

Chesterfield Borough Council

Chesterfield Car Parking Study

Car Parking Study

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Executive Summary

The provision of access to and from town centres for all modes is of key importance. Maintaining the draw of urban centres such as Chesterfield, and the employment, leisure, and commercial opportunities they offer, depends on access being easy and attractive for a wide range of people. The draw of out-of-town retail centres, online shopping and remote working present significant challenges to the economies of town centres. A clear and strategic car parking vision for urban areas is essential to tackle these challenges in the most beneficial way for visitors, workers and businesses to the town centre whilst supporting climate change goals and parallel strategic priorities of the council. From providing access to services to maximising economic opportunity and addressing climate and air quality challenges, there are significant challenges in how parking supply and demand is managed in town centres.

By maximising efficiency of land use, setting appropriate parking charges, greening of car parking sites and providing sufficient EV charging infrastructure, town centre car parks can provide an important and multi-faceted role for the town centres they serve. Establishing a coherent, attractive, socially and environmentally conscious and appropriately-placed network of car parks in the town centre can contribute towards an improved local economy, resident and visitor experience and climate resilience for the whole town.

The car parking strategy initially evaluates the efficiency of land use of car parking sites in the town centre through analysis on the use of existing car parking sites, and the income arising from these. Subsequently, analysis and evaluation of current and future revenue protection from car parking charges is used to outline how the future of car parking in Chesterfield may look to achieve this. This includes potential changes and improvements such as car park greening, expanded EV charging provision and, where appropriate, the conversion of selected car parks into development sites.

A map of the Chesterfield Borough Council (CBC)-owned sites included in this study, along with the suggested outline opportunities for each site, is shown in Figure 1.

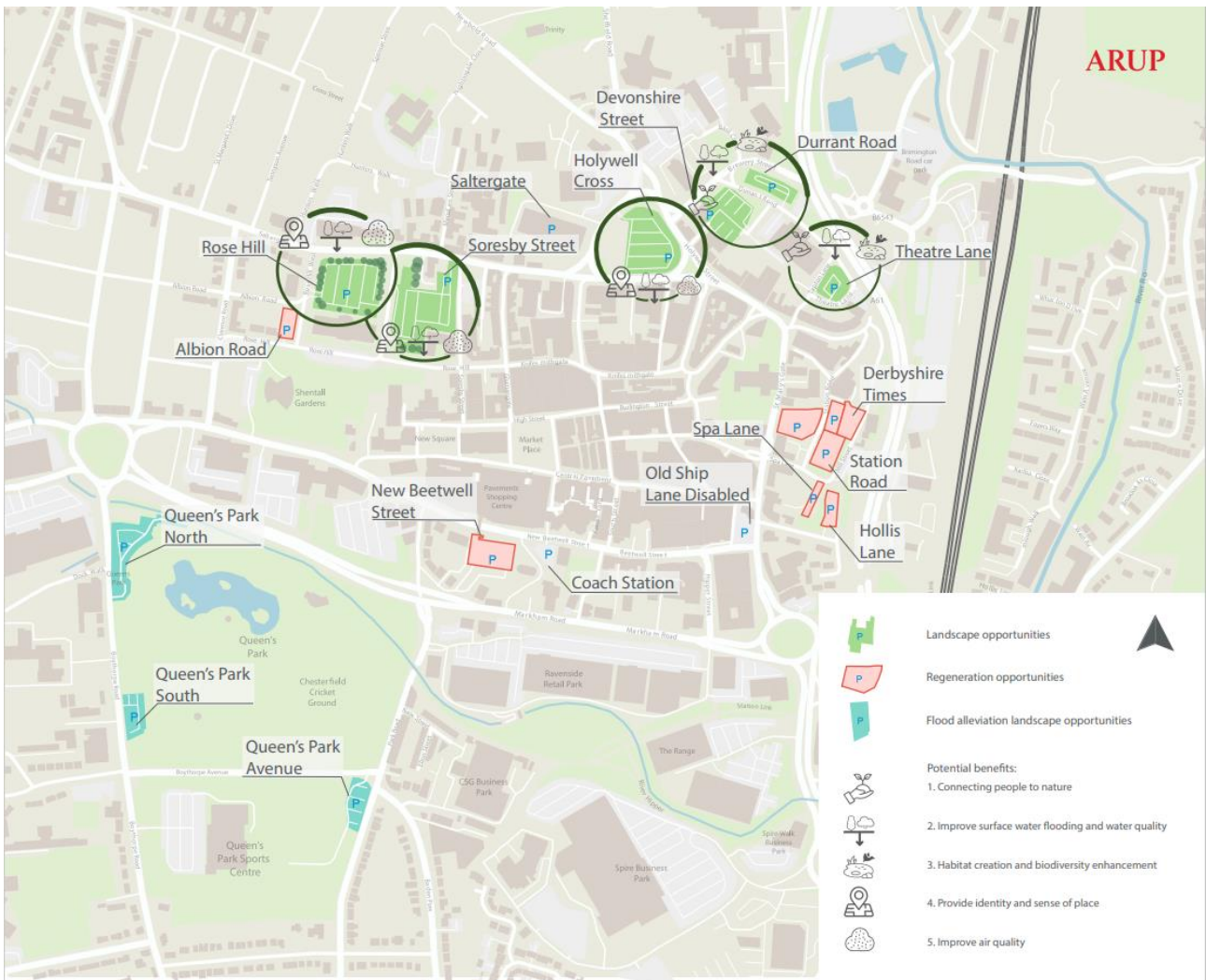


Figure 1: Map of CBC car parks analysed as part of this study, showing suggested opportunities for each site

Baseline

Usage

Analysis of existing car park usage revealed considerable spare capacity typically available across council-owned car parking sites. Usage data between 20 August 2022 and 31 December 2022 shows that car parking sites do not typically reach full occupancy and when looking at available collective capacity across sites, occupancy stays below 73% of overall capacity the vast majority of the time (this is the case across 99% of days analysed).

Income

Income is not currently reaching targeted levels of revenue. There are a broad range of incomes across different council-owned car parking sites with sites varying greatly in the “income per space” they generate. There is an unclear trend in terms of income throughout the year. However, for sites with overall income above £10,000, a general increase in income throughout the course of the year is observed (though this may be due to a COVID bounce back effect in the data).

Climate Change

This strategy has identified opportunities to adapt Chesterfield’s car parks to increase resilience to a changing climate, while improving their appeal to users and their contribution to the public realm. One opportunity consists of an increase in electric vehicle charging, as required to facilitate the shift to electric

vehicles as part of the UK's decarbonisation commitments. This presents an opportunity for Chesterfield to shape the usage of its town centre through its parking strategy, as different speeds of EV chargers are more suitable for different use cases, while providing an additional income stream through the provision of overnight charging facilities. There is potential for solar canopies to provide some of the electricity required, simultaneously providing shade to the car parks provided with them.

The other key opportunity from tackling climate change as discussed in this report is the potential to improve the car parks through landscaping and greening interventions. These have several benefits, including improving access to nature and thus wellbeing, localised cooling and making the environment around the town centre more attractive and enjoyable for visitors.

Regeneration

Given the excess capacity identified in Chesterfield's car park estate, this report has examined the potential to regenerate selected car parking sites. An analysis of car parking occupancy data indicated that the regeneration of New Beetwell Street MSCP, as part of the Pavements shopping centre redevelopment, would be possible with the displaced demand being accommodated elsewhere. The car parks that comprise the Spire Neighbourhood (St. Mary's Gate, Derbyshire Times, Spa Lane and Hollis Lane) could be regenerated in line with CBC planning policy, while accommodating current demand levels. More ambitious proposals could see further car parks such as Albion Road released for redevelopment.

1. Introduction

1.1 Background

Providing the correct amount of parking is key to ensuring a thriving town centre for Chesterfield. While adequate parking is vital to ensure that those who need to drive to access the town centre are able to do so, an overprovision of parking can inhibit the performance of the town centre by preventing high-value land from being developed. Moreover, income from car parking is a vital source of funds to support public services for many local authorities, including Chesterfield Borough Council (CBC).

The climate crisis presents new challenges for car parking management. The car is likely to remain a key mode of access to shops and services for many, particularly in market towns like Chesterfield whose rural hinterlands are difficult to serve by public transport and active travel. However, a widespread switch to electric vehicles (EVs) and the greater use of alternative modes for shorter trips may impact on car journeys to town centres in future. The car parking estate itself needs to be adapted to the challenges caused by climate change, notably more extreme weather including increasing heat and rain, through measures such as providing shade and the use of sustainable urban drainage systems.

For a multitude of reasons, maintaining access to and from town centres for all modes is of increasing importance. From providing access to services to maximising economic opportunity and addressing climate and air quality challenges, there are significant challenges in how parking supply and demand is managed in town centres. A car parking strategy creates a robust evidence base and highlights critical discussion points to assist future decision making to manage and provide parking in a way that maximises the future health, economic vitality and overall success of Chesterfield town centre.

1.2 Document Structure

This report, the Chesterfield Parking Study, begins by setting out the existing local context, with an overview of the local economic context, the existing parking provision, demand and income, and future developments that are already committed or anticipated. This report then analyses potential future car parking demand scenarios in Chesterfield Town Centre, including EV charging facilities, and sets out methods for adapting car parks to climate change and to regeneration opportunities.

The final section consists of options for Chesterfield to manage its car parking in the future, balancing considerations including income, facilitating access to the town centre, adaptation to climate change and the regeneration opportunities afforded by existing car parking land.

1.3 Engagement Summary

Engagement was undertaken with CBC officers from relevant departments to provide inputs to the Parking Strategy. Those engaged with are detailed in Table 1.

Table 1: Additional Engagement

Name	Role within CBC
Anna Sharman	Senior Economic Development Officer
Andy Bond	Town Centre Operations Manager
Lynda Sharp	Economic Development Manager
Neil Johnson	Service Director – Economic Growth
Luke Harding	Parking & CCTV Supervisor
Ian Waller	Service Director – Leisure, Culture & Community Wellbeing
Paul Staniforth	Head of Planning

Name	Role within CBC
Alan Morey	Strategic Planning Manager
William Rolls	Climate Change Officer
Karen Ludditt	Financial Accountant
Rick Long	Infrastructure Planning Officer
Marc Hollingworth	Housing Development Manager

Engagement was also undertaken with Queensberry Real Estate, who are undertaking an appraisal of options for the Pavements Shopping Centre (the scope of which includes options for New Beetwell Street Multi-Storey Car Park), concurrently with this parking study.

2. Baseline

2.1 Local Economic Context

Chesterfield is a market town in Derbyshire with a variety of chain and independent retailers, as well as a historic market. These amenities attract both residents and visitors to the town centre for retail and leisure purposes. The population of Chesterfield was recorded as 103,600 people in the 2021 census. According to the Chesterfield Growth Strategy, in 2021 there were 51,000 employee jobs in Chesterfield (plus 4,000 self-employed). North-west of the town and its respective county, Derbyshire, is rural land reaching out into the Peak District national park. Chesterfield Local Authority District comprises of a 1.8% rural population and a 98.2% urban population. The town faces similar challenges to other UK town and cities with competition from online shopping and out-of-town retail opportunities for footfall and spend. However, there have been successes over the last decade in the local economy with the creation of over 2,000 new jobs and more than 500 new businesses. The town centre continues to attract visitors from across the borough as well as further afield.

2.1.1 Key Trip Attractors

The main trip attractors in the town centre are the shopping opportunities (including the markets which operate on Mondays, Thursdays, Fridays and Saturdays) as well as employment and leisure opportunities. Key retail attractors include The Pavements shopping centre, Vicar Lane open-air shopping centre, the large open-air markets and the Market Hall.

Chesterfield's crooked spire remains the town centre's largest trip attractor for tourists with 50,000 people visiting annually, the markets also attract 23,000 visitors to events. There are also special events throughout the year that attract a large number of daily visitors, notably the Medieval Market in July, the 1940s Market in September/October, and the Christmas lights switch-on in November. Chesterfield's Visitor Economy Strategy outlines the ambition of the town to increase tourism.

2.2 Overview of Existing Parking Provision

As shown on Figure 2, there are a number of multi-storey car parks (MSCP) and surface car parks in and around Chesterfield town centre which service employment, housing, leisure, commercial and travel-interchange destinations. The majority of these car parks are within short walking distance of the main shopping and attraction sites of the town. The largest car parks in the town centre are Saltergate MSCP with 526 spaces and New Beetwell Street MSCP with 465 spaces.

The capacity and use of these car parks has been assessed using existing available parking data as well as data received from a commissioned parking survey of the privately operated car parks. The existing car parks in the town centre are operated by either CBC or private operators. The charges for parking in council-owned sites are generally consistent, but parking charges across privately operated sites vary. Some council-owned car parks are designated as commuter sites, offering a discount on stays between 4 and 12 hours when compared to other council-owned car parks. Council operated car parking offers residents parking free of charge before 10:00 and after 15:00.

