efficiency and management of parking and minimises incidences of inappropriate parking.

3.2   SWOT Analysis

3.2.1   The overall strengths, weaknesses, opportunities and threats for parking in Lancaster is summarised in Table 4 and has been used to inform the goals and objectives of the Parking Strategy.

Table 4. Lancaster Parking SWOT Analysis

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Current total supply sufficient for existing and forecast future parking demand. Mix of different parking types and ticket durations. Distribution of parking provision enables users to generally park near destination. Increasing proportion of Pay by Phone use for ticket sales allows for enhanced back-office data collection. Potential exists for introduction of	Significant variance in car park occupancy, with some car parks subject to under occupancy. Information provision for users lacking in some elements (e.g. real-time parking availability). Under-use of Park & Ride facility at present.	Canal Quarter development provides opportunity to rationalise car parking offer in Lancaster, with opportunities to convert some public car parks to facilitate residential / commercial development. Use of technology to influence user behaviour, management and enforcement. Optimised parking provision to support residential, business and retail growth,	Reduction of parking capacity may lead to an increase in demand for on-street parking or private operators.

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
emission-based charging. Integration with shared mobility (car clubs) already present in car parks.		including the Canal Quarter. Opportunities to tie to shared mobility (e.g. cycle hire). Improved wayfinding to enhance customer experience. Dynamic pricing could be used to attract users to underutilised car parks. Potential for emission-based charging.	

3.3 Formulation of Strategy Aims & Objectives

3.3.1 The above section has described the key issues that have been identified through the baseline review. The options included in the strategy aim to address these issues, whilst also meeting the future needs of the area and taking advantage of potential opportunities.

3.3.2 To guide the development of options for the Parking Strategy, the following eight objectives have been established:

- **1**: Manage and optimise car parking provision to best meet the needs of the local community, local economy and tourist demand;
- **2**: Ensure parking plays a role in helping to reduce transport-related climate change contributions, aligning with wider city council visions and ambitions;
- **3**: Ensure adequate quality, safety and security of all city council-operated parking provision;
- **4**: Support the promotion of travel by sustainable means, including through the provision of secured and sheltered cycle parking, and promoting public transport use to, from and across Lancaster;
- **5**: Ensure effective enforcement of parking so as to maximise available supply and minimise traffic disruption and congestion;
- **6**: Improve signage and wayfinding infrastructure (both physical and online) to facilitate efficient movement of vehicles and people to and from car parking;
- **7**: Consider appropriate management solutions to help meet future parking demand generated by new development; and
- **8**: Embrace new and emerging technology in the parking sphere.

3.3.3   These objectives have been taken forward and act as the principles for developing and evaluating potential options and measures that are set out within the Parking Strategy and Action Plan set out in the remaining sections of this report.

4. OPTION DEVELOPMENT

4.1 Overview

4.1.1 This section sets out the potential options for the strategy and appraises them against the key issues and opportunities, as well as the overriding objectives. Options which neither tackle issues identified, or will not assist with the achievement of the above goals will be disregarded. Options considered have been grouped under a series of overriding themes as summarised in Figure 5.

Figure 5.   Parking Strategy Option Development Themes
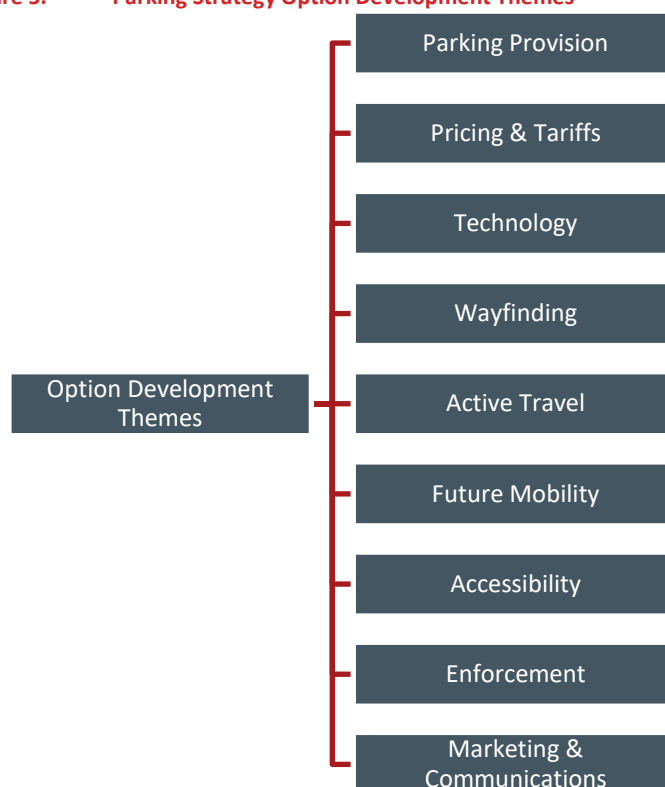
4.1.2 There are a number of important questions that require consideration which may influence the direction of travel regarding the future of city council-operated parking within Lancaster. It is important that a clear direction for the role of parking is identified and agreeable to all within the city council from the outset. There are a range of both direct and indirect economic, environmental, social impacts that need to be taken into consideration in the decision making process regarding parking.

4.2 Parking Provision

Overview & Rationale for Inclusion

4.2.1 As set out in this section, there are a number of measures and tools that can be used to either change the quality of parking provision or the overall quantity of supply. If employed in an appropriate manner, such measures help to provide parking supply that is not only safe, secure and able to meet current parking demand, but that is also made

resilient against anticipated employment and housing growth across Lancaster, seasonal patterns of tourist activity and changes in travel patterns.

Option Development

4.2.2   It is important that an umbrella policy and strategy that allows the city council to effectively manage its off-street car parking provision is developed, notwithstanding the differences in the character, usage and nature of car parks. It is recognised that, alongside this umbrella strategy, different arrangements in terms of developing and delivering measures for the operation and management of car parks may be required (for example, specific requirements of the permit-holder only car parks (Bridget Street, Bulk Street and Windy Hill)).

Off-Street Parking

4.2.3   Currently, off-street provision provides a mixture of quality and quantity. As summarised in Figure 3 in **Section 2**, there is variable demand for off-street parking across the city centre.

4.2.4   Some car parks are well utilised, including Dallas Road, Auction Mart, Lucy Street and Wood Street (100%, 96%, 94% and 85% recorded occupancy respectively). However, a number of car parks are significantly underutilised. A number of potential factors can be attributed to low levels of utilisation, including car park location, size, quality and resultant safety concerns.

4.2.5   The permit-only car parks (Bridget Street, Bulk Street and Windy Hill), whereby individual spaces are allocated to specific permits, were not well utilised at the time of the audit. Whilst this is not unexpected in car parks with a set limit of possible users, it suggests the spaces are not currently subject to the most efficient use.

4.2.6   As an umbrella strategy, the city council should seek to meet the Park Mark standard for all car parks under their operation. The Park Mark Safer Parking Scheme is a Police Crime Prevention Initiative that is aimed at reducing both crime and the fear of crime in parking facilities.

4.2.7   At present, six city council-operated car parks that form part of the Parking Strategy have been awarded the Park Mark standard (Auction Mart, Cable Street, Castle, Moor Mills 1, Nelson Street and St Nicholas Arcades). These are shown in Figure 6.

Figure 6.   Park Mark Standard Car Parks
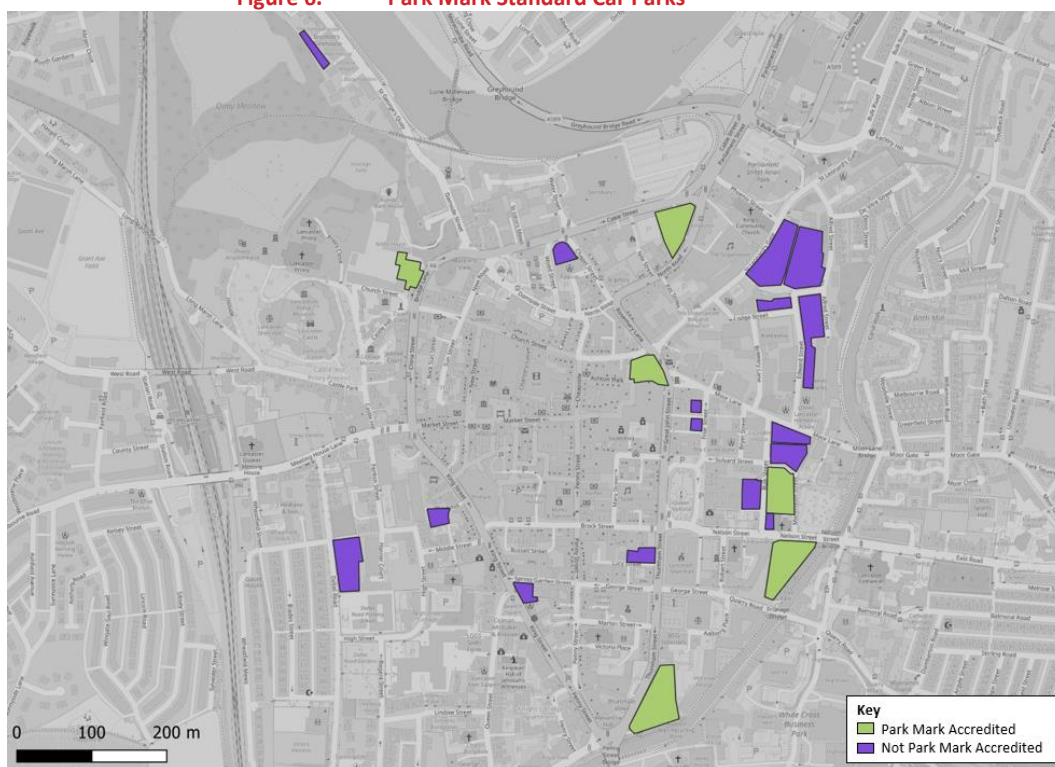
Open Street Map Contributors 2022

4.2.8   Meeting this standard can help to improve user experience and promote usage whilst potentially reducing short-term maintenance costs associated with identified issues. The standard takes elements including lighting facilities, CCTV, management practices, access arrangements and signage provision into consideration.