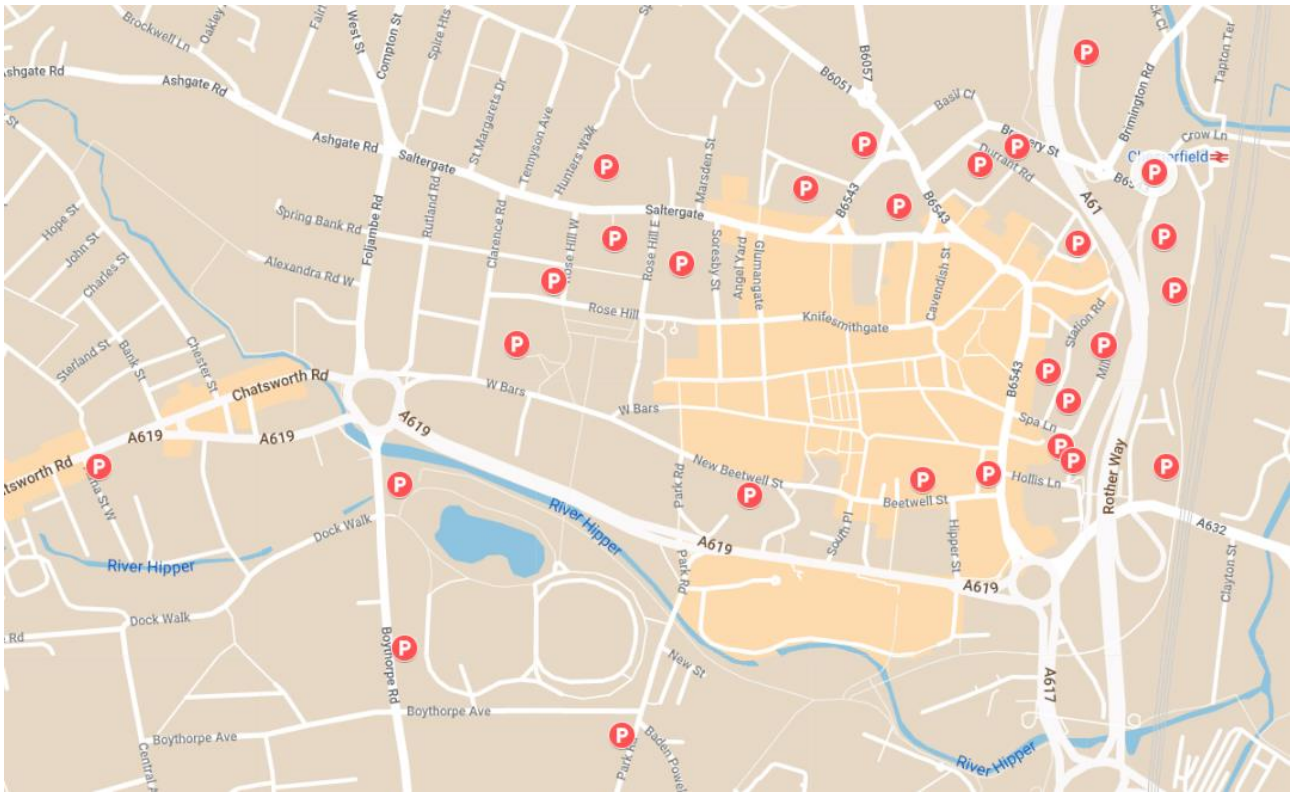


Figure 2: Map of car parks in Chesterfield town centre

2.3 CBC Operated Car Parks

2.3.1 Parking Supply and Demand

Chesterfield Borough Council operates several car parks in the town centre of Chesterfield. To understand usage, income, and opportunities of these sites it is important to understand the scale of parking supply operated by the council.

Table 2 shows the current car parking supply at each of the car parks throughout the town centre, including the current accessible car parking electric vehicle (EV) charging point provision.

Table 2: Number and type of spaces at council owned car parks

Name	Total Spaces	Accessible Spaces	EV Charging Points
Soresby Street	208	14	1
Holywell Cross	150	11	-
St Mary's Gate	66	2	8
Station Road	59	-	-
Rose Hill	242	9	-
Spa Lane & Hollis Lane	94	-	-
Theatre Lane	50	2	-
Saltergate Multi-Storey	526	29	6
Queen's Park Annexe	43	2	-

Name	Total Spaces	Accessible Spaces	EV Charging Points
New Beetwell Street Multi-Storey	465	29	-
Queen's Park North	120	3	-
Coach Station	12	2	-
Durrant Road	69	-	8
Devonshire Street	73	-	-
Derbyshire Times	55	-	-
Albion Road	30	-	-
Queen's Park South	43	2	-
Old Ship Lane	6	6	-
Total	2,311	111	23

The largest car parks in Chesterfield are New Beetwell Street MSCP with 465 spaces and Saltergate MSCP with 526 spaces. St Mary's Gate and Durrant Road have the highest number of EV charging points, with eight EV charging spaces each. The Old Ship Lane car park is unique in that it only contains accessible spaces. The majority of car park sites are surface level with the exception of Saltergate and New Beetwell Street which are MSCPs. All car parks operate 24 hours apart from New Beetwell Street which operates 07:00 to 20:00 from Monday to Saturday and 09:30 to 16:30 on Sundays.

As part of occupancy analysis for Saltergate MSCP, 58 days of entries and exit data between 8 August 2023 and 31 December 2022 were assessed as well as overnight parking occupancy between 15 March 2023 and 31 March 2023. This shows that on average, occupancy levels do not exceed 32.55% on a weekday and 27.84% on a weekend, with an overall peak occupancy of 47%. There is therefore considerable space available at Saltergate MSCP at peak times. The demand profile is outlined in Appendix A.

Analysis of overall occupancy data for council owned car parks between 20/08/2022 and 31/12/2022 suggests there is considerable spare capacity across council owned car parks. New Beetwell Street MSCP only reaches 50% occupancy in the survey period. As set out in Table 3, on 90% of days the collective occupancy of New Beetwell Street MSCP, Soresby Street and Rose Hill does not exceed 58%. On 95% of days the occupancy does not exceed 62% and on 99% of days this does not exceed 73%. Assuming that these car parks' occupancy figures are average for CBC's car parks would result in an estimated equivalent of more than a quarter (27%) of Council operated parking bays sat empty for 361 days a year, equating to 624 parking spaces. The breakdown of New Beetwell Street MSCP, Soresby Street and Rosehill analysis is provided in Appendix A.

Table 3: Percentage of days where overall occupancy of car park sites doesn't exceeds a certain number

Percentage of Days	Daily Peak Occupancy at or Below	Equivalent Number of Days of Year Occupancy Exceeds %
90%	58%	37
95%	62%	18
99%	73%	4

2.3.2 Existing Parking Charges and Income (Council-owned Car Parks)

The typical charging structure for the council owned car parks is shown in Table 4.

Table 4: Council car parking charge bands

Duration of Stay	Parking Charge
Up to 30 minutes	£0.90
Up to 1 hour	£1.70
Up to 2 hours	£3.00
Up to 3 hours	£3.20
Up to 4 hours	£4.80
Over 4 hours / up to 12 hours*	£5.30

* = Some sites charge £1.70 per hour over 4 hours.

Multi-day saver passes are also available for validated parking at all sites except Holywell Cross, Rose Hill, Soresby Street, St Mary's Gate, New Beetwell Street MSCP and the Coach Station. These follow a charging structure of £660 for an annual saver, £66 for a monthly saver, £19 for a weekly saver and £3.80 per day for a scratch card (with a minimum purchase of five). Old Ship Lane, which is a blue-badge-holder only car park, is included in the general CBC pass for Blue-Badge holders, which costs £5 per week and £50 per annum.

EV charging is facilitated by BP Pulse with registration and separate payments required alongside the relevant pay-and-display charges.

Table 5 and Figure 3 outline the relationship between spaces, transactions, and income for each of the Council-owned car parks, ordered by income per car parking space (determined from overall capacity). This provides a representation of the relative performance of each car park from a commercial standpoint. There is a large range in terms of performance. Soresby Street is the best performing car park with an annual income per space of £2,735. Excluding Old Ship Lane, which is a not a typical pay-and-display car park, Albion Road is the worst performing car park with an annual income per space of £145.

Table 5: Income and transactions of car parks

Name	Annual Income	Income per Space	Transactions	Transactions per Space	Transactions per Space per Day
Soresby Street	£600,246	£2,735	245,624	1,089	3.0
Holywell Cross	£410,320	£2,322	163,318	889	2.4
St Mary's Gate	£153,254	£1,282	58,705	410	1.1
Station Road	£75,626	£1,097	24,194	431	1.2
Rose Hill	£265,493	£860	104,403	304	0.8
Spa Lane & Hollis Lane	£80,819	£714	28,578	207	0.6
Theatre Lane	£35,691	£682	10,369	174	0.5
Saltergate Multi-Storey	£358,681	£521	91,695	175	0.5
Queen's Park Annexe	£22,391	£471	7,527	156	0.4
New Beetwell Street Multi-Storey	£218,932	£430	72,539	174	0.5
Queen's Park North	£51,631	£399	20,859	1,664	4.6
Coach Station	£4,784	£392	19,972	123	0.3

Name	Annual Income	Income per Space	Transactions	Transactions per Space	Transactions per Space per Day
Durrant Road	£27,054	£381	8,472	123	0.3
Devonshire Street	£27,831	£280	8,990	66	0.2
Derbyshire Times	£15,413	£153	3,619	56	0.2
Queen's Park South	£6,214	£145	2,446	57	0.2
Albion Road	£4,583	£145	1,690	57	0.2
Old Ship Lane	£0	£0	-	N/A	N/A

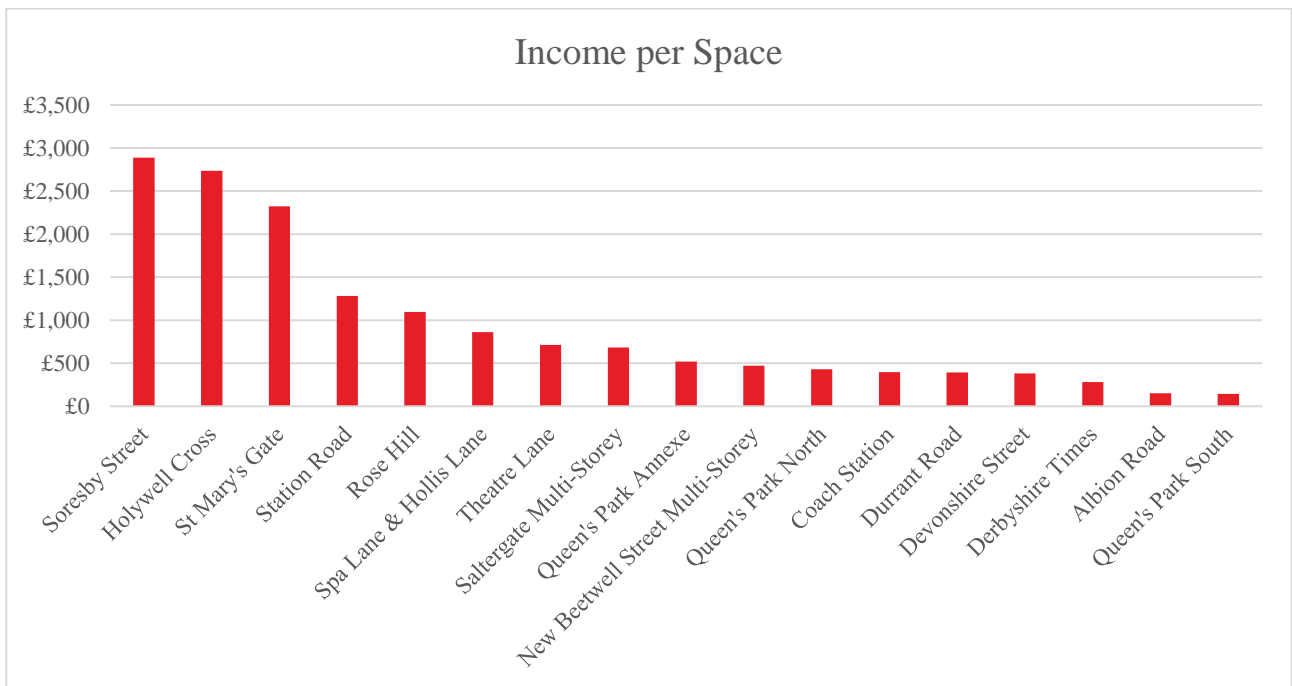


Figure 3: Income per space for council owned car parks

As shown in Figure 4, analysis of current income levels against the profiled budget suggests that with current parking demand, to reach the income targets, in the short term, charges will need to increase. This could be done through incremental charges. In the immediate term, this shows a 10% increase in charges would have been needed in 2022/23 to reach this year's income targets.

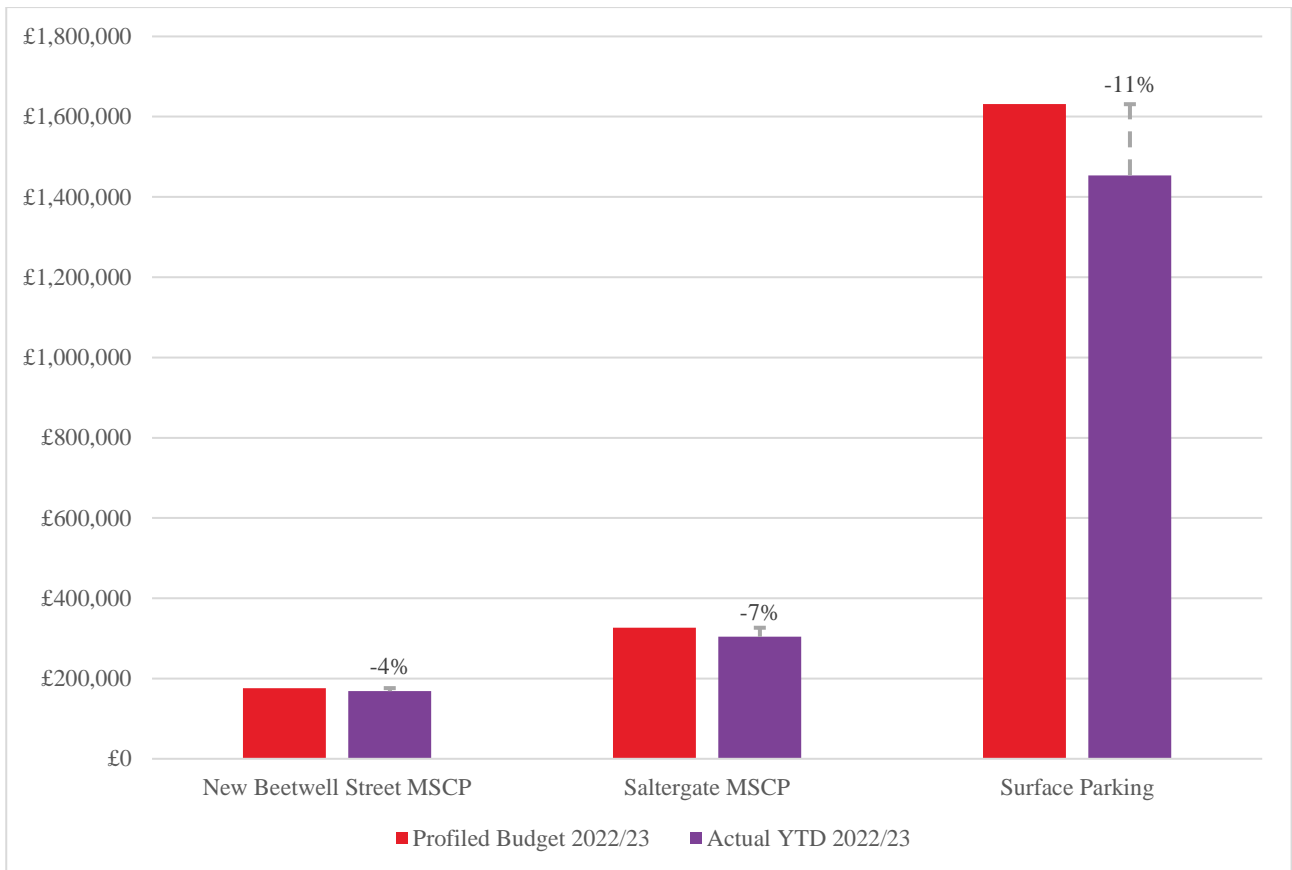


Figure 4: Income against target for council owned car parks 2022/23

There is a broad range of monthly incomes for each car park. The car parks have been grouped below in monthly income charts for car parks earning above or below £10,000 income per month. In the car parks earning below £10,000 income per month there is a large variance of income month-to-month. This may be down to the proximity of the car parks to seasonal attractions such as Queen’s Park during school holidays or the town centre main shopping attractions towards the Christmas period. It is difficult to ascertain a clear consistent monthly trend for income across sites, as shown in Figure 5 (for car parks with a monthly income above £10,000) and Figure 6 (for car parks with a monthly income below £10,000). At sites with income over £10,000 a month there appears to be a general income increase throughout the course of the year, this may be due to a COVID bounce-back effect, and it isn’t clear this is a definitive trend as only one year’s data has been assessed. Sites with income of less than £10,000 show a more variable picture in terms of income.

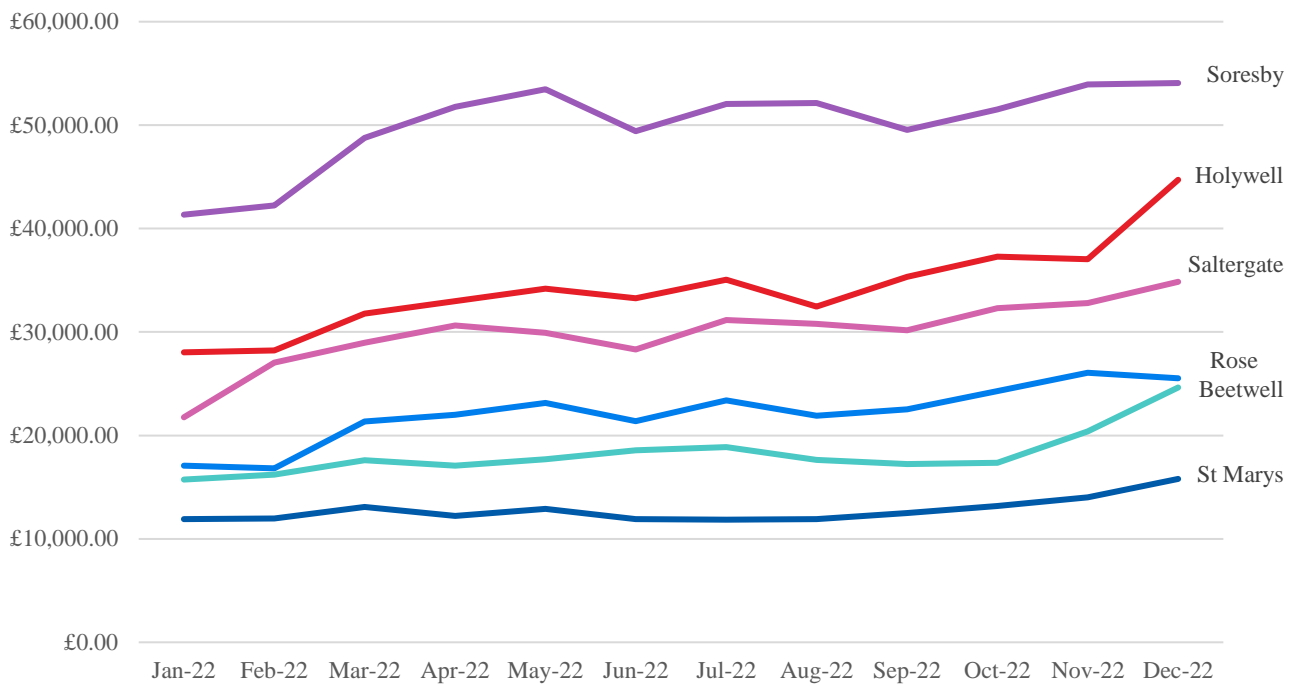


Figure 5: 2022 monthly income for car parks with over £10,000 monthly income

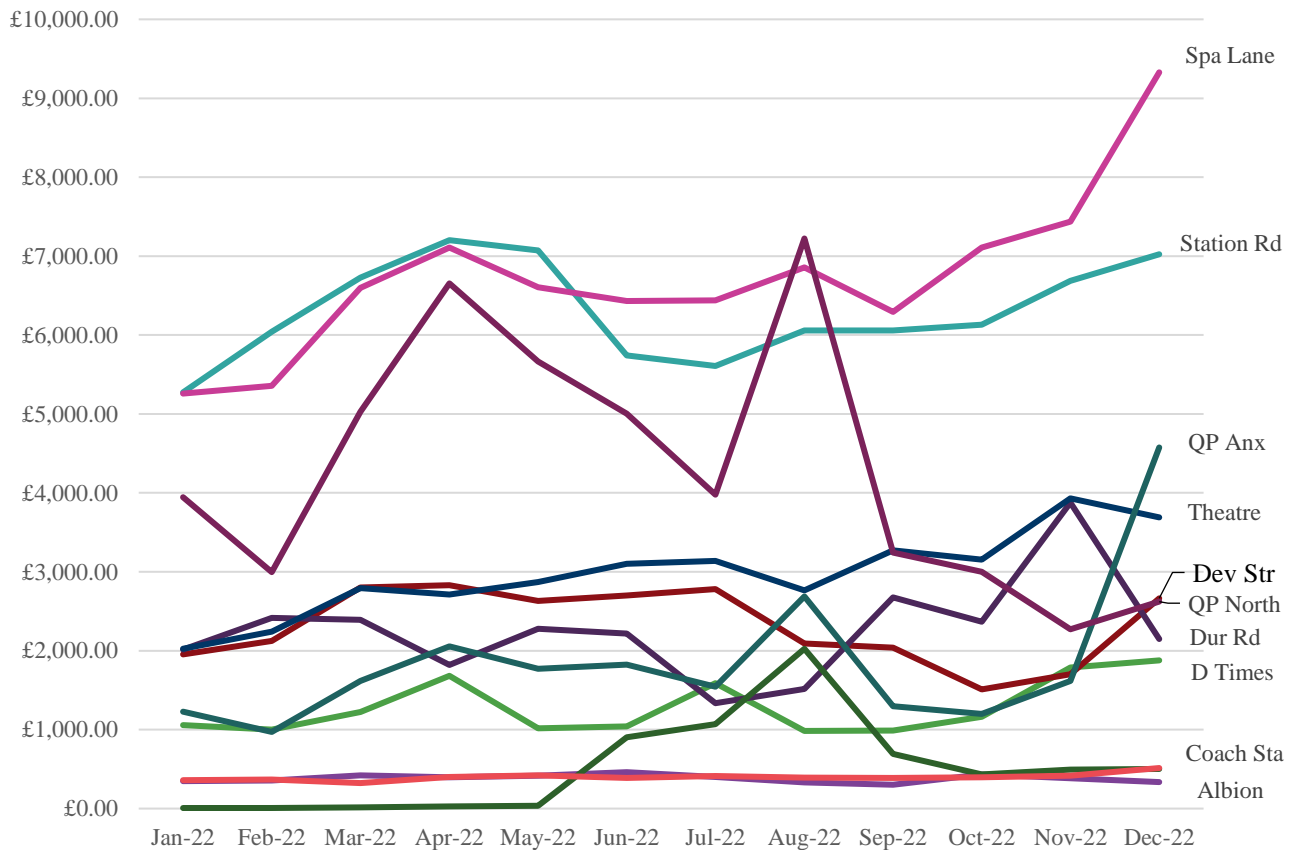


Figure 6: 2022 monthly income for car parks with under £10,000 monthly income

Income collection is split between the Pay-By-Phone app and payments at machines. Pay-By-Phone accounts for 46% of purchases at council operated car parks.

2.4 Electric Vehicle Charging Usage

There are a total of 22 fast (7.2kW) charging points in CBC-owned car parks in the town centre, at the St. Mary’s Gate, Saltergate and Durrant Road car parks, in addition to one rapid (43/50kW) charge point at Soresby Street (see Table 2). For a more detailed discussion of different EV charger types, see Section 4.4.2.

The usage of charging infrastructure in CBC-owned car parks for the period June 2022 to May 2023 is shown in Table 6.

Table 6: Usage figures for EV Chargers in CBC-owned car parks in the Town Centre, June 2022 to May 2023

Car Park	Site ID	Charger type	Number of charging points	Number of charges carried out	Total energy consumed (kWh)	Total time spent charging (hours)	Percentage of time in use
St. Mary's Gate	11948	Fast	2	337	2,735.364	603.35	7%
St. Mary's Gate	11950	Fast	2	63	590.05	110.00	1%
St. Mary's Gate	11951	Fast	2	41	285.934	174.68	2%
St. Mary's Gate	11949	Fast	2	67	390.32	85.77	1%
Saltergate	12766	Fast	2	239	4,395.172	1,123.92	13%
Saltergate	12764	Fast	2	199	3,483.856	858.13	10%
Saltergate*	12452	Fast	2	346	72,516.408	1,874.99	23%
Durrant Road	11965	Fast	2	127	1,195.02	222.85	3%
Durrant Road	11964	Fast	2	61	470.052	85.22	1%
Durrant Road	11963	Fast	2	44	329.119	59.46	1%
Durrant Road	11962	Fast	2	66	650.111	105.42	1%
Soresby Street*	24358	Rapid	1	681	15,567.426	1,370.00	17%
Total	-	-	23	2271	37,608.83	6,673.79	-
Average	-	-	-	189.25	3,134.07	556.15	7%

* The data for Soresby Street, and one charger at Saltergate, excludes February 2023 due to a data error

The average charger was in use for 556.15 hours, or 7% of the time, in the period from June 2022 to May 2023. All chargers apart from Soresby Street have two connection points that could be used simultaneously, meaning that the average charging point would have been in use for half of this. The chargers at Saltergate and the rapid charging point at Soresby Street recorded the highest usage, with each charger at Saltergate in use for between 10 and 23% of the time, and the rapid charging point at Soresby Street in use over 17% of the period. The charge points at Soresby Street provided the largest amount of charge in kWh (15,567), despite being used for a shorter period overall than the most used charger in Saltergate, reflecting the faster charge that the Soresby Street charger offers as a rapid charger.

There is some overlap with overall parking demand and income as discussed in Section 2.3.2, with the lower usage of EV chargers at Durrant Road mirroring the lower demand at this car park overall. However, the usage of chargers at Saltergate is higher than those at St. Mary's Gate, the reverse of overall demand per space at these car parks. This is likely to reflect the fact that demand in absolute terms is higher for Saltergate than St. Mary's Gate, given that Saltergate has a higher number of places overall (526 as compared to 66) but

a similar number of EV chargers (six as compared to eight). Soresby Street fulfils a different consumer need to the other chargers due to being a rapid charger (see Section 4.4.2).