4.2.9   A high level of service should be maintained within all car parks, with appropriate and relevant maintenance budgets allocated to facilitate this. The Baseline Review has identified some minor quality issues within some car parks a range of small-scale improvement works and remedial actions could be taken in the short-term to improve the car park quality. These include:

○   Installation of enhanced lighting (Bridget Street, Bulk Street, Cable Street, Edward Street, Moor Mills 3, Spring Garden Street, Windy Hill);
○   Refreshing existing or providing new bay markings (Dallas Road, Edward Street, Lower St Leonardsgate);
○   Repainting of wayfinding markings (Cable Street, Moor Mills 1+2);
○   Resurface footpath associated with / adjacent to car park (Bulk Street);
○   Removing potholes located within car park access routes or bays (Charter House, Edward Street); and
○   Removal of graffiti (Nelson Street).

4.2.10   Costs associated with the undertaking of these works should be identified and, if considered appropriate, financing and approvals sought for works to be undertaken. Due consideration should be given to the potential lifespan of the car park in the context of development proposals within the city centre when considering the suitability of undertaking such works.

Recommended Actions & Opportunities

Meet the Park Mark standard in all car parks, and maintain in car parks currently Park Mark accredited.

Assess feasibility and secure funding for identified car park improvement works.

Implementation of works identified through Baseline Review audit process.

Secure appropriate maintenance budget for future car park improvement works.

Future Parking Demand & Changes to Parking Supply

4.2.11   An informed decision is required on the future provision of car parking and managing parking demand, ensuring that this aligns with the city council's wider ambitions, objectives and visions. This includes the objective of the Lancaster Highways & Transport Masterplan (2016) to reduce the volume of cars travelling into the city centre as a means of supporting a less congested and healthier Lancaster.

4.2.12   Extensive growth and development is proposed in Lancaster, with the city council aiming to deliver at least 10,440 new dwellings across the district during the lifespan of the Local Plan. Development will incorporate the regeneration of brownfield land, delivery of large strategic greenfield sites and delivery of smaller greenfield sites. Many planned urban residences are in or around the city centre.

4.2.13   Future residential, commercial and tourism growth is expected to increase parking demand; as outlined in **Section 2**, linear growth from current parking demand may result in demand for parking in individual car parks approaching or exceeding capacity. However, current levels of city council-operated off-street parking would be expected to accommodate future growth.

4.2.14   Recorded levels of utilisation suggest that the removal of individual car parks to facilitate development may not require reprovision to meet parking demand. However, it is important that the impacts and suitability of car park closures are assessed and confirmed on an individual case-by-case basis and within the wider local context. This should give consideration to factors including:

- Car park location;
- Proximity to other parking opportunities, both city council-operated and privately managed;
- Extent of parking provision to be removed;
- Usage levels;
- Revenue generation;
- Proximity to key trip generators / attractors; and
- Public transport accessibility.

4.2.15   The **Canal Quarter** provides a unique opportunity for the rationalisation of car parking provision within the city centre, noting the need to balance with wider city council goals of encouraging active and sustainable transport uptake in favour of private car use, by concentrating required provision in appropriate strategic locations.

4.2.16   One of three main development sites situated in and around the city centre, the Canal Quarter occupies a key part of the eastern side of the city centre. As shown in Figure 7, it is bordered by the western frontage of the canal from the northern extent of the centre to White Cross in the south.

Figure 7.   Canal Quarter
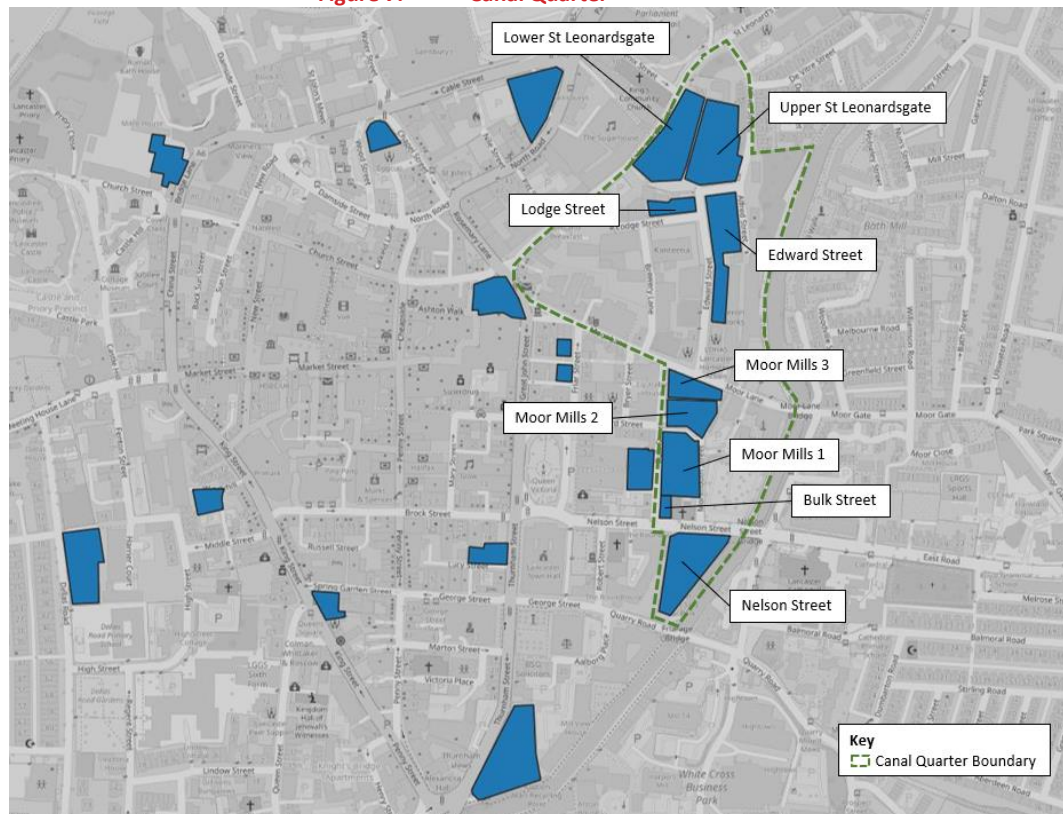
Open Street Map Contributors 2022

4.2.17   The Canal Quarter Masterplan (October 2022) seeks to deliver a mixed-use neighbouring that complements the wider city centre through the provision of approximately 580 residential units, 7,000 sqm of employment and retail space, improved pedestrian and cycle connectivity and public realm enhancements. The importance of integrating the development with the wider city centre, including via enhancing pedestrian permeability through creating a pedestrian friendly, safe and attractive walking and cycling environment, is recognised.

4.2.18   The development proposals incorporate a mix of land uses with development phased to enable incremental growth over a 15-to-20-year period and are centred around four key locations:

O   Stonewall Courtyards;
O   The Ropewalks;
O   Coopers Fields; and
O   Moor Lane South.

4.2.19   The Canal Quarter SPD (2021) recommends a rationalisation of car parking provision, with no net gain of publicly accessible spaces. As shown in Figure 7, a large proportion of the Canal Quarter currently accommodates surface-level public car parking, including the

Moor Mills 1, 2 and 3, Bulk Street, Edward Street, Nelson Street, Lodge Street, Lower St Leonardsgate and Upper St Leonardsgate car parks.

4.2.20   With combined capacity for in excess of 560 vehicles within standard spaces, the car parks located in the Canal Quarter boundary comprise approximately one third of the city centre's overall parking supply that is managed by the city council, as summarised in Table 5. Occupancy levels of standard spaces within these car parks, recorded through spot counts undertaken by SYSTRA in November 2022 are also detailed. Occupancy of 273 vehicles was recorded.