While most charging takes place during the day, Saltergate also records some overnight charging, comprising 13% of the charging occurrences during the period. In St. Mary’s Gate, this share is 3%, and is under 1% for Durrant Road and Soresby Street. Overnight charging presents an opportunity for CBC to drive usage of car parks at night, when overall demand is much lower than during the day (see section 2.3.1).

Overall, the results indicate that there is currently sufficient EV charging capacity to comfortably meet demand in CBC’s town centre car parks. However, this is likely to change in the future due to the increasing uptake of electric vehicles, as discussed in Section 4.4, which will be driven by local and Government level policy with respect to sales of petrol and diesel vehicles.

2.5 Private Car Parks

Table 7 sets out the private car parking provision in the town centre.

Table 7: Number and type of spaces at privately operated car parks

Car Park	Operator	Overall Capacity	Accessible Spaces	EV Charging Spaces
Lifehouse Church	ParkingEye	20	2	-
LCP West Bars	LCP	43	0	-
Saltergate (County Council Building)	Retail Park	124	7*	-
Hardwick Place	Parkit	95	6*	-
Brewery Street	Excel Parking	195	12*	-
Chesterfield Station	East Midlands Railway	353	11	-
Spa Lane	War Chest Capital Ltd	85	2	-
Vicar Lane	Vicar Lane Shopping Centre (Managed by YourParkingSpace)	420	18	-
Royal Mail^	Royal Mail	~184	~8	-
Total	-	1335 (Excl. Royal Mail)	58* (Excl. Royal Mail)	-

* = Unclear satellite imagery and lack of online information. Assumed using DETR Traffic Advisory Leaflet 5/95 recommendations as per Chesterfield Parking Standards 2013

^ = Royal Mail staff car park, operates as a pay-and-display on Saturdays only

~ = Taken from satellite imagery

The privately operated car parks in the town centre offer a variety of pay at machine and pay online / by phone options. The charging structures vary between the different operators and there is a large range of fees between sites. The cheapest all day parking option (>6 hours) is £2.20 (at Spa Lane) with the highest fee being £16 (Vicar Lane).

A survey was carried out between 15 March 2023 and 18 March 2023 to better understand the use and demand profile of privately operated car parks in Chesterfield town centre. The survey included Lifehouse Church, LCP West Bars, Saltergate (County Council Building), Hardwick Place, Brewery Street, Chesterfield Station, Spa Lane and Vicar Lane. The resulting occupancy analysis is available in Appendix B.

Hardwick Place and Saltergate (County Council Building) are well used car parks and reach high levels of occupancy. Spa Lane and Vicar Lane are also moderately well used. However, there is still spare capacity even at their peak occupancy levels of 67% and 64% respectively. Most car parks exhibit a mid-day peak to some extent. However, the Lifehouse Church car park exhibits a mid-morning peak and an evening peak. This evening peak is consistent with prayer meetings as well as evening youth sessions organised at the adjoining Lifehouse Church on the survey days.

It is clear from the survey data that the privately-operated car park sites experience significant variations in peak occupancy percentages, ranging from 20% at Chesterfield Railway Station car park to 96% average peak occupancy at Hardwick Place. This is impacted by a variety of factors including overall numbers of bays in the car park and the proximity to local trip attractors. Overall, there is currently available capacity at peak times within the privately-operated car parks to facilitate displaced demand should there be a reduction in council-operated car park supply. If all sites were to reach their maximum capacity simultaneously, this would still result in 489 available spaces across the town centre. The vast majority of these come from the Rail Station car park, if this is removed then there would be 243 available spaces. This is dependent on the continuation of current parking supply from the private sector which is subject to the future decisions and strategy of these privately-operated sites and is therefore an area in which the council's influence is more limited.

Full details of the car parking occupancy for the private car parks are provided in Appendix B.

2.6 Relationship with On-Street Parking

As has been demonstrated, there is considerable excess capacity across car parks in the town centre. This means that it is not anticipated that there would be a general spill-over of increased demand for on-street parking should some off-street car parking sites or space be reallocated to development sites. Due to restrictions on on-street parking in the Spire Neighbourhood there is no anticipated impact on on-street parking due to the removal of the car parks in this area. There is therefore not an anticipated substantial impact on on-street parking from the recommendations made in this strategy.

Furthermore, the amount of on-street parking within the study area is small, estimated at under 100 spaces. On-street demand has not been assessed as part of this study, but given that it only contributes a small share of parking provision in central Chesterfield, this does not materially alter this study's assessments of parking provision and usage.

2.7 Blue Badge Saver Permits

Blue Badge holders can purchase "parking saver permits" for discounted pay and display parking at the following car parks:

- New Beetwell Street
- Saltergate
- Devonshire Street
- Derbyshire Times
- Durrant Road
- Hollis Lane
- Old Ship Lane
- Queens Park Annexe
- Queens Park North
- Queens Park South
- Spa Lane

- Station Road
- Theatre Lane

3. Anticipated Future Development

3.1 Introduction

To fully understand the likely parking requirements in the future requires an understanding of the known committed and planned development in Chesterfield, as well as the wider policy context which will provide a case for change.

3.2 Chesterfield Town Centre Masterplan (2015)

The Chesterfield Town Centre Masterplan is a strategic plan for the whole of the town centre that incorporates the development of community goals and aspirations to act as a development framework for future growth opportunities. The plan builds on long term aspirations for Chesterfield to be a thriving market town with distinctive character, a destination for the Peak District, a “learning town”, a location for high value employment and a “really good place to live”. Developments within and close to the town centre must be supportive of the core functions of the centre: retail, civic functions, education, local professional services, and culture and heritage, while facilitating an overall “growing town”. The overarching vision for Chesterfield through the Town Centre Masterplan is for the town to be:

“recognised as a distinctive historic market town, with a thriving centre built around the market squares, national and independent retailers and leisure operators. The town will embrace the opportunities created by new technology and be a popular place to live and visit, with an economy based on employers attracted by great access, beautiful environments and a specialised well qualified workforce.”

Critically, the strategy for parking will influence to what extent the town centre reflects a “historic market town” environment, there will be opportunities to utilise new technologies to provide and retain excellent access and do so with sensitivity to the creation of a beautiful environment. The Town Centre Masterplan therefore outlines that *“parking must not compromise operation or environment of key public spaces”*. There is also a commitment that a car parking management strategy for Chesterfield ensures cash-less payment mechanisms at all car parks, this has since been achieved through the implementation of PayByPhone at council car park sites.

3.3 Chesterfield Station Masterplan (2021)

Chesterfield’s Station Masterplan includes a desire to retain current levels of car parking with an ambition to convert current car parking provision from surface to multi-storey. Specifically, it contains reference to the provision of approximately 550 car parking spaces in a future MSCP with commercial units at ground level around the perimeter of this MSCP. There was additionally reference to the exposed nature of the current surface car parks and the resulting windswept environment for passengers when exiting the railway station. Coach parking was noted as an opportunity in a redesigned station forecourt as there is currently no dedicated provision for this. Furthermore, the masterplan identified opportunities for greening around car parking to soften the aesthetic of the environment around the station.

In November 2021 the eastern leg of HS2, north of East Midlands Parkway, was reviewed with the publication of the Integrated Rail Plan (IRP) with plans to electrify the Midland Main Line (MML) retained but construction of the new line north of the East Midlands Parkway not going ahead. However, the regeneration of the area around the station has been long been identified as a key development priority for CBC and the design of developments around the station is independent of HS2. Under the IRP there will be improved connectivity for Chesterfield allowing classic compatible high-speed journeys from London to Chesterfield and Sheffield (and through to Leeds) under completion of electrification of the MML. The provision of local services from Sheffield to Clay Cross via the Barrow Hill line is being investigated through the Restoring Your Railway programme.

3.4 Chesterfield Local Plan (2020)

The Chesterfield Borough Local Plan outlines the vision and framework for development in the Chesterfield region. This includes information surrounding housing, the local economy, community facilities and

infrastructure and relevant adaptations to climate change. The Local Plan stipulates that appropriate levels of parking must be provided for in the town to meet resident demand. Most new parking is expected to be in the form of Park & Ride or Park & Walk provision. CLP20 in the Local Plan states that there must be provision of adequate and safe vehicle access and parking at new developments. Alongside this there is commentary on the requirement of parking provision to not worsen levels of safety perception, congestion, pedestrian, and cycle accessibility in Chesterfield. Note SS1 outlines the desire to maintain overall parking level of provision of public car parking. In cases of development where there is a loss of parking in the Spire neighbourhood an assessment of the impact of this on the viability of Chesterfield town centre must be carried out and if negative consequences are identified, compensatory parking must be provided elsewhere. Parking on Chatsworth Road has been identified as an area where improvements are necessary to provide for anticipated additional demand in the area.

3.5 Other Future Developments and Policy Commitments

3.5.1 Northern Gateway

Recent developments in the Northern Gateway project have delivered a new Saltergate MSCP, with six EV charging bays and the ability to connect a further 10 bays as well as improvements in public realm and quality and security. Further to this, some car parking space on the Holywell Cross “doughnut” site has been reallocated to build the new Enterprise Centre. This, alongside various other public-realm and commercial improvements, was enabled by £5.83 million of funding from the South Yorkshire Mayoral Combined Authority (then the Sheffield City Region Infrastructure Fund) and £6.5 million of funding from CBC.

3.5.2 Waterside

The Waterside developments comprise of a series of smaller developments, including include restaurants, bars, offices, and housing, positioned between the A61 and the Midland Main Line railway line adjacent to Chesterfield Railway Station. As part of the Basin Square section of the developments there are plans for a 442-space MSCP as well as a hotel, offices (whose construction has been completed) and residential units. Currently land adjacent to the Basin Square area, which is also designated for the Waterside development plans, is used as a temporary 240-space surface gravel car park operated by Excel Parking.

3.5.3 Growth Strategy (2023)

The Chesterfield Growth Strategy outlines a goal for Chesterfield to be a carbon neutral borough by 2050 through championing a sustainable approach to growth. CBC has committed to becoming a carbon-neutral organisation by 2030. It is recognised that to achieve the borough-wide goal there will need to be “significant adaptation” in business, workforce, consumer and visitor behaviours. It also outlines measures to promote the growth of non-‘privately owned motor vehicle’ modes of transport such as rail via the reopening of the Barrow Hill line between Chesterfield and Sheffield as well as zero-emission public transport to feed tourism demand in the Peak District. The Growth Strategy also acknowledges that there is a need to “*reduce carbon dependency in the local economy*”.

3.5.4 Climate Change Strategy (2023)

The Climate Change Strategy outlines several points relevant to car parking in the town centre. It is noted that CBC has received around £170,000 from the Office for Low Emission Vehicles for on-street electric car charge-points. Further to this the strategy outlines the prioritisation within the local plan towards active modes of travel and a requirement for all new-build houses with off-street parking to be fitted with electric charge points as a standard planning requirement. The strategy recognises that the council has limited control over the “grey fleet” of officers and elected members however seeks to encourage alternatives such as public transport, active travel, car-sharing and reduced need for travel due to hybrid-working. Decarbonisation of the council’s own fleet of vehicles is a core element of council activities to reach the 2030 carbon neutral target.

3.5.5 Covid Recovery (2020)

One of the key objectives of the Chesterfield Economic Recovery Plan is for continued modal shift to cycling and walking (active travel) and public transport. There is also a commitment to develop an Integrated

Travel Plan with Derbyshire County Council. The plan states that key developments and sites need to be accelerated to unlock better outcomes for local communities.

3.5.6 Visitor Economy Strategy (2023)

The Visitor Economy Strategy highlights Chesterfield Borough Council's ambition to increase the number of visitors to the town by 20% by 2030, relative to 2023 levels. This aims to capitalise on Chesterfield's proximity to the Peak District and key attractions including Chatsworth House, as well as the town's own visitor offering. The strategy aims to encourage visitors to use sustainable transport, including bus, rail and cycle paths, to access the Peak District from Chesterfield. Developments currently planned or under construction within the borough, including the £300 million PEAK leisure, education, wellness and entertainment complex and the Chesterfield Waterside scheme (see section 3.5.2 above) will contribute to the realisation of the strategy.

3.5.7 Derbyshire County Council Future EV Strategy (2023)

The Derbyshire County Council (DCC) future EV strategy, completed in February 2023, outlines options for DCC and the borough and district councils within Derbyshire to cater for the growing requirement for EV charge points. It recommends an overarching role for DCC to co-ordinate the procurement of EV chargers across the county area, with support from districts and boroughs. This would involve DCC aggregating sites to provide larger-scale investment opportunities for Charge Point Operators (CPOs), to provide the best-value and fastest infrastructure roll-out.

4. Car Parking Strategy

4.1 Introduction

To fully achieve successful management and provision of car parking in Chesterfield, the challenges and opportunities of car parking must be addressed across various themes. Establishing the current usage of car parks alongside the income expectations and performance of the sites helps to establish the existing picture of site behaviour. This can then be applied through future growth scenarios to determine what the future of parking might look like in Chesterfield town centre. Crucially this can then be assessed against regeneration opportunities in the town centre and the climate change mitigation steps that can be taken to ensure a resilient future for car parking infrastructure.

4.2 Future Demand

Three future demand scenarios have been modelled to illustrate how demand for Chesterfield's town centre car parks may change between the present day and 2035.¹

The core and high-growth scenarios are derived from the Department for Transport's (DfT) National Trip End Model (NTEM), and assume that peak car parking demand in the town centre is correlated with growth in the number of trips attracted to the town centre from surrounding areas. These equate to the Middle Super Output Area (MSOA) defined as Chesterfield 010 with the town centre, as this is the smallest area available for analysis within this dataset, and contains all of the car parks in the study area while minimising the area outside of the town centre. This area is shown in Figure 7.

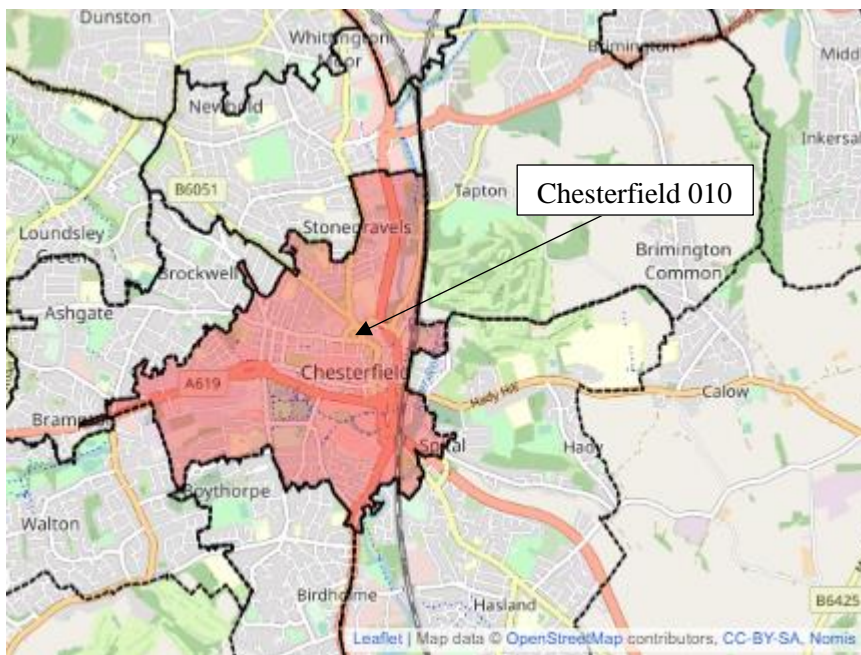


Figure 7: NTEM Area used to estimate town centre parking demand (Chesterfield 010)

4.2.1 Central Case: NTEM Core Scenario

Forecasting using the NTEM core scenario results in 2035 growth factors of 1.0695 (for production trips) and 1.0924 (for attraction trips).

¹ Note that the present day is defined as 2022 for the core and high scenarios as the majority of existing CBC parking data analysed in this study is from 2022.

Through further analysis taking the NTEM attraction value this results in an estimated 9.24% increase in car parking demand between 2022 and 2035, assuming no significant interventions to increase usage of other modes outside of the known policies.

In this scenario, alongside removal of New Beetwell Street MSCP, Albion Road, St Mary's Gate, Spa Lane, Hollis Lane and Derbyshire Times, given a high-level approximation exercise, there is an estimated overall shortfall of 20 spaces supplied versus demand at peak demand for parking. However, with the retention of Albion Road there would be overall 10 available spaces at peak demand. These particular sites have been used in this exercise due to engagement with stakeholders and their proximity to key development areas (e.g. Spire Neighbourhood). Further details are provided in Section 4.5.

4.2.2 Low Case: No parking demand growth

In this scenario, all growth in demand for trips to the town centre is anticipated to be accounted for by other modes. Parking demand is therefore equivalent to the baseline.

In this scenario, alongside removal of New Beetwell Street MSCP, Albion Road, St Mary's Gate, Spa Lane, Hollis Lane and Derbyshire Times, given a high-level approximation exercise, it is estimated there would be an overall 116 spaces available at peak demand for parking.

4.2.3 High Case: NTEM High Economic Growth Scenario

Forecasting using the NTEM high economic growth scenario results in 2035 figures of 1.1032 (for production trips) and 1.1293 (for attraction trips).

Through further analysis taking the NTEM attraction value this results in an estimated 12.93% increase in car parking demand between 2022 and 2035.

In this scenario, alongside removal of New Beetwell Street MSCP, Albion Road, St Mary's Gate, Spa Lane, Hollis Lane and Derbyshire Times, given a high-level approximation exercise, it is estimated there would be a shortfall of 75 spaces supplied versus demand at peak demand for parking.

4.3 Income

There is limited evidence on the impact of increases in parking charges on the demand for parking in UK towns and cities. There is some historic research to suggest the impact is in the range of 1-4% reduction in parking demand relative to each 10% increase in charge (Feeney, 1998; Pratt, 1999). However, it is also understood that an increase in charges in areas where there is alternative parking supply may simply result in a diversion of traffic to neighbouring cheaper car parks. Chesterfield, due to its current policy of free parking for residents outside the hours of 10:00 to 15:00, is in a unique position to understand its latent parking demand relative to parking charge changes. In the parking data assessed there is no clear increase in parking demand during free parking hours for residents which would suggest that there is not a significant latent demand for car parking that is restricted by the current parking charges. However it is difficult to fully ascertain this relationship as by the nature of the permit there is little recorded data of usage. At car parking sites with substantial usage data, a barrier is used, limiting the permit's use at that site and this may lead to displaced demand to other non-barriered car parks at the resident permit operating hours. Increases in parking charges in order to boost income are more relevant in scenarios where there is excess demand on the existing provision of parking.

Assuming the continuation of the current car parking charges strategy, future demand on parking will in large part depend on provision, quality, and price of alternative transport modes to trip attractors in Chesterfield town centre. Given a lack of latent parking demand, mode shift towards more sustainable modes of transport for journeys to and from the town centre would result in a decrease in demand on parking.

4.3.1 Yearly Income Profile as per TEMPRO Central Growth Scenario

Using the NTEM core scenario and making assumptions around future parking income targets, it is possible to assess how income might perform relevant to these targets in future years. The NTEM core scenario informs background growth to parking demand, and this can be established for an annual breakdown. This is assuming the 2023 income target is indicative of a consistent expectation on parking income. Therefore, the

assessed 2023 YTD income level has been used as a base and the NTEM core scenario growth has been applied to increase this income year on year to approximate the annual income level for each year between 2024-2035.

Further to this an assumption has been made that parking charge income targets will rise in line with inflation, as will parking charges themselves. Under this scenario, the Office for National Statistics (ONS) and Office for Budget Responsibility (OBR) forecast for CPI inflation (March 2023) has been taken as the inflation rates up until 2028 and the Bank of England inflation target of 2% has been taken as the inflation rate subsequently up until 2035. The resulting estimation is an income of £2,519,264.80 in 2035 with an income target of £2,593,807.07. This equals income 2.87% below the year's target, as shown in Table 8. Across the whole analysis range, 2024 to 2035, each year is forecasted to have income below targets.

Table 8: Projected income mapped against the forecasted targets

Year	Income	Target	% under target
2024	£1,996,593.99	£2,165,954.26	7.82%
2025	£2,027,063.62	£2,176,784.03	6.88%
2026	£2,047,697.81	£2,176,784.03	5.93%
2027	£2,094,213.18	£2,213,789.36	5.40%
2028	£2,147,228.98	£2,258,065.14	4.91%
2029	£2,200,722.59	£2,303,226.45	4.45%
2030	£2,254,694.01	£2,349,290.97	4.03%
2031	£2,309,143.23	£2,396,276.79	3.64%
2032	£2,361,003.44	£2,444,202.33	3.40%
2033	£2,413,456.48	£2,493,086.38	3.19%
2034	£2,466,060.37	£2,542,948.10	3.02%
2035	£2,519,264.80	£2,593,807.07	2.87%

4.3.2 Tariff Band Targeting & Comparison with Similar Towns

Guidance on parking provision in town centres, as outlined by the Association of Town & City Management, British Parking Association, Parking Data & Research International and Springboard Research, demonstrates trends in cost of parking relative to town centre size, footfall, and target consumer. On assessment of the cost of parking in a town centre, the 2-hour tariff is the most pertinent band when targeting impact on shoppers as opposed to commuters. This data was collated in 2013 and prices quoted have been adjusted to represent present day values after accounting for inflation. It is likely that costs of parking have not followed price increases directly in line with inflation. However, this is a useful exercise to understand the relationship between footfall and parking pricing.

A calculation exercise carried out to calculate parking charges required to reach income target levels given assessed background NTEM demand growth scenarios and inflation adjustments to charges and targets is outlined in Table 9. This exercise has established a forecasted annual shortfall to income targets and uplifted parking charges with this flat percentage. There has also been an assumption that charges will increase by £0.05 at a minimum and that charges will not decrease at any point. Additionally, price elasticity has been accounted for with the previous assumption that for every 10% increase in cost there is a 1-4% loss of demand, this has been taken as 2.5% for this exercise and with an assumed elasticity only applied to charge increases above inflation. This exercise demonstrates the need for parking charges to increase greater than forecasted inflation levels and to what extent this would need to occur to reach anticipated income targets. Given a loss of 2.5% of demand for 10% increases in charges the increases in charges outlined in this

charging structure would result in a loss of 7% of demand in 2035. However, this loss may be lower given these increases in charges are taking place incrementally over a long period of time. Furthermore, background growth is anticipated to be 8.19% from 2023 to 2035 and therefore it is anticipated there would be no overall reduction in demand given the NTEM core scenario.

It is to be noted that income is dependent on a wide variety of factors, of which demand is only one. It is highly uncertain that estimations of income are likely to be accurate as there are a multitude of factors which could induce or reduce demand, impact operations, affect consumer behaviours etc. The estimations given in this report are intended to solely provide a snapshot of how scenarios could develop given certain assumptions.

Table 9: Forecasted parking charge bands required to reach forecasted income targets

Year	Up to 30 Mins	Up to 1 Hour	Up to 2 Hours	Up to 3 Hours	Up to 4 Hours	Over 4 Hours / Up to 12 Hours
2024	£1.00	£1.90	£3.35	£3.55	£5.30	£5.85
2025	£1.00	£1.90	£3.35	£3.55	£5.30	£5.85
2026	£1.00	£1.90	£3.35	£3.55	£5.30	£5.85
2027	£1.00	£1.90	£3.35	£3.55	£5.30	£5.85
2028	£1.05	£1.95	£3.40	£3.60	£5.40	£5.95
2029	£1.05	£1.95	£3.45	£3.65	£5.50	£6.05
2030	£1.05	£2.00	£3.50	£3.75	£5.60	£6.15
2031	£1.10	£2.05	£3.55	£3.80	£5.70	£6.25
2032	£1.10	£2.05	£3.65	£3.85	£5.80	£6.40
2033	£1.15	£2.10	£3.70	£3.95	£5.90	£6.50
2034	£1.15	£2.15	£3.80	£4.05	£6.05	£6.65
2035	£1.20	£2.20	£3.85	£4.10	£6.15	£6.80

Analysis carried out by Springboard Research and Parking Data & Research International shows no clear correlation in footfall per week and cost of parking. The evidence suggests that towns with very high levels of footfall (300,000 per week +) charge the greatest amounts for parking. However, this may reflect the fact that larger more successful towns and cities are able to charge the most for parking due to their already robust centre viability, or that these towns may have a greater more developed public transport and active travel networks, reducing the numbers arriving in the city centre by car. This is summarised in Figure 8.