Table 5.   Car Parks in the Canal Quarter

CAR PARK	CAPACITY (STANDARD SPACES)	RECORDED OCCUPANCY (%)
Bulk Street	8	25%
Edward Street	85	42%
Lodge Street	30	47%
Lower St Leonardsgate	66	45%
Moor Mills 1 & 2	102	78%
Moor Mills 3	37	70%
Nelson Street	112	46%
Upper St Leonardsgate	127	26%
Total	567	48%

4.2.21   The positioning of the Canal Quarter in the context of the wider transport network means there is plentiful opportunity for use of alternative modes in favour of the private car. This, coupled with overall usage of city council operated parking and the existing and proposed Park & Ride facilities at M6 J34 and J33 respectively, provide an opportunity to reduce the number of public car parks within Lancaster to enable use of sites for development.

4.2.22   The phasing of future parking removal and associated displacement will need careful consideration. As such, an assessment has been undertaken of the potential impact of the removal of parking located within the Canal Quarter. To enable a robust assessment, consideration has been given to the removal of all public car parks within the Canal Quarter with no reprovision. The assessment also assumes no modal shift will occur away from private car use in future years; in reality, it can be expected that a larger proportion of trips will be made by sustainable modes (public transport, walking and cycling) as masterplan proposals are brought forward and facilities for these modes enhanced.

4.2.23   The city council manages ten car parks within the city centre that are located outside of the Canal Quarter (excluding the permit-only Bridget Street and Windy Hill). These

provide combined capacity for 944 vehicles within standard spaces, as summarised in Table 6.

Table 6.   City Centre Car Parks (Outside Canal Quarter)

CAR PARK	CAPACITY	RECORDED OCCUPANCY (%)
Auction Mart	98	96%
Cable Street	80	61%
Castle	271	17%
Charter House	40	73%
Dallas Road	84	100%
Lucy Street	18	94%
Spring Garden Street	19	68%
St George's Quay	44	50%
St Nicholas Arcades	277	45%
Wood Street	13	85%
Total	944	52%

4.2.24 Considerable spare capacity was recorded across the ten city council-operated car parks that sit outside of the Canal Quarter during the audit spot counts, with approximately 450 spaces unoccupied across the car parks detailed in Table 6.

4.2.25 These car parks provide sufficient spare capacity to accommodate displaced parking should all car parks within the Canal Quarter be closed to facilitate development and no reprovision accommodated as part of the development proposals, as shown in Figure 8.

Figure 8.   Canal Quarter Parking Displacement
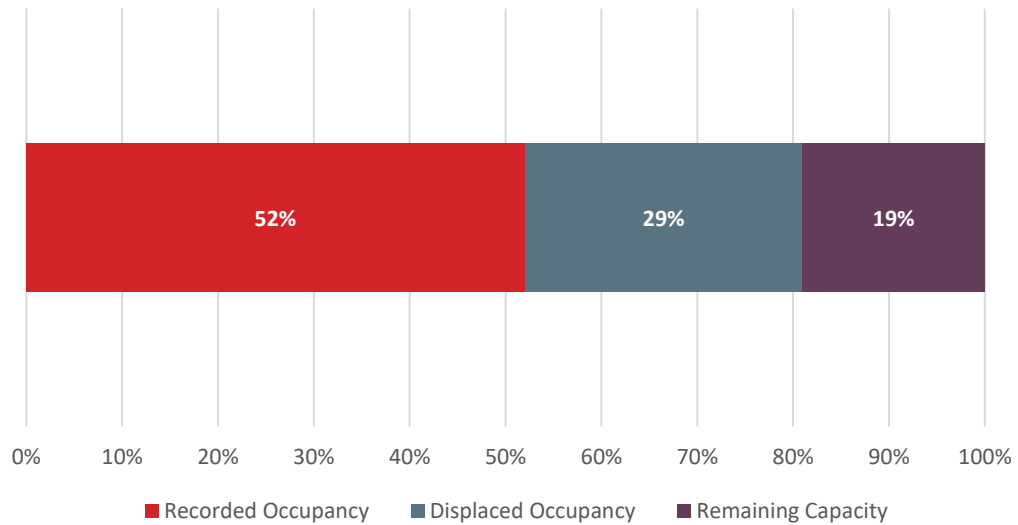
4.2.26   Changes to parking within the city centre as a result of the Canal Quarter development provide the city council with opportunities to encourage greater use of its larger car parks that are currently underutilised. As such, displaced parking should be promoted to use the two largest car parks located within an accessible walking distance of the Canal Quarter. These provide combined capacity for 548 vehicles within standard spaces:

   ○   Castle (approximately 330m to the west, 271 spaces); and
   ○   St Nicholas Arcades (50m to the west, 277 spaces).

4.2.27   Recorded occupancy within these car parks is presented in Figure 9. These two car parks are expected to be able to accommodate the majority of parking displaced through car park closures to facilitate Canal Quarter development.

Figure 9.   Occupancy of Largest Car Parks Closest to Canal Quarter
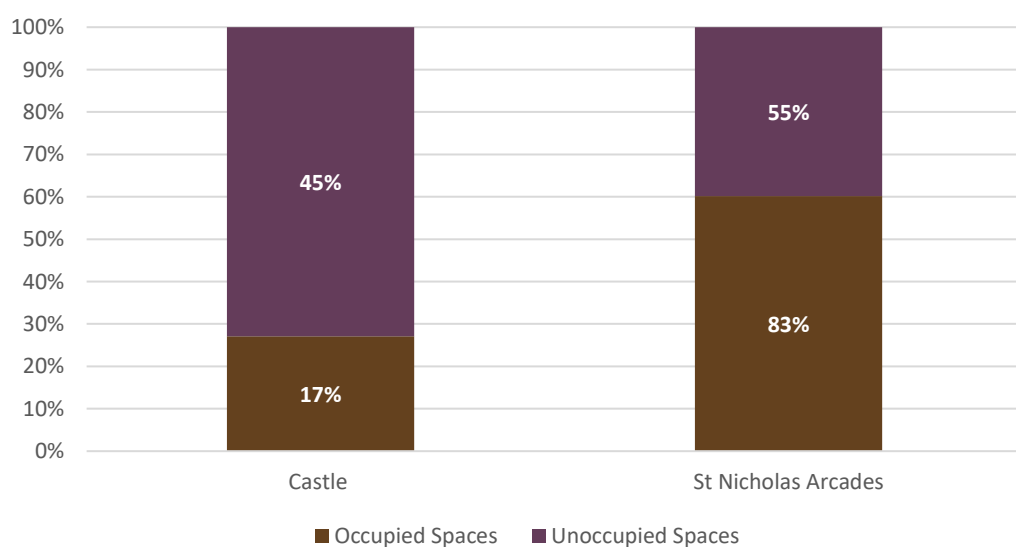
4.2.28   Notwithstanding the above assessments, it is important to note that parking occupancy can vary throughout the day, on different days of the week and seasonally. The above calculations utilise a snapshot survey of parking occupancy. As such, figures presented above may not reflect occupancy across all time periods. Prior to any car park closures or changes, it is recommended that detailed parking occupancy surveys are undertaken, covering both a weekday and weekend period during a neutral month, to understand demand for parking within individual car parks.

4.2.29   Considerable spare capacity was observed within the two multi-storey car parks at Castle (84%) and St Nicholas Arcades (72%). The multi-storey nature of these car parks, including low ceiling levels, may limit perceptions of security and resultant car park use. The car park may therefore not be fit for purpose to best meet the future needs of visitors, employees and residents of the city.

4.2.30   Given the age of the two car parks, their nature, usage and location in proximity to the considerable development of the Canal Quarter, it is recommended that opportunities for redevelopment of both the Castle and St Nicholas Arcades car parks are explored to provide an enhanced parking offer for Lancaster.

4.2.31   In the short-term, it is recommended that the feasibility of such works, including potential outline designs, is assessed by the city council, with the aim of delivering works in the medium- to long-term.

4.2.32   The potential to close both car parks and construct a new, modern and fit-for-purpose city centre multi-storey car park should be explored, with this located close to the Canal Quarter development area to serve both wider city centre employees, residents and visitors as well as those to the Canal Quarter. Based on the recorded capacity figures outlined in this section, capacity for 400 spaces is considered to be required.

4.2.33   Alternatively, consideration could be given to redeveloping the two car parks to provide enhanced parking facilities at both sites

User Behaviour

4.2.34   Changes to parking supply or location may also require a change in user behaviour by those who may currently have a preferred car park they use, as potential congestion and lack of parking choice (both perceived and actual) could potentially deter trips to Lancaster as well as see users move to privately managed parking options.

4.2.35   User behaviour can be manipulated though a number of means, including provision of information concerning parking options and location in terms of access to key facilities and amenities, signage and real-time occupancy information, marketing and promotional activity that encourages travel by sustainable means, and provision of cycle parking and supporting infrastructure within car parks and city centre locations.

4.2.36   Previous experience suggests that a large proportion of parking users have firm car park choices and tend to use the same car park within a town regardless of trip purpose. The undertaking of user behaviour surveys within targeted car parks could help to provide qualitative and quantitative evidence within a localised context in Lancaster.