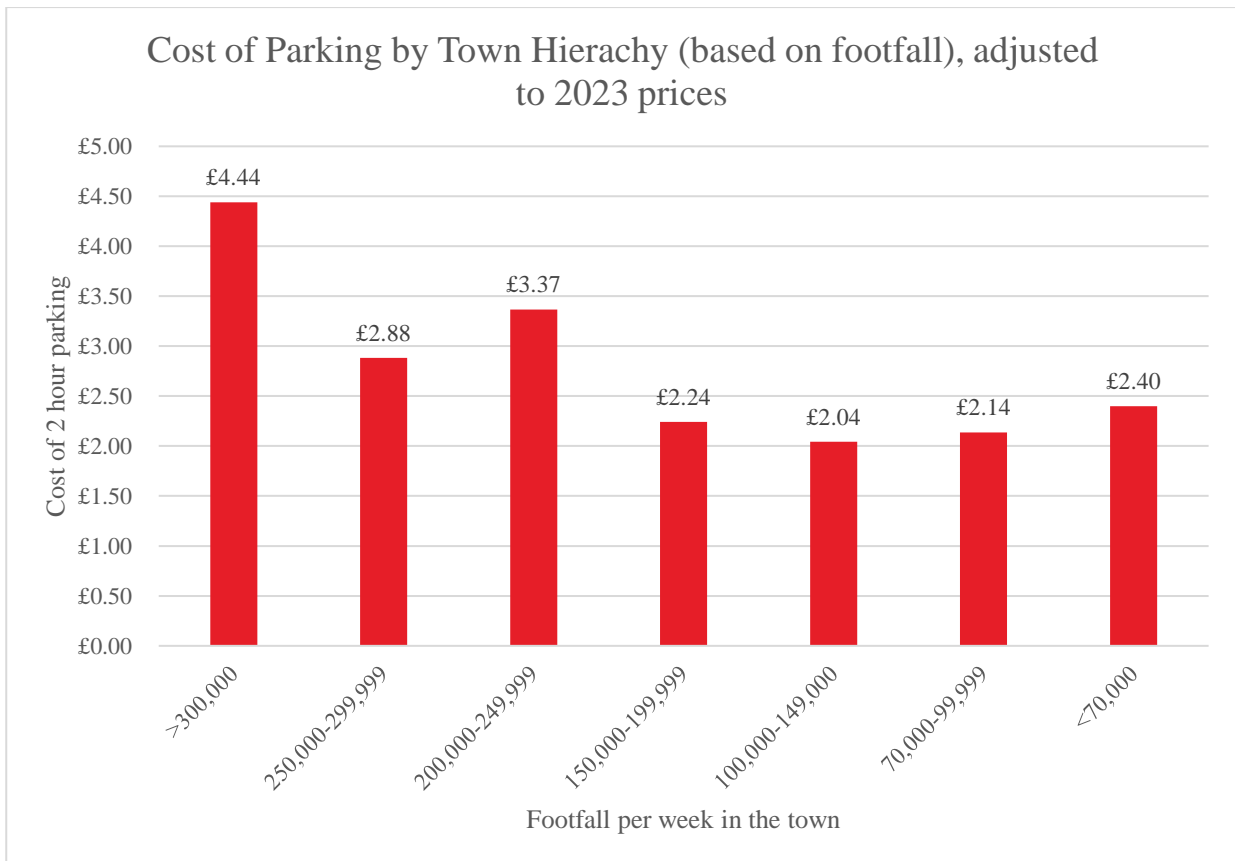


Figure 8: Cost of parking by town centre footfall (Springboard/PDRI)

Analysis of parking charges in towns of a similar size to Chesterfield shows that Chesterfield parking pricing is towards the higher end of tariffs for 1-hour and 2-hour stays, as shown in Table 10. However, this comparison based on population size does not reflect the economic viability and success of these town centres and as such should not be taken as a reflection of how Chesterfield should price its car parking charges. The relationship between town centre viability, destination status, car parking demand, public transport offering, relative wealth of residents and neighbouring regions result in such complexity that it is difficult to ascertain a benchmark for car parking charges simply from looking at towns of a similar size.

Table 10: Car parking tariffs for towns of a similar population to Chesterfield

Town	Town Population	1 Hour	2 Hours	4 Hours
Chesterfield	89,181	£1.70	£3.00	£3.20
Halifax	91,338	£0.50-£1.00	£1.00-£2.00	£2.00-£4.00
Grimsby	88,500	£1-£1.50	£1.50-£2.50	£2.50-£3.50
Hartlepool	89,610	£0.70	£1.00-£1.50	£2.80
Stevenage	93,944	£2	£3	£5

4.3.3 Resident Parking Permit

Residents of Chesterfield Borough are provided with a resident parking permit upon payment of council tax which entitles them to free parking before 10:00 and after 15:00 from Monday to Saturday and all-day on Sundays and bank holidays. This is valid at Albion Road, Derbyshire Times, Devonshire Street, Durrant Road, Hollis Lane (excluding on-street bays), Holywell Cross, Queens Park, Spa Lane, Station Road, St Mary's Gate and Theatre Lane. If residents wish to park after this allocated free period, they buy a ticket valid to cover the extra time needed. To quantify the estimated loss of parking income due to this parking incentive the average number of parked cars using the resident parking permit surveyed in March 2023 has

been extrapolated. This number of average cars in the morning and afternoon has been taken along with an assumption as to the turnover of cars in the “free” periods (i.e. before 10:00 and after 15:00) and an assumption as to the average length of stay (2-hours). This results in an estimated loss of revenue of £787.80 per day which is equal to £287,547.00 per year. Though there may be political sensitivities around the resident parking permit and the permit is not intended to act in an income chasing approach, there may be an opportunity to release some of this lost revenue should amendments or removal of the parking permit take place.

4.4 Climate Change

4.4.1 Electric Vehicle (EV) Charging

This section outlines anticipated growth in EV demand in the years to 2035 and beyond, and the implications of this for anticipated charging demand in car parks in Chesterfield Town Centre, using the National Grid Future Energy scenarios and Arup’s in-house EV Charging Infrastructure Model.

Wider policy context

According to National Grid’s Future Energy Scenarios, the number of electric cars on the UK’s roads could increase to over 10 million by 2030, with up to 37 million battery-electric cars and vans in service in 2050.² This contrasts with the 700,000 EVs in service today.³ Scenarios that see a higher number of electric vehicles (EVs) in service would require the government’s target of 300,000 public charge points installed by 2030 to be exceeded, particularly as concern around the availability of public charge points is the second most common factor behind cost in discouraging consumers from switching to electric vehicles.⁴

Interaction with the Derbyshire County Council (DCC) Future EV Strategy

The contents of the Derbyshire County Council Future EV Strategy are discussed in Section 3.5.7. Workshops with DCC and constituent borough councils identified an initial shortlist of suitable sites for new or additional EV charging infrastructure; relevant shortlisted car parks in Chesterfield town centre were Durrant Road/Brewery Street, Queens Park Annexe and St. Mary’s Gate (although note that St. May’s Gate also sits in the Spire Neighbourhood area and is therefore a prime consideration for redevelopment – see Section 4.5).

National Grid Future Energy Scenarios (FES)

The National Grid Future Energy Scenarios (FES) reflect four different potential scenarios for the UK’s progress towards decarbonisation, each with different speeds of decarbonisation and varying levels of accompanying societal change. These are summarised in Figure 9.

² <https://www.nationalgrideso.com/document/263951/download>, p.51

³ <https://www.rac.co.uk/drive/electric-cars/choosing/road-to-electric/>

⁴ nationalgrideso.com/future-energy/our-net-zero-work/empowering-climate-action

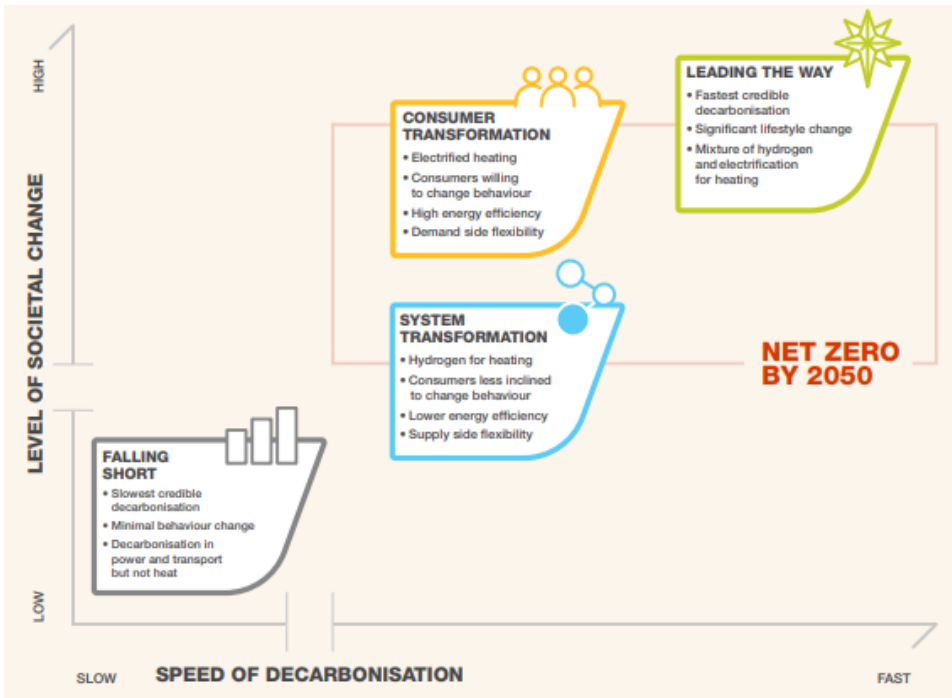



Figure 9: National Grid Future Energy Scenarios

The key implications of the National Grid FES for EV uptake are summarised in Table 11.

Table 11: National Grid Future Energy Scenarios: Implications for Electric Vehicle (EV) uptake

<p>Steady Progression (prior to 2022 FES report)</p> <p>Or</p> <p>Falling Short (after 2022 FES report)</p>	<p>Electric Vehicles are slow to be adopted by the public, most likely due to the cost of new vehicles, therefore the Public and Private sectors are reluctant to install dedicated charge points until revenue forecasts can be justified.</p> <p>In this scenario National Grid forecast the 2030 ban on new petrol/diesel vehicles is missed and is instead achieved in 2035 by cars and 2040 by vans.</p>
<p>System Transformation</p>	<p>The Public and Private sectors are first to deploy charge points for EV drivers ahead of the need, this in turn spurs on greater EV uptake as the charging provision is present across public residential, destination and on-route locations.</p> <p>In this scenario National Grid forecast the 2030 ban on new petrol/diesel vehicles is missed and is instead achieved in 2032.</p>
<p>Consumer Transformation</p>	<p>Drivers adopt EVs ahead of charging provisions, most likely to be led by drivers with access to off-street parking. This in turn allows the Public and Private sectors to provide charging provision at all other location types due to demand and forecast revenue justifying CAPEX costs.</p> <p>In this scenario National Grid forecast the 2030 ban on new petrol/diesel vehicles is achieved.</p>
<p>Leading The Way</p>	<p>This is the National Grid’s fast rate of decarbonisation scenario, which in turn is the most aggressive approach for EV uptake, this is not down to one individual group, rather as a combination change across all groups.</p> <p>In this scenario National Grid forecast the 2030 ban on new petrol/diesel vehicles is achieved.</p>

In absolute terms, the number of electric cars on the road in 2035 will vary between 10 million (in the Falling Short scenario) and over 25 million in the Consumer Transformation and Leading the Way scenarios, with a consequent variation in the number and type of EV chargers required, as shown in Figure 10.

Figure EC.T.07: Battery Electric Cars on the road 

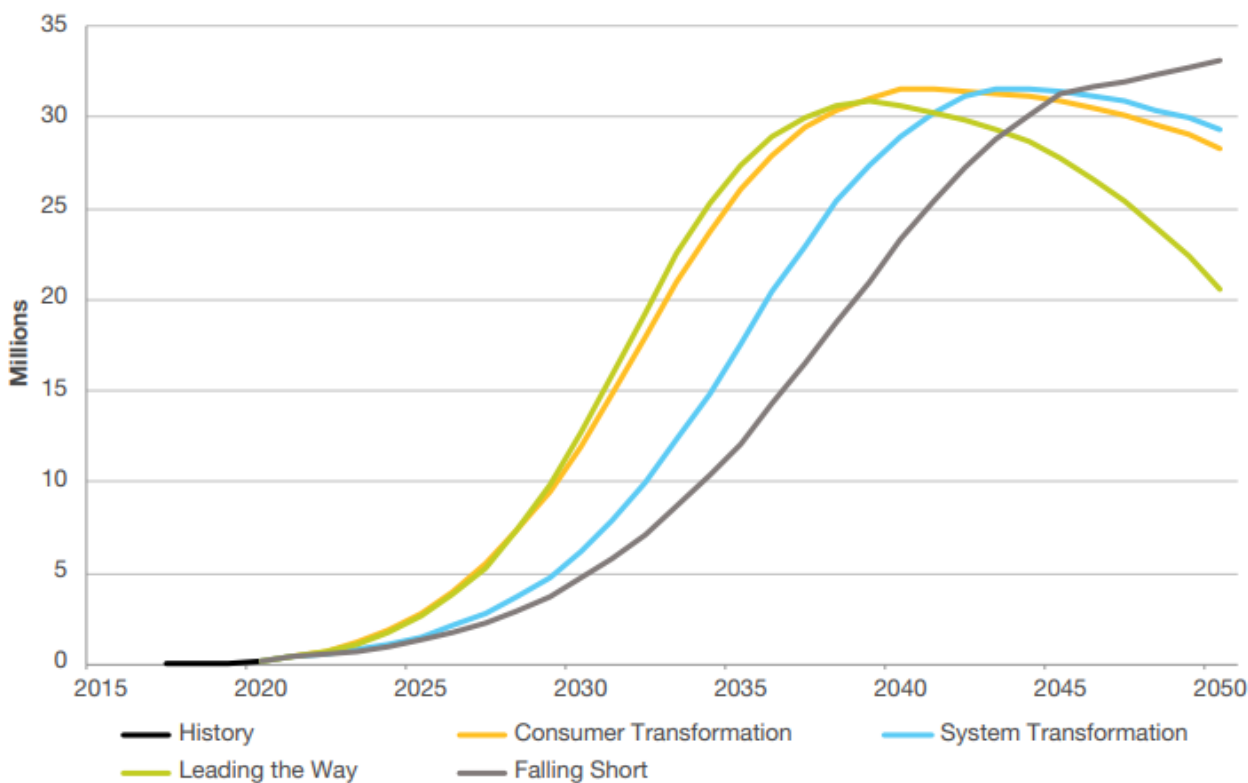


Figure 10: National Grid Projections for future number of EVs in service in the UK⁵

4.4.2 Types of EV charging

EV chargers can broadly be categorised into four types: slow, fast, rapid and ultra-rapid (with “ultra-rapid” sometimes included under the “rapid” category). Each is suitable for different types of charging, as detailed in Table 12.