> **Recommended Actions & Opportunities**
>
> *Direction of travel regarding future parking supply is largely dependent on wider city council aims and objectives.*
>
> Case-by-case assessment for suitability of individual car park closures against identified range of factors, supported by detailed parking beat surveys.
>
> Rationalisation of car parking provision to facilitate the development of the Canal Quarter to align with the SPD and emerging Masterplan; this includes phased closure of car parks within the Canal Quarter boundary.
>
> Undertake feasibility study for the redevelopment / reprovision of St Nicholas Arcades and Castle car parks in light of their age, nature, usage and location not being fit for purpose to meet the needs of users and the city.
>
> Consideration of displacement activity to encourage uptake of sustainable modes, supported by the County Council's Park & Ride facility.
>
> Implementation of supporting measures and promotions to influence travel behaviour and choice.

4.3   Technology & Information Provision

Overview & Rationale for Inclusion

4.3.1   There are a range of areas where existing technologies can be enhanced and utilised to improve the user experience of car parking in Lancaster whilst simultaneously improving management and enforcement practices. It is important that the strategy allows for Lancaster to maximise the potential for and take advantage of emerging and future technologies related to car parking.

Option Development

Smart Parking Technology

4.3.2   Smart parking technology can be utilised to deliver fully integrated parking solutions through the use of real time parking information and wireless cloud-based technology.

4.3.3   The city council currently operates an internal parking data dashboard that can provide a wealth of information concerning the usage and operations of its parking stock. However, minor issues exist with the collection of some ticket sales information, particularly for Pay & Display machines. In the first instance, enhancing and building upon existing systems and data collection processes would support improvements to management and enforcement practices as well as potentially improving the experience of car parking users.

4.3.4   There are a number of platforms that provide real time information on parking availability through sensors located either within individual parking bays or at car park access and egress points. Such platforms have the potential to increase the ease of finding a space

for drivers and help reduce congestion as vehicles circulate looking for parking opportunities. They can also benefit parking management, including the ability to easily access live parking occupancy data in real-time (and provide this information online to users), and to determine trends in parking across time, which can be used to make informed decisions on issues such as tariff structures, time restrictions and potentially to inform the introduction of dynamic pricing.

4.3.5   Data provided through the use of sensors within individual parking spaces regarding arrival / departure times and duration of stay can also be used for the purposes of enforcement, helping to identify hotspot areas for non-compliance, allowing Civil Enforcement Officers to be directed to locations and specific vehicles that have contravened restrictions.

4.3.6   The installation of sensors within strategic car parks (e.g. those subject to highest occupancy and turnover) could be considered to provide enhanced levels of information both for users and the city council. Sensors can also be used to collect important data on occupancy levels that can be used to make informed data-driven. Information from sensors can also be made available to parking users, helping to reduce time spent by users looking for a parking space, helping to improve car park efficiency. In the first instance, the installation of sensors could be considered in the largest car parks, particularly those where redevelopment / enhancement opportunities have been identified in **Section 4.2**:

- Castle; and
- St Nicholas Arcades.

4.3.7   Where smart parking technology is introduced in combination with enhanced data collection and improvements to back-office technology, this should be capable of integrating data from multiple sources and have the resilience to incorporate future developments such as vehicle to infrastructure connectivity and providing future accessibility for Connected and Autonomous Vehicles (CAVs).

Payment Technology

4.3.8   It is noted that both Pay & Display and Pay by Phone payment mechanisms are currently offered and used in all city council-operated car parks and on-street locations. The proportion of sales made by phone is increasing year-on-year. Such payment options can provide significant back-office data, including near-instantly available electronic information.

4.3.9   In the short- and medium-term, regular reviews (e.g. bi-annual) of Pay & Display and Pay by Phone ticket sales data should be undertaken to understand parking trends in terms of key locations, arrival periods, duration of stay purchased and under-utilised locations. This data can be used to inform the decision process regarding potential car park changes or closures, including within the Canal Quarter (**Section 4.2**).

4.3.10   As the proportion of Pay by Phone sales increases, the city council may wish to investigate moving to a cashless system for payments. This can enhance data collection processes and remove reliability issues with Pay & Display machines. However, it is important to note that not all parking users have access to a smartphone and so alternative payment methods may still be required.

4.3.11   Consideration could also be given to the use of Pay on Exit facilities; this is recommended as a way to provide greater flexibility for users, which may result in longer car park stays and increased spend in the city centre. The introduction of ANPR technologies in car parks can support this.

Information Provision

4.3.12   Real-time information concerning parking availability within individual car parks is not provided for city council-operated car parks. In the longer-term the provision of sensors in car parks, either within individual bays (in strategic and larger car parks) or at car park entry and exit points, could be utilised to enable this information to be provided both through physical signage and online, helping to encourage use of a wider range of parking locations.

4.3.13   The introduction of Variable Message Signs that provide real-time information on the number of available spaces within each car park on the periphery of the city centre should be considered. Information provided through these signs can encourage use of underutilised car parking provision, and help to reduce congestion in certain locations. Whilst under the management of Lancashire County Council, such signage can also be used to promote the Park & Ride facility to reduce the number of cars travelling into the city centre to park.

> **Recommended Actions & Measures**
>
> Regularly review ticket sales data to understand key parking trends and maintain an evidence base to inform future decisions regarding parking.
>
> Consider suitability of implementation of smart parking platform / sensors, initially within the largest city-council managed car parks.
>
> As the proportion of ticket sales made by pay by phone increases, assess the suitability of and utilise pay by phone data for real-time information provision on parking occupancy to parking users, to be complemented by entry/exit sensors in strategic car parks.
>
> In the medium- and long-term, expand live occupancy information to additional car parks.

4.3.14   All technology options set out above have the potential to support the goals of the strategy, particularly in terms of enhancing management and enforcement practices. Alongside this, technological advancements can improve the customer experience and help manage parking demand such that existing supply can be used more efficiently.

4.4   Pricing & Tariffs

Overview & Rationale for Inclusion

4.4.1   Tariffs for the use of parking provision represent a significant revenue generator for the city council. Parking charges can be used as a tool to influence demand for parking and encourage changes to more sustainable modes of travel.

4.4.2   They can also be used to promote use of currently underutilised parking locations, encourage changes in user behaviour and support uptake of sustainable travel modes. Notwithstanding, a key factor in any changes to parking operations or supply is to ensure this does not significantly negatively impact upon revenue generated by the city council's parking stock.

Option Development

4.4.3   Pricing is a factor that plays an important role in influencing user parking choice and it is therefore important to consider differences in parking tariffs.

Off-Street (Pay & Display)

4.4.4   The majority of city council-operated car parks provide a similar pricing structure, with charges operational at all times including on Sundays and bank holidays, unless specified on signage within individual car parks. Tariffs were increased in April 2022.

4.4.5   A maximum stay of 24 hours is enforced within all car parks. Blue badge holders (when displaying a valid badge) and motorcycles are exempt from payment. Prior to June 2022, free parking was offered as a temporary measure in all city council-operated car parks between the hours of 18:00 and 08:00.

4.4.6   Changes to tariffs could be considered as a means of encouraging parking users to change current behaviours and transfer to use under-utilised city council-operated car parks in favour of those that are subject to higher levels of use.

4.4.7   In the medium- and long-term, consideration may be given to moving towards a dynamic system with respect to how tariffs are set. Dynamic pricing is a strategy that can be used to adjust parking charges based on demand. There are three main ways in which dynamic pricing can be implemented:

   ⦿   Fixed charges with differing parking charges across different parking locations, with higher charges in locations that generally are subject to the highest levels of parking demand or in 'prime' town centre car parks;
   ⦿   Fixed charges with higher rates during peak occupancy periods (either within a particular day or longer period) and lower tariffs during periods subject to lower occupancy; and
   ⦿   Fluctuating charges that alter in real-time, based on available capacity and parking demand.

4.4.8   Dynamic pricing seeks to encourage use of a greater range of parking locations, promoting use of car parks with spare levels of capacity in favour of those operating closer to capacity and helping to spread parking demand.

4.4.9   It is important that, should dynamic pricing be introduced as a parking management tool, a strong supporting marketing and communication programme is budgeted for and implemented to ensure that users are aware of the payment systems operational.

4.4.10   A potential option to assess the receptiveness of any changes to pricing structures in the most central car parks would be to undertake a trial within one car park and monitor

before versus after usage to see if changes result in some users changing to other parks within the city centre.

Off-Street Long-Stay (Permits)

4.4.11   Season tickets are available for use within car parks across Lancaster, allowing unlimited parking across various car parks. These provide regular users with cost savings compared to purchasing daily tickets. In general, such season tickets are most suitable for business users who may need to come and go throughout the day.

4.4.12   Such tickets allow for unlimited parking across various car parks, meaning it is not possible to identify the car parks where season ticket holder demand is highest; however, it is important to recognise the role season tickets play in contributing to demand for off-street parking provision.

4.4.13   The permit-only car parks (Bridget Street, Bulk Street and Windy Hill), whereby specific spaces are allocated to individual permits, were not well utilised at the time of the audit. As such, opportunities may exist to encourage use of currently under-utilised car parks through changes to season ticket costs, or arrangements.

4.4.14   The potential advantages and disadvantages of permit-only car parks, where spaces are allocated to an individual permit / vehicle, are presented in Table 7.