Table 12: Types of EV Charging

Type	Power	Time to full charge	Suggested Use Cases
Slow	<7kW (DC)	8-12 hours	Residential/overnight charging; all-day parking
Fast	7-22kW (DC)	1-6 hours	Medium-term parking for shopping and leisure
Rapid	43-50kW (AC/DC)	20 minutes- 1 hour	Short-term use e.g. service stations, short shopping trip
Ultra-rapid	100-350kW (DC)	20-40 minutes	Very short shopping trip/ trip to access services in town centre, stopping as part of a longer journey in order to top-up charge

⁵ National Grid Future Energy Scenarios, p.72: <https://www.nationalgrideso.com/document/263951/download>

As faster EV chargers are generally more expensive to operate and install, which is reflected in the price per kWh for the end user, consideration should be given to prioritising slower charging types where demand for rapid and ultra-rapid is lower. Some users will not aim to charge their vehicle fully, but instead to extend their battery range sufficiently to reach their intended destination or place of residence.

4.4.3 Costs of installing EV charging infrastructure

The costs of EV chargers and charging infrastructure is set out in Table 13 and Table 14. This is based on a cost benchmarking exercise carried out by Arup for a previous project for the Welsh government, and represent prices within the period 2020 to 2022. These costs can be affected by a number of factors, including the location and whether this is urban or rural, the existing surface type, the costs of connecting to the grid (although the cost of grid upgrades is no longer generally borne by the individual user as discussed in section 4.4.7 below). These costs are for individual chargers and are therefore also likely to reduce substantially if chargers are being purchased in bulk.

Table 13: Benchmark supply costs by charger type. Source: Arup

Type	Power Rating	Central Estimate	Higher Cost	Lower Cost	Unit
Fast	7 kW	1,700	2,125	1,275	£ /Charge Point
Fast	11 kW	2,000	2,500	1,500	£ /Charge Point
Fast	22 kW	2,300	2,875	1,725	£ /Charge Point
Rapid	50 kW	35,000	43,750	26,250	£ /Charge Point
Ultra-rapid	100 kW	55,000	68,750	41,250	£ /Charge Point
Ultra-rapid	150 kW	60,000	75,000	45,000	£ /Charge Point

Table 14: Benchmark installation costs by charger type. Source: Arup

Type	Power Rating	Central Estimate	Higher Cost	Lower Cost	Unit
Fast	7 kW	2,200	2,750	1,650	£ /Charge Point
Fast	11 kW	2,200	2,750	1,650	£ /Charge Point
Fast	22 kW	2,200	2,750	1,650	£ /Charge Point
Rapid	50 kW	15,000	18,750	11,250	£ /Charge Point
Ultra-rapid	100 kW	15,000	18,750	11,250	£ /Charge Point
Ultra-rapid	150 kW	15,000	18,750	11,250	£ /Charge Point

4.4.4 Different Charging Behaviours: Arup Scenarios

In addition to uncertainties as to the scale and speed of EV uptake, as outlined in the National Grid FES above, there are uncertainties as to how and when EV drivers will choose to charge their cars. Arup has therefore developed four possible future EV charging scenarios, as detailed below:

- **Base:** A baseline set of assumptions established using market and behaviour observations to date, continued forward with trends to forecast EV energy and charge point quantity. EV charging behaviour follows observed charging to date (70% Fast and 30% Rapid or above)

- **Consumer Efficiency:** Consumers are more environmentally conscious and EV drivers choose vehicles with a battery suitable for every day short distance use and do not purchase the largest range EV on the market, affecting the average EV battery size. EV drivers are also more efficient with charging their vehicles; favouring lower charger speeds.
- **Government On-Street:** In this scenario it is assumed that a Government incentive or scheme is in place and widely adopted enabling up to **50%** of EV drivers who have no off-street parking the ability to charge close to home via public residential charging by the year **2035**.
- **Rapid Dominant:** In this scenario EV drivers are expected to follow the ‘fuel and go’ behaviour patterns observed in ICE vehicles, therefore there is a greater need for Rapid and above charge points to reduce consumer dwell times.

4.4.5 Amount and Type of EV Charging Required

Combining Arup’s future charging scenarios and the FES produces sixteen potential scenarios for the amount of charging required in Chesterfield’s car parks in the future. The wide variety of potential future charging requirements scenarios highlights the need for CBC to remain adaptable in developing their EV charging provision for the future.

The Arup model distinguishes between four types of EV charging: Home, Destination, Public Residential and On-Route. Of these four, two are considered relevant to CBC’s car parks in the town centre. These are Destination (charge points associated with attractions such as supermarkets, shopping centres and work) and Public Residential (charge points meeting the needs for those who cannot charge at home due to limited off-street parking access, associated with on-street deployment or dedicated bays in car parks). The total number of chargers required for these cases and scenarios for Chesterfield LSOA areas 010A, 010F and 010G (see Figure 11 below), which correspond to the area of the study car parks, is shown in Table 15.

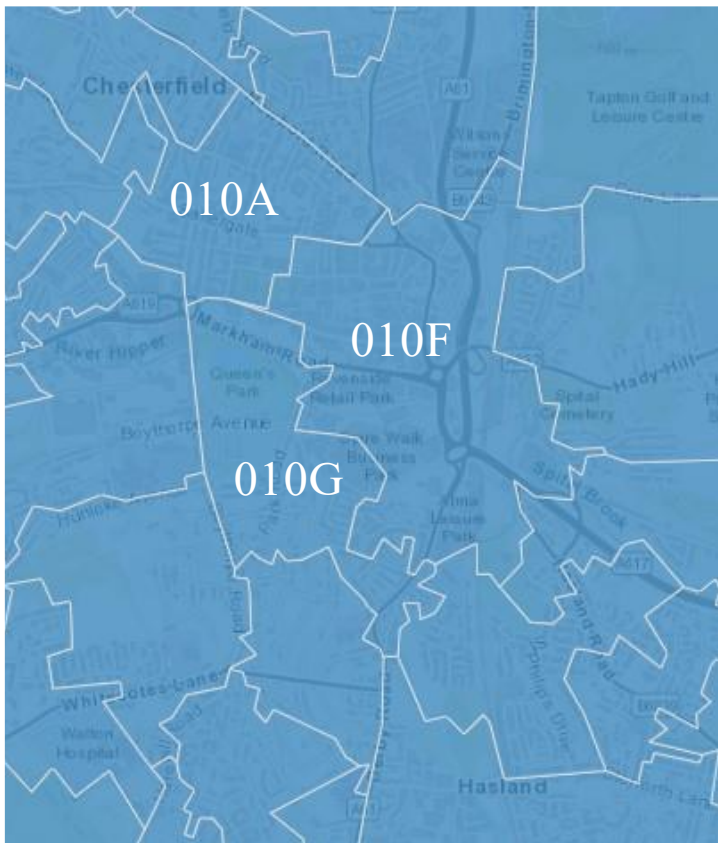


Figure 11: Area used for EV Charging Requirements Analysis (Chesterfield LSOAs 010A, 010F and 010G)

Table 15: Estimated peak demand for destination and public residential chargers in central Chesterfield (LSOAs 010A, 010F and 010G) under different Arup and FES scenarios, in 2035

Scenario	Consumer Transformation	Falling Short	Leading The Way	System Transformation
⊕ Base	194.33	87.40	205.17	130.42
⊕ Consumer Efficiency	387.80	174.42	409.43	260.27
⊕ Govt. On-Street	430.32	193.55	454.33	288.81
⊕ Rapid Dominant	158.48	71.28	167.32	106.37

Illustrating the scale of uncertainty, the estimates for the number of chargers required to fully cater for peak demand in this area varies between 72 (under a FES Falling Short/Arup Rapid Dominant scenario) to 455 (under a FES Leading The Way/Arup Government On-Street scenario). In general, the Arup Base and Rapid Dominant scenarios anticipate that significantly less chargers will be required in the future, regardless of the National Grid FES chosen. This is because Base and Rapid Dominant have a significantly higher proportion of rapid chargers than the other scenarios, allowing for the same charger to be used by multiple vehicles in a day.

Not all of this demand would need to be accommodated in CBC’s town centre car parks; some could be met through on-street provision, although this is limited in the town centre, while private car parks may also install EV charging points in the future. However, given that CBC car parks consist of 50% of parking bays in the study area, a reasonable estimate would suggest this percentage of total EV charging requirement as a minimum would be delivered by CBC, through a mix of provision in car parks and on-street provision. This would lead to a minimum of 35 to 230 chargers being delivered by Chesterfield Borough Council in the town centre area. This contrasts with 23 EV charge points available in CBC’s town centre car parks currently.

The high level of uncertainty around future EV charging demand means that any future approach would need to be flexible and adaptable. Figure 12 highlights how even under one National Grid Future Energy Scenario (this example shows the leading the way scenario), there is a large degree of uncertainty in terms of the

number and type of chargers required to meet demand in the future. This could initially include implementing a mix of charger types at car parks in the town centre, before adapting the focus of any programme to focus on government policies including subsidies and changing patterns of demand. The mix of charging in car parks across the town centre can also be related to nearby land uses, given the different types of use cases that different speeds of EV charger are best suited to serve (see Table 12). The level of risk, including any financial risk over and above subsidies, on achieving an increase in the uplift of the number of EV chargers could lie with CBC in most scenarios. However, private sector investment interest, if the market supports this, could help to offset some of the risk and boost the speed at which the uplift in EV charging could be achieved.

It is important to note that the demand for chargers is likely to continue growing until after 2035 (refer to Figure 13 and Figure 14), and therefore the 2035 levels of charging provision should be seen in this context rather than as a final long-term requirement.

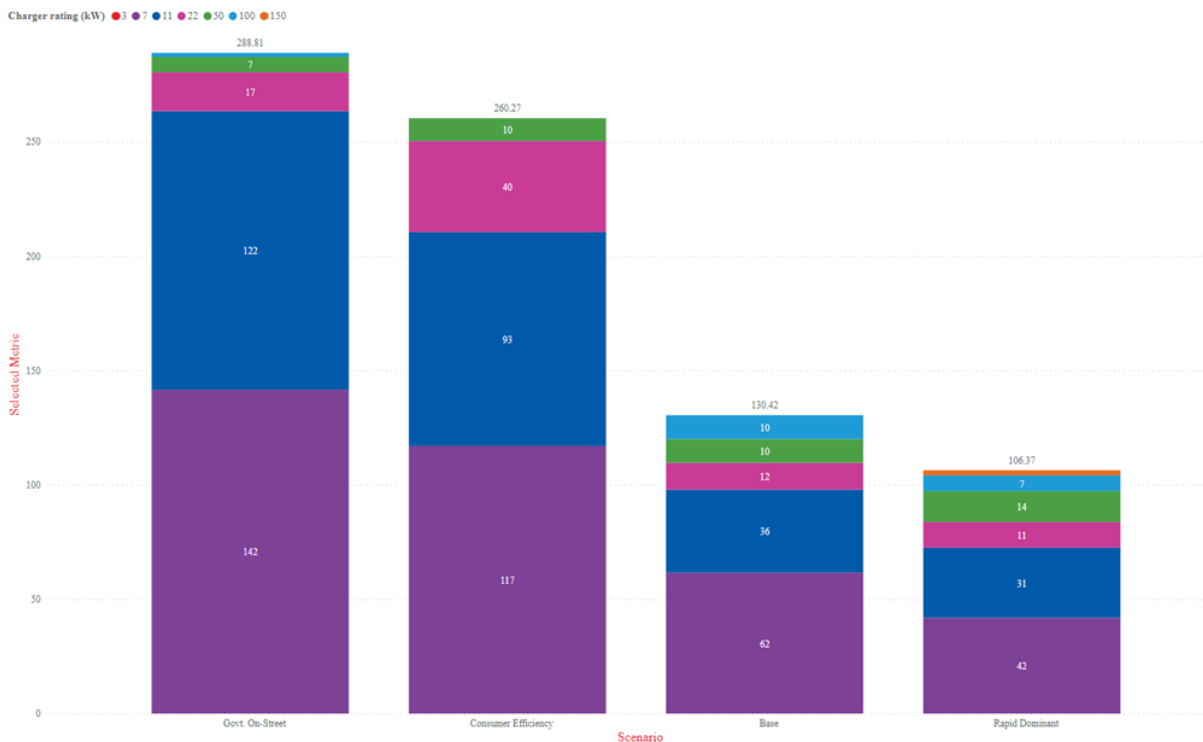


Figure 12: Estimated number of destination and public residential chargers required by type in central Chesterfield in 2035 under the National Grid Leading the Way scenario