Table 7. Permit-Only Car Parks

ADVANTAGES	DISADVANTAGES
- Ensures adequate provision of long-stay (season ticket) parking to meet demand within Lancaster. - Can increase the likelihood of season ticket holders being able to park in their chosen location. - Can support a reduction in on-street parking demand. - Can encourage an uptake of use of car parks that are currently under-utilised.	- Removes the ability for varied usage of car parking provision, as spaces not used by season ticket holders cannot be used by short-stay visitors. - Enhancing the ease and convenience of finding long-stay parking has the potential to discourage use of alternative modes, particularly for commuter-based trips.

4.4.15   Measures relating to off-street season tickets that could be implemented include:

 ○   Providing season ticket opportunities with tickets designed for use in specific car parks, particularly those currently subject to low levels of utilisation (such as Edward Street or Nelson Street), rather than across multiple locations;

 ○   Enhanced promotion of season ticket opportunities, for example to key employers within Lancaster, to encourage higher uptake;

 ○   Including discounted access to other modes of travel, particularly shared micro-mobility (e.g. car club) for season ticket users to encourage use of alternative modes;

 ○   Changes to season ticket management and allocation at Bridget Street, Bulk Street and Windy Hill so that an individual permit does not offer exclusive use of an

allocated space, given spaces can sit empty for large periods of time without other vehicles able to utilise them; and

- Creation of additional season ticket-only car parks in locations where ticket sales data confirms minimal short-stay parking demand.

4.4.16 When identifying and implementing changes to long-stay pricing consideration should be given to the following factors:

- Current car park usage and revenue generation;
- Proximity to neighbouring 'competition' parking locations;
- Hours of operation;
- Capacity;
- Proximity of key trip attractors and generators; and
- Future committed and proposed development in the car park vicinity.

4.4.17 Changes to arrangements for use of season tickets could provide efficiencies in terms of parking demand, revenue generation and user behaviour; for example, promotion of season tickets within car parks that are currently under-utilised. An increase in visibility of car park usage may also enhance user perception of safety and therefore promote wider use.

4.4.18 Uncertainly regarding longer-term changes to commuter travel patterns following the introduction of hybrid working as a result of the COVID-19 pandemic, and associated parking demand, means that changes to long-stay parking may be more suited for the medium-term when there is greater clarity on user behaviour following the removal of all COVID-related restrictions.

Emission-Based Charging

4.4.19 Emissions-based charging can play a role in supporting a reduction in vehicle-related emissions and improvements to air quality. At present, emission-based charging is not implemented within Lancaster.

4.4.20 It works through the principle that the less polluting a vehicle is, the less the user pays for parking and conversely the more polluting a vehicle, the more is paid for parking. This supports the wider objectives of the city council's Climate Emergency Action Plan, Highways & Transport Masterplan (the Local Implementation Plan 2019-2041) and Air Quality Action Plan.

4.4.21 Vehicle registrations are utilised to apply the appropriate parking tariff, based on emissions data from the DVLA, with the city council able to define different emission bands and pricing tariffs.

4.4.22 It can be used as a tool to encourage residents and visitors to make more environmentally friendly transport choices (such as walking and cycling) and, in instances where vehicular-based travel is the only realistic option, promote the use of more environmentally vehicles.

4.4.23 It is important that any decisions regarding emission-based charging measures are supported by a suitable evidence base in terms of the proportion of vehicles likely to fall

within different charging bands. There are two elements that are important to consider depending on the type of parking:

- ○ Short-stay and off-street season ticket parking: vehicles travelling between Lancaster and origin locations; and
- ○ On-street long-stay (resident permits): vehicles registered in Lancaster.

4.4.24 The Department for Transport collects data concerning the proportion of cars registered in specific locations, split by vehicle tax band (identified by the vehicle's carbon dioxide emissions). This data can be used to support proposed emission bands based on local-level data for vehicles utilising parking stock.

4.4.25 It is recommended that, should the city council wish to consider implementing emission-based charging in Lancaster, that such data is obtained and analysed to identify potential emission bandings.

4.4.26 It is important that any changes to tariffs are managed carefully to ensure they do not encourage additional new vehicle trips to be made that would otherwise be made on foot, by cycle or by public transport.

Recommended Actions & Measures

In the medium-term, consider the introduction of variable / dynamic pricing, with higher tariffs in well used locations to encourage usage of car parks with spare levels of capacity.

Enhance promotion of season tickets, for example to key employers within the borough.

Expand season ticket eligibility across a greater number of car parks, or consider changes to season ticket management whereby season tickets are allocated to specific car parks.

Provide discounted access to other modes of travel (e.g. future cycle hire scheme) for season ticket holders.

Investigate the suitability of creating additional season ticket-only car parks in locations with minimal short-stay parking demand.

4.5   Wayfinding & Signage

Overview & Rationale for Inclusion

4.5.1 Improved wayfinding and signage infrastructure can help to improve navigation for visitors and help to identify the location of all car parks. The provision of good quality and easy-to-follow signage can play an important role for both local residents and visitors to a location. Through improvements in signage, better awareness and information for all car parks can be supplied to the public, ensuring an improved journey experience for visitors. This in turn can potentially improve traffic circulation and reduce issues of congestion.

Option Development

4.5.2   Some signage identifying the locations of car parks is provided within Lancaster, although such signage is not easy to follow in all instances. For example, signage in Nelson Street is covered in part by graffiti. Signage noting pricing tariffs and hours of operation are clearly displayed in all car parks, noting the changes to pricing (and therefore signage) in April 2022).

4.5.3   The provision of real-time occupancy signage along key routes into the city centre enables users to make an informed decision of where to park based on availability. It also provides the city council with an opportunity to direct users to under-utilised car parks, including the Park & Ride facility. It can also help to reduce journey times and the number of vehicles circulating on the local network looking for a space, providing benefits in terms of congestion and air quality, helping to meet the objectives of the Climate Emergency declared by the city council in June 2019.

4.5.4   Information concerning the location and capacity of car parks could be incorporated into the city council's wider wayfinding strategy and existing signage, developed by Place Marque and provided across the city centre and some periphery locations,

4.5.5   Pedestrian signage can be improved at access and egress points of car parks to improve user experience, particularly for visitors who do not visit often. This could include identifying pedestrian routes to key destinations and trip attractors, such as St Nicholas Arcades shopping centre, Lancaster City Museum and Lancaster Castle.

4.5.6   Enhancements could also help encourage greater use of locations subject to lower levels of pedestrian footfall and more active travel in general. Increased awareness of pedestrian routes and travel times could encourage people to park further from their ultimate destination than at current, redistributing the use of car parks (both council and private) and on-street parking.

4.5.7   Through improvements in signage, better awareness and information for of all car parks can be supplied to the public, ensuring an improved journey experience for visitors. This in turn can potentially improve traffic circulation and reduce issues of congestion within the city centre. This can have further benefits in terms of easing congestion and improving air quality, which ties to the objectives of the Climate Emergency declared by the city council.

> **Recommended Actions & Measures**
>
> Expand VMS provision across the city centre and approaches.
>
> Install signposts listing car parks on key approach routes, detailing capacity.
>
> Review existing car park wayfinding and identify locations where signposts are missing / required.
>
> Improve signs currently not functioning correctly (e.g. poorly positioned), ensure clearly visible.

Provide information concerning occupancy levels of car parks (where data is available), including online.

Install directional signing alerting users to specific car parks and key locations / attractions.

Install pedestrian directional signage at strategic car park exits, showing map with walking time isochrones as well as directional arrows to key landmarks.

4.6   Future Mobility

Overview & Rationale for Inclusion

4.6.1   The city council is committed to supporting a reduction in air pollution, climate change impacts and transport-related emissions, and declared a Climate Emergency in January 2019. Supporting an uptake of zero emission vehicles through providing infrastructure that makes it easier to use such vehicles is a key strand to help meet these objectives.

4.6.2   It can be expected that the nature of the ownership and use of vehicles will change significantly over the next ten years. In particular it is anticipated that the roles of electric vehicles, automated vehicles and ride sharing will expand. Parking provision will not only need to react to these changes, but can also help determine how they grow.

4.6.3   The Lancaster Highways & Transport Masterplan (2016) incorporates a strategy for Ultra Low Emission Vehicles; this includes promotion of car clubs to provide access to the city centre and providing public charging points for electric vehicles.

4.6.4   Ensuring such elements within the Parking Strategy also adds resilience for changes in the transport sector in future years.

Option Development

Electric Vehicles

4.6.5   With an increased focus on the Climate Emergency, the uptake of electric vehicles is expected to grow, therefore adequate Electric Vehicle Charging Point (EVCP) provision is needed to sustain increased usage. The availability of charging infrastructure can be a major limiting factor in the uptake of electric vehicles.

4.6.6   Two types of electric vehicle charging points (EVCPs) have been installed within city council-operated car parks for public use:

- **Fast Chargers**: Provided by the city council in partnership with BP Pulse and Charge My Street, electricity is provided for free with a connection fee charged. Users are required to pay any applicable parking tariffs; and
- **Rapid Chargers**: Four rapid chargers have been installed by Electric Blue (EB!) in three car parks within the district, including Spring Garden Street in the city centre. Use of these chargers is limited to one hour, with electricity charged for. However, users are able to park without payment whilst their vehicle is charging.

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4.6.7 EVCPs are provided at Auction Mart, Charter House, Dallas Road and Spring Garden Street car parks. An EVCP located at Upper St Leonardsgate is available for use by city council vehicles only.

4.6.8 This provision is complemented by additional EVCPs at the J34 Park & Ride facility managed by Lancashire County Council. A hub with charging facilities for 18 vehicles is provided, comprising six fast chargers (each able to accommodate two vehicles) and six rapid chargers.

4.6.9 The city council is committed to expanding EVCP provision, and should actively investigate opportunities for expanded provision across its parking stock.

4.6.10 It is recognised that the parking and vehicle charging requirements of residents and visitors are different, resulting in different EVCP requirements to meet the needs of both user types. The city council should work collaboratively with Lancashire County Council, private parking operators and service providers to ensure a connected and aligned approach to EVCP provision across Lancaster.

Car Clubs

4.6.11 Car clubs offer an alternative to private car ownership and allow people to pay a subscription in order to be able to book and use a shared vehicle on a pay as you go basis. The cars are locally parked and can be booked online, over the phone or via a mobile app. Car club vehicles are parked in designated spaces ensuing that users can be guaranteed a space to return their vehicle to within the designated time slot. This allows distribution of car club vehicles to be maintained across locations.

4.6.12 Car club spaces are currently provided in two city council-operated car parks, Charter House and Upper St Leonardsgate, as part of a fully-electric scheme operated by Co-Wheels.

4.6.13 The city council, in collaboration with operators prevalent within Lancaster, should assess the suitability of providing further car club bays within off-street car parks, particularly in car parks currently subject to lower levels of utilisation. Provision for car club vehicles should be promoted as part of any development opportunities within the city centre, including the Canal Quarter. Reprovision of car club facilities in any car parks subject to change in capacity or removal to facilitate development (such as Upper St Leonardsgate as part of the Canal Quarter) should be secured.

Ride & Lift Sharing

4.6.14 Ride or lift sharing allows people to offer spaces in their vehicle for a specified trip, offering efficiencies in cost and traffic volumes. This can help to reduce both car ownership and the number unnecessary vehicle trips made, particularly in a workplace setting, where verifiable car sharing options are now readily available. Car parking policy can be utilised to encourage these activities.

Connected Autonomous Vehicles

4.6.15   Much uncertainty remains around the practicalities of Connected Autonomous Vehicles (CAVs), both legislatively and in terms of how they will work in complicated urban environments. However, it can be expected that they will become a form of transport supply in the future, with the future Transport Bill, due in May 2023 at the earliest, expected to introduce legislation for self-driving vehicles to enable safe deployment within the UK. Therefore, how CAVs are stored, fuelled and move around will be an issue to consider. Within these considerations, parking supply will be an important factor.

4.6.16   It is recommended that the city council keeps abreast of progress and changes within the CAV sector, including the Government's forthcoming Transport Bill, to fully understand any implications on parking policy and the ways in which CAV technology can be harnessed.

> **Recommended Actions & Measures**
>
> Increase current provision of EVCPs in on- and off-street locations.
>
> Ensure suitable enforcement, management and regulation for use of EV spaces, (e.g. a requirement for vehicles to be charging whilst parked in such bays).
>
> Increase number of car club bays, both on- and off-street, through collaborative discussions with operators.
>
> Maintain awareness of progress in the CAV sector to understand implications on parking policy and the ways in which CAV technology can be harnessed in Lancaster.

4.7   User Prioritisation

Overview & Rationale for Inclusion

4.7.1   The prioritisation of parking provision amongst different users is an important policy tool where parking demand is high or supply is restricted; it is important to ensure a balance is struck that meets the parking demands of all users.

Option Development

Accessible Parking

4.7.2   Ensuring that parking provision is not discriminatory to people with disabilities should be a fundamental part of any strategy or guidance relating to parking, in line with legislation against discrimination.

4.7.3   Appropriate provision for blue badge parking is important. As average population age increases, there may be greater demand for such spaces and a requirement to increase the number of accessible parking spaces in car parks close to amenities and services, along direct routes. Recent changes in the blue badge eligibility criteria may also increase demand for blue badge spaces.

4.7.4   At present, blue badge parking spaces comprise 5% of the city council's total off-street parking capacity, with provision ranging from 13% (in Lodge Street) to 0% (in four car parks). A figure of 5% of total capacity is the standard benchmark used for off-street blue badge parking provision.

4.7.5   At present, 15 of the 20 city centre car parks operated by the city council meet the recommended threshold for blue badge bays. No such parking is provided at Bridget Street, Bulk Street, Edward Street or Windy Hill, with provision making 2% of overall spaces at Castle.

4.7.6   Whilst the permit-only nature of Bridget Street, Bulk Street and Windy Hill may mean a lack of blue badge provision is appropriate, as spaces are allocated to individual permits, it is recommended that provision is increased at Castle.

4.7.7   Blue badge parking bays should be located in central areas and in close proximity to major services and trip attractors.

4.7.8   It is important to ensure that existing accessible spaces are indeed accessible and properly enforced such that they are used only by those who require them. To ensure that appropriate levels of blue badge parking are provided, the city council could consider undertaking a study of current usage of such parking provision, to determine whether current blue badge parking supply meets demand and whether issues of non-compliance exist.

> **Recommended Actions & Measures**
>
> Review quantity and location of all blue badge bays.
>
> Implement improvements for blue badge holders, including provision of additional spaces where appropriate and ensuring these are in optimum locations in relation to access points.
>
> Ensure pedestrian accesses are accessible.
>
> Maintain appropriate enforcement to deter misuse of blue badge bays.

4.8   Active Travel & Public Transport

Overview & Rationale for Inclusion

4.8.1   In June 2019, the city council declared a Climate Emergency. The objective of this declaration is to achieve zero net carbon emissions by 2030, the programme of investments focuses on a number of key areas, including transport.

4.8.2   Parking provision can play a key role in meeting the zero emissions objective. Currently the nature of parking provision is not linked to encouragement of either active travel or the use of public transport. However, the quantity, nature and cost of car parking could be used as an incentive to encourage mode shift away from the car for either part of, or whole journeys, particularly as high levels of development are both committed and proposed across Lancaster.

Option Development

4.8.3   Measures to enhance pedestrian wayfinding detailed above can help encourage people to park further from their destination and complete their journey on foot, as opposed to driving and parking within the immediate vicinity of their destination. They may also encourage use of car parks which are not considered to be in convenient locations and are therefore currently under-utilised.

Cycle Parking

4.8.4   Cycling is a healthy and environmentally friendly form of transport that can improve the health and wellbeing of users as well as the wider population indirectly. Traffic-free and on-road cycleways are provided across the city centre, with an expansion of the cycle network and supporting infrastructure planned.

4.8.5   The provision of secure and sheltered cycle parking in convenient locations is a key element to promote an uptake in cycling. Current provision of cycle parking in Lancaster car parks is limited and provision does not extend across all car parks (for example, six spaces are provided at Cable Street).

4.8.6   Whilst car parks can provide opportunities for the provision of cycle parking within the city centre, it is recognised that some cycle users tend to prefer parking within on-street locations, due to the ultimate convenience and higher levels of natural surveillance that these locations provide.

4.8.7   In suitable locations, increased space could be provided within car parks for cycle parking. Locations taken forward for the delivery of additional cycle parking supply should be safe and secure. To increase perception of safety, it is suggested that locations are overlooked by other buildings where possible, subject to relatively high footfall levels to maximise overlooking / natural surveillance both from car park users and passing vehicles and pedestrians, and kept free from litter and graffiti.

4.8.8   Consideration should also be given to the provision of a cycle hub within a city council-operated car park. Such a hub should be prioritised in locations in close proximity to the city's main retail offer and key trip attractors. Should the Castle or St Nicholas Arcades car parks be redeveloped to provide an enhanced parking offer for Lancaster (**Section 4.2**), an area in the car park(s) could be allocated for the provision of a secured cycle parking facility.

4.8.9   Access to the cycle hub could be managed through an online permit-based system, incorporating either long-term access (annual, monthly, weekly) or pay-as-you-go for shorter-term uses, with a digital-based system used to access the cycle hub to ensure safety for users. The city council and cycle hub operator could also work with city centre businesses to provide an opportunity for use of the cycle hub to provide cycle parking opportunities for employees, if not available on-site.

Alternative Uses

4.8.1   Consideration should also be given to opportunities for the provision of alternative and/or complementary uses of car park space alongside parking in the short- and medium-term.

This can help to diversify use of underused car parks, raise awareness of parking provision and encourage a spread of parking demand across a greater number of locations.

4.8.2   Potential alternative uses can be permanent or temporary and include smart lockers, cycle parking and supporting infrastructure, shared mobility services (such as cycle hire, e-scooter hire), pop-up markets, appliance repair workshops and event-based activity.

Workplace Parking Levy

4.8.3   A Workplace Parking Levy (WPL) is a charge levied by a local authority on businesses dependent on the number of car parking spaces provided for employees. A WPL can provide several benefits including reduced parking demand resulting in air quality improvements and congestion reduction, land value uplift and enhanced public transport capacity (with the latter enabled through the use of WPL-raised funds ring fenced for investment in local transport improvements).

> **Recommended Actions & Measures**
>
> Assess suitability of installing cycle parking in car parks, including the feasibility of a cycle hub within a strategic car park (for example the redeveloped Castle or St Nicholas Arcades car parks).
>
> Liaison with city centre employers to encourage use of the cycle hub for workplace cycle parking, if not available on-site.
>
> Provision of informational mapping / signage providing walking and cycle isochrones and travel times.
>
> Further consideration towards implementation of a Workplace Parking Levy.

4.9   Enforcement

Overview & Rationale for Inclusion

4.9.1   Lancashire Parking Services is contracted to undertake enforcement of both on- and off-street car parking within Lancaster, with the city council responsible for off-street car parks and Lancashire County Council responsible for the enforcement of on-street parking, including of CPZs and resident parking permits. The city council's approach to enforcement is to:

> Deploy sufficient enforcement assets to ensure compliance with parking restrictions is fair, professional, and effective.

4.9.2   The city council has created a series of operational parking policies, a number of which relate to enforcement. This states that city council-operated car parks should be enforced in a fair, consistent and professional manner, and comply with all relevant legislation and regulation.

4.9.3 Adopting approaches to improve enforcement will potentially have the benefit of ensuring that car parking locations are used as intended and remove instances of inappropriate parking. Enhanced enforcement can also support an increase in revenue generated through parking, which can be invested in parking and wider transport projects and initiatives.

Option Development

4.9.4 Appropriate and effective enforcement practices can be developed through enhancements in technology and data collection, and can help to support a large number of the options set out in this strategy.

4.9.5 Many of the proposed technological options detailed above would be expected to benefit the enforcement regime, through increasing the efficiency of officers and making it easier to patrol car parks. For example, handheld devices with GPS technology embedded could be used to help accurately map where parking contraventions occur, enabling hotspots to be identified and enforcement targeted to specific locations.

> **Recommended Actions & Measures**
>
> Consider how technological improvements could support enforcement team.
>
> Use of technological advancements to benefit enforcement regime and practices.
>
> Target enforcement on hotspot areas of non-compliance.

4.10 Marketing & Communication

Overview & Rationale for Inclusion

4.10.1 Effective marketing and communication can help drive Travel Demand Management, encouraging people to make certain decisions.

4.10.2 The provision of easily accessible information regarding parking availability to current and prospective users can enable a greater awareness of the city council's parking provision across Lancaster, supporting use of sites that are currently underutilised. It can also potentially reduce the time spent looking for a space, vehicle idling and traffic congestion, bringing about wider direct and indirect benefits in terms of air quality, pollution and road safety.

4.10.3 Furthermore, it is important that any changes to parking supply or operations are supported by a suitable communications and marketing package to ensure user awareness.

4.10.4 Reviewing how such information is provided and marketing approaches could help alter or reduce parking demand as well as improve user experience. Information on parking provision is provided on the city council website, but there is not significant marketing beyond this. Reviewing how such information is provided and marketing approaches could help alter or reduce parking demand as well as improve user experience through providing information on payment methods or real time occupancy across all car parks.

Option Development

4.10.5   At present, there is comprehensive information concerning all parking types provided on the city council's website; however, a number of pages are no longer available and some information is not easily accessible. A review of all information on the city council's website should be undertaken to ensure it is up-to-date and provides all appropriate details.

4.10.6   It is important that, for any changes made to parking, a comprehensive accompanying marketing and communications strategy is developed, budgeted for and implemented prior to and following any changes. The role of communications in supporting a range of measures has been identified throughout the Parking Strategy; this includes for:

- Changes to parking supply (e.g. car park capacity reduction, closure, hours of operation);
- Any changes to parking tariffs, including possibilities for the introduction of any additional emission-based charging structures or dynamic pricing mechanisms;
- Promotion of season ticket opportunities; and
- Raising awareness of city council-operated parking stock across Lancaster.

4.10.7   Marketing and communication practices can also be integrated into wider sustainable transport messaging and communication opportunities, helping to support alternative forms of transport and aligning with wider city and county council sustainability goals. For example, signage and information promoting the use of alternative modes provided within city council-operated car parks (and across the city centre more widely) to encourage future trips to be made by public transport, cycle or on foot.

> **Recommended Actions & Measures**
>
> Review what, how and where information is provided with respect to car parking.
>
> Implement targeted marketing campaigns on specific elements (e.g. benefits of emission-based charging).
>
> Integrate marketing and communication strategy and interventions with wider sustainable transport messaging.

5. STRATEGY ACTION PLAN

5.1 Context

5.1.1 It is clear from the evidence base collected that Lancaster requires a progressive and consistent car parking strategy that manages and enhances existing provision, whilst taking advantage of existing and emerging technologies to maximise benefits for both users and parking management practices. It is important that the strategy is aligned with the city council's strategic priorities as far as possible to support environmental objectives and city centre vitality.

5.2 Strategy Principles

5.2.1 The previous chapter has set out a range of options for enhancing car parking provision and management in Lancaster. This is intended to provide the city council with an informed evidence base to consider and choose options that are considered to be most appropriate to align with the objectives of the Parking Strategy, replicated below, as well as with wider objectives and goals of both the city and county councils.

- **1**: Manage and optimise car parking provision to best meet the needs of the local community, local economy and tourist demand;
- **2**: Ensure parking plays a role in helping to reduce transport-related climate change contributions, aligning with wider city council visions and ambitions;
- **3**: Ensure adequate quality, safety and security of all city council-operated parking provision;
- **4**: Support the promotion of travel by sustainable means, including through the provision of secured and sheltered cycle parking, and promoting public transport use to, from and across Lancaster;
- **5**: Ensure effective enforcement of parking so as to maximise available supply and minimise traffic disruption and congestion;
- **6**: Improve signage and wayfinding infrastructure (both physical and online) to facilitate efficient movement of vehicles and people to and from car parking;
- **7**: Consider appropriate management solutions to help meet future parking demand generated by new development; and
- **8**: Embrace new and emerging technology in the parking sphere.

5.2.2 It is recognised that balance must be found to identify the options that best meet the overall strategy goals whilst also offering value for money and aligning with the wider aims and objectives of the city council and Lancashire County Council. Options identified within the **Recommended Actions & Measures** boxes within **Section 4** have been taken forward as part of the Action Plan.

5.3 Strategy Action Plan

5.3.1 Table 8 provides an overview of strategy recommendations based on the evidence base collected and measures set out in **Section 4**.

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Table 8. Strategy Action Plan

OPTION	DESCRIPTION	BENEFITS	COST	LIMITATIONS
PARKING PROVISION				
Physical Upgrade Works	Improve aspects such as surface, marking, lighting and CCTV in lower quality car parks.	Improved customer experience, greater willingness to use under-utilised car parks.	Maintenance costs, infrastructure works.	Cost, especially for car parks that are subject to lower utilisation levels.
Park Mark Standard	Work towards obtaining / maintaining Park Mark standard within all city council-operated car parks.	Improved quality, safety and potential increase in usage of car parks.	Upgrade works, future maintenance.	Cost, especially for car parks that are subject to lower utilisation levels.
Car Park Development Review	Undertake case-by-case assessment for closure of / changes to individual car parks in terms of future and displaced demand for car parking, particularly in light of development impacts of Canal Quarter on car parking provision.	Forecast for need for future car parking and potential car park closures	-	Forecast only, degree of estimation inherent.
Review of Pedestrian Accesses & Routes to Key Destinations	Review of pedestrian access and egress points at car parks and routes to key destinations to ensure high quality provision which is accessible to all.	Improved customer experience, potential to increase occupancy of under-utilised car parks.	Infrastructure works	Potential high costs
PRICING & TARIFFS				

OPTION	DESCRIPTION	BENEFITS	COST	LIMITATIONS
Review / Trial of Tariff Increases	Trial tariff increase in one car park and monitor usage to see if changes result users changing to other parks.	Allows the city council to better understand whether blanket tariff increase will be accepted by public.	Signage, marketing information provision.	May increase parking demand in other car parks or encourage users to visit competitor locations.
Season Ticket Opportunities	Enhance promotion of season tickets, for example to key employers within the city centre. Increase the number of car parks with season ticket eligibility.	Increased use of provision, promote use of lower emission vehicles. Increased revenue generation.	Marketing, signage, information provision.	Balance with sustainability priorities and not promoting shift in favour of car use.
Change Allocated Parking for Season Tickets	Change arrangements in Bridget Street, Bulk Street and Windy Hill from dedicated spaces for individual season tickets.	Allows greater use of car park provision, enhances efficiency.	Operational changes, information provision.	Potential to negatively impact upon current season ticket holders.
Emission-Based Charging / Dynamic Pricing	Consider potential introduction of emission-based charging and/or dynamic charging, with higher tariffs in well used locations.	Encourage use of car parks with spare levels of capacity and encourage uptake of low / zero emission vehicles.	Marketing, signage, information provision.	May promote use of private managed parking in favour of city council provision.
Changes to Tariffs	Change tariff arrangements for short-stay and long-stay parking to ensure best meets Lancaster's needs.	Encourage use in favour of non-city council operated parking. Promote use of lower emission vehicles.	Marketing, signage, information provision.	Wider range of tariff options may reduce user experience.
Integrate Parking Season	Offer discounted	Modal shift, reduced parking	Subsidies for alternative	Potential for low uptake /

OPTION	DESCRIPTION	BENEFITS	COST	LIMITATIONS
Tickets with Alternative Modes	access to other modes of travel, e.g. car club, for season ticket users to encourage use of alternative modes.	demand and resultant congestion / air quality benefits.	modes, marketing.	limited change in season ticket user behaviour.
TECHNOLOGY				
Smart Parking Technology	Use of a smart parking platform / app to provide reliable information for all car parks and robust data for parking management; e.g. provision of sensors within strategic car parks.	Enhanced user experience, enabling journey planning in advance. Can contribute to reduced vehicle circulation, congestion. Ties in with Climate Emergency priorities.	Application development, management and licensing marketing costs; sensor installation; maintenance costs.	Potential high cost of set up and maintenance (versus car park usage); management and development costs; potential for data inaccuracies / sensor failure.
Parking Bay Sensors	Consider installation of sensors in strategic car parks.	Real time occupancy data that allows information to be easily provided to users and Council, can help identify issues. Improves car park efficiency.	Capital infrastructure; IT infrastructure; analysis and processing.	High cost to install and maintain sensors in large number of locations.
Investigate Cashless-Only Payment Options	Assessment of scope for removal of Pay & Display mechanisms as Pay by Phone proportion grows.	Standardised payment options for users, enhanced data provision for Council, remove reliability issues with Pay & Display machines.	Costs of removal. Marketing of Pay by Phone.	Not all parking users have access to a smartphone, alternative payment methods may be required.
Pay on Exit Payment Mechanism	Consider use of Pay on Exit facilities in car parks subject to high turnover	Provides greater flexibility for users, can support longer	Costs of installation, maintenance of technology, marketing of	-

OPTION	DESCRIPTION	BENEFITS	COST	LIMITATIONS
	and utilisation, possibly supported by ANPR technologies.	car park stays and increased spend in the city centre.	changes to operations.	
WAYFINDING & SIGNAGE				
Signage Installation on Key Routes	Install signposts listing car parks on key approach routes, detailing capacity. Where possible include VMS showing occupancy.	Clarifies purpose of car parks and helps users make informed decision on where to park.	Installation and maintenance costs.	Technology requirements to support use of VMS.
Wayfinding Review	Review existing car park wayfinding and identify locations where signposts are missing / required.	Identification of locations where additional wayfinding required.	Completion of review.	-
VMS Provision	Display occupancy levels of car parks (where data available) for strategic locations where signage is not currently installed.	Reduce unnecessary circulation and irritation for drivers.	VMS design and installation, installation of sensors and/or ANPR.	Requires live occupancy data.
Vehicle Directional Signposting	Installation of signposts directing drivers to car parks and key locations / attractions.	Aid navigation for drivers, reduce vehicle circulation.	Capital infrastructure	Increases street clutter.
Pedestrian Directional Signposting	Installation of pedestrian signposts at car park exits, showing map with walking time isochrones and routes to	Aid navigation of pedestrians in general as well as car park users. Encourage active travel through increased	Capital infrastructure.	N/A

OPTION	DESCRIPTION	BENEFITS	COST	LIMITATIONS
	key destinations.	awareness of travel times.		
FUTURE MOBILITY				
Provision of Electric Vehicle Charging Infrastructure	Increase current provision of EVCPs in on- and off-street locations.	Provision of charging facilities for users, promotes uptake of electric vehicles	Capital infrastructure	Installation and management costs, potential additional street clutter
Electric Vehicle Charging Regulation	Continued enforcement of use of EV spaces, for example the need for vehicles to be charging whilst parked in EV bays.	Ensures EV spaces are not used by non-electric vehicles or solely for parking, enabling access specifically for charging use.	Consultation on regulations, marketing, enforcement costs.	Potential legal issues regarding enforceability.
Additional Car Club Provision	Increase number of car club bays on- and off-street.	Encourage scheme uptake, allow scheme growth, potential to reduce private car use.	Installation and marketing costs, consultation, enforcement costs.	Requires liaison and agreement with operators.
USER PRIORITISATION				
Review of Blue Badge Parking Provision	Review quantity and location of all blue badge bays, identifying areas where provision is lacking or not sufficiently accessible.	Ensure provision is appropriate to needs.	Commissioning and undertaking of review.	-
Accessible Parking Upgrades	Implement improvements for blue badge holders including provision of additional spaces. Ensure provision is in optimum locations.	Improved experience of parking users with disabilities.	Implementation	Potential reduction in availability of standard spaces.

OPTION	DESCRIPTION	BENEFITS	COST	LIMITATIONS
	Ensure pedestrian accesses are accessible.			
Blue Badge Bay Enforcement	Enforcement to deter misuse of blue badge bays.	Ensures that blue badge parking is available for appropriate users.	Training	May restrict time available for other enforcement activities.
ACTIVE TRAVEL				
Cycle Parking	Assess suitability of installing additional cycle parking in car parks.	Encourage cycle mode shift.	Purchase of cycle stands, installation, maintenance.	Not sufficient alone to drive behaviour change; car parks may not provide most convenient locations for cyclists.
Information Provision	Installation of informational mapping / signage providing walking and cycle isochrones and travel times.	Promotion of active travel, reduce parking demand within city centre.	Signage design and installation, supporting marketing programme.	Requires changes to user behaviour and parking practices.
ENFORCEMENT				
Review Existing Enforcement Approach	Consider how technological improvements could support enforcement team.	Basis for improving enforcement approach	Completion of review	-
Adoption of Improved Technology	Use of technological advancements to benefit enforcement regime and practices	Increase efficiency of officers and make patrolling car parks easier	IT infrastructure, processing and analysis costs, marketing.	High cost of set up, on-going costs and knowledge requirements
Targeted Enforcement	Use review findings to target enforcement on	Improved compliance, potential increases in	Officer training	Can be unpopular with parking users

OPTION	DESCRIPTION	BENEFITS	COST	LIMITATIONS
	hotspot areas of non-compliance.	revenue generation from PCNs.		
MARKETING & COMMUNICATIONS				
Review Marketing & Comms Strategy	Review what, how and where information is provided with respect to car parking.	Basis for improving marketing and information provision.	Completion of review.	N/A
Improve Marketing & Comms Strategy	Implement improvements identified by review undertaken	Improve Travel Demand Management and user experience	Implementation	N/A

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For more information visit www.systra.co.uk

Birmingham – Newhall Street
5th Floor, Lancaster House, Newhall St,
Birmingham, B3 1NQ
T: +44 (0)121 393 4841

Birmingham – Edmund Gardens
1 Edmund Gardens, 121 Edmund Street,
Birmingham B3 2HJ
T: +44 (0)121 393 4841

Dublin
2nd Floor, Riverview House, 21-23 City Quay
Dublin 2,Ireland
T: +353 (0) 1 566 2028

Edinburgh
Prospect House, 5 Thistle Street, Edinburgh EH2 1DF
United Kingdom
T: +44 (0)131 460 1847

Glasgow
Seventh Floor, 124 St Vincent Street
Glasgow G2 5HF United Kingdom
T: +44 (0)141 468 4205

Leeds
100 Wellington Street, Leeds, LS1 1BA
T: +44 (0)113 360 4842

Liverpool
5th Floor, Horton House, Exchange Flags, Liverpool,
United Kingdom, L2 3PF
T: +44 (0)151 607 2278

London
3rd Floor, 5 Old Bailey, London EC4M 7BA United Kingdom
T: +44 (0)20 3855 0079

Manchester
16th Floor, City Tower, Piccadilly Plaza
Manchester M1 4BT United Kingdom
T: +44 (0)161 504 5026

Newcastle
Floor B, South Corridor, Milburn House, Dean Street, Newcastle, NE1 1LE
United Kingdom
T: +44 (0)191 249 3816

Perth
13 Rose Terrace, Perth PH1 5HA
T: +44 (0)131 460 1847

Reading
Soane Point, 6-8 Market Place, Reading,
Berkshire, RG1 2EG
T: +44 (0)118 206 0220

Woking
Dukes Court, Duke Street
Woking, Surrey GU21 5BH United Kingdom
T: +44 (0)1483 357705

Other locations:

France:
Bordeaux, Lille, Lyon, Marseille, Paris

Northern Europe:
Astana, Copenhagen, Kiev, London, Moscow, Riga, Wroclaw

Southern Europe & Mediterranean: Algiers, Baku, Bucharest, Madrid, Rabat, Rome, Sofia, Tunis

Middle East:
Cairo, Dubai, Riyadh

Asia Pacific:
Bangkok, Beijing, Brisbane, Delhi, Hanoi, Hong Kong, Manila, Seoul, Shanghai, Singapore, Shenzhen, Taipei

Africa:
Abidjan, Douala, Johannesburg, Kinshasa, Libreville, Nairobi

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