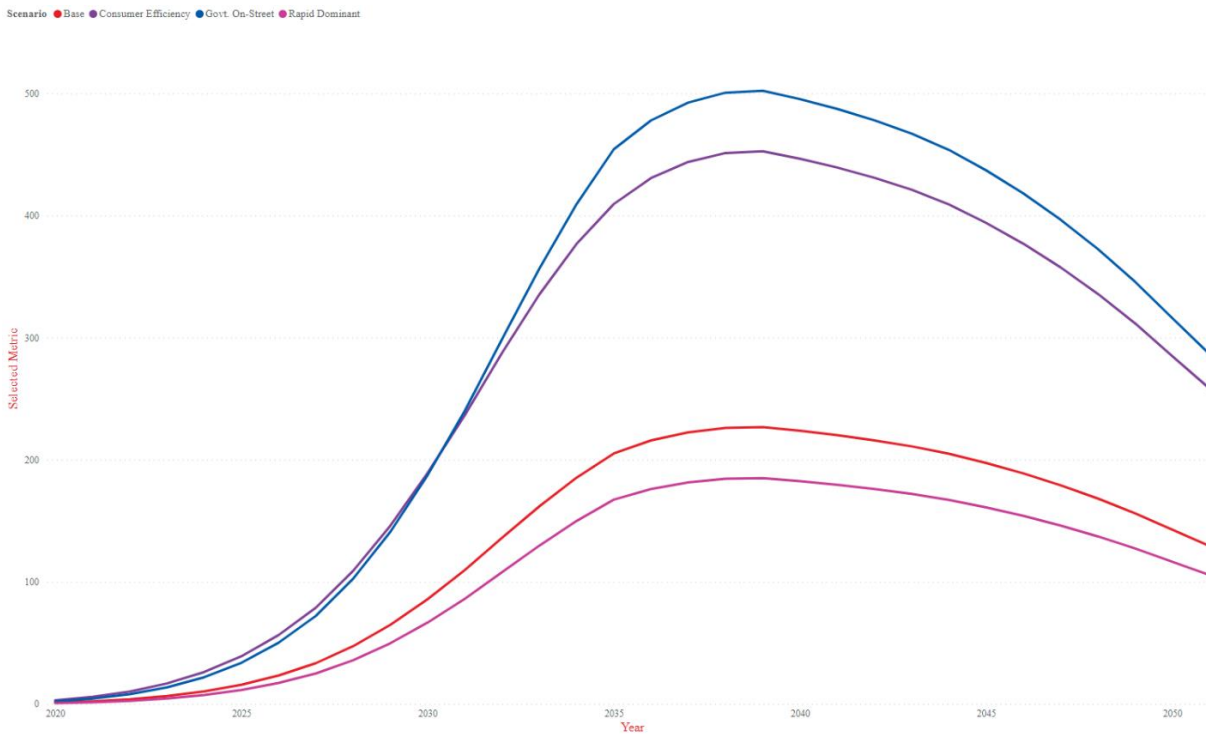


Figure 13: Estimated Future EV Charging Requirements for central Chesterfield car parks, National Grid Leading the Way scenario

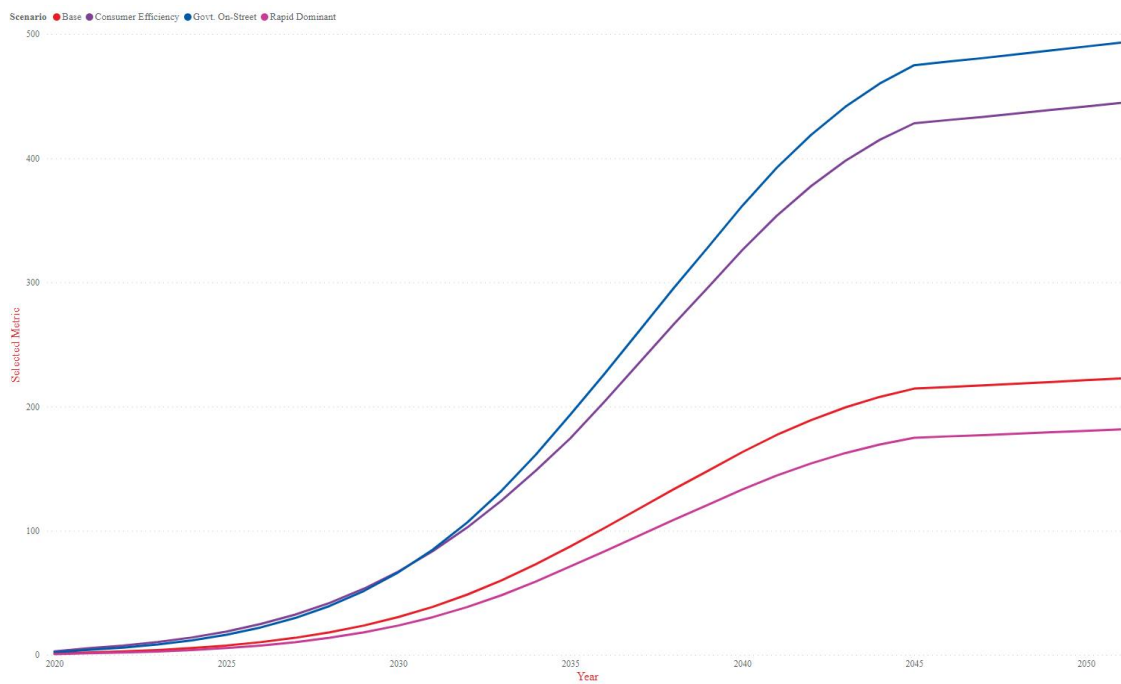


Figure 14: Estimated Future EV Charging Requirements for central Chesterfield car parks, National Grid Falling Short scenario

4.4.6 Suggested EV charging locations

As EV Charging demand increases up to 2035 and beyond, there are two broad location-based approaches to facilitating this growth in demand: an approach of incrementally upgrading all car parks to meet growing demand as this arises and one that grows supply to meet demand by upgrading car parks sequentially.

The key advantages and disadvantages of adopting each approach in Chesterfield town centre are outlined in Table 16.

Table 16: Incremental and Sequential upgrades – advantages and disadvantages

Approach	Advantages	Disadvantages
Incremental upgrades to all car parks	Provision distributed across town centre from the outset; improves convenience of EVs relative to ICE vehicles. Charges less likely to be incurred for unused assets.	Higher long-term costs due to need to make repeated upgrades to the same car parks.
Sequential; car parks equipped in order	Lower long-term costs; greater efficiencies due to completing all upgrade work to each car park in one package.	Makes EVs less convenient than ICE vehicles until car parks in all areas of the town centre are upgraded. Charges more likely to be incurred for underutilised assets if EV drivers opt not to shift destination to designated car parks for the purposes of charging.

4.4.7 Grid Upgrade Requirements in Chesterfield Town Centre

The National Grid Network Capacity Map (Figure 15) and supporting data table (Table 17) indicates that there is currently spare grid capacity at three substations to the south of Chesterfield Town Centre (Goitside x2 and Queens Park), although capacity is constrained at Sheffield Road to the north of the Chesterfield town centre area. No data is available for the Robert Hyde substation to the south-east of the town centre. The DCC Future EV report included an assessment of the costs of grid upgrades to three town centre car parks (Durrant Road/Brewery Street, Queens Park and St. Mary’s Gate) and concluded that grid connection costs did not present a significant issue for any of these. However, this situation could change if future developments in and around Chesterfield town centre reduce the amount of spare grid capacity available, and should only be considered as a point-in-time view on capacity.

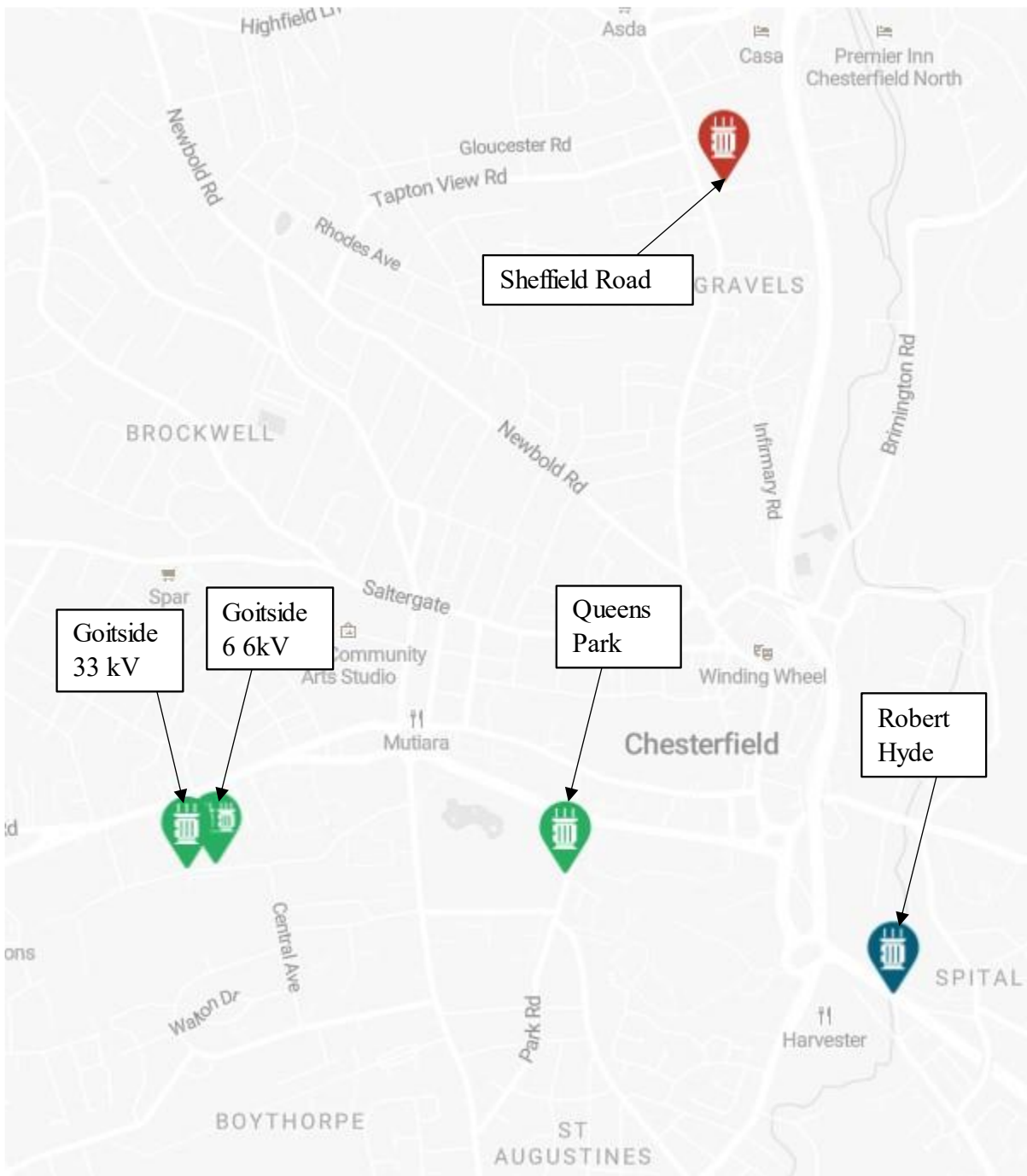


Figure 15: Substation capacity in and around central Chesterfield (source: National Grid Network Capacity Map)

Table 17: Substation capacity in and around central Chesterfield, May 2023 (source: National Grid Network Capacity Map)

Substation Name	Demand Headroom (MVA)	Generation Headroom (MVA)
Goitside 33kv S Stn	48.41	61.85
Goitside 6 kv S Stn	9.99	12.93
Queens Park 33 11kv S Stn	13.18	24
Sheffield Road 33 11 6 6kv S Stn	0	9.93

Substation Name	Demand Headroom (MVA)	Generation Headroom (MVA)
Robert Hyde 33/11kv	No data	No data

Changes to how grid upgrades are paid for since April 2023 have reduced the proportions paid by the user requesting the upgrade significantly in most cases, with costs instead being “socialised”, i.e. passed to grid users as a whole. This is likely to reduce the directly payable costs of any future grid upgrades in the town centre, though the need for grid upgrades could affect timescales for rolling out EV charging infrastructure.

4.4.8 Solar Charging

As the demand for EV charging increases, the capacity of the power distribution network could be adversely impacted. To mitigate these impacts one approach that could be considered is the implementation of Solar PV canopies across the borough’s carparks. Solar canopies have become a popular means of utilising carpark land with some countries opting to legislate for their implementation. The images show examples of the implementation of Solar PV canopies.

As part of this study a high-level analysis of the solar potential of the authority owned car parks has been undertaken. This analysis utilises GIS techniques to look at the solar potential of each of the authority owned carparks and produces an estimated megawatt hours (MWhs) output for the site (the estimated MWhs is indicative). Table 18 outlines the solar potential for each of the car park sites and lists the estimated solar potential utilising two solar panel efficiencies.

The efficiency of a solar panel utilises the percentage of energy that a solar panel is able to convert from solar radiation into electricity. The first is 22%, this figure utilises the most efficient solar panels on the market at present. It is capable of converting 22 % of solar radiation into electricity. This would mean that if an area is receiving 10MWhs of solar radiation then the solar panel would be able to produce 2.2MWhs of electricity. The second solar panel has an efficiency of 15%, this represents the standard efficiency of the majority of solar panels currently on the market. Using the example from before if the site was receiving 10MWhs of solar radiation then the panels would be able to produce 1.5Mwhs.

Table 18: Solar generation potential for each car park

Name	Site Area (Ha)	Total potential solar power generation in MWh at 22%	Total potential solar power generation in MWh at 15%
Beetwell Street MSCP	0.3	6.8	4.64
Saltergate MSCP	0.2	3.44	2.35
Rose Hill	1.7	15.78	10.76
Albion Road	0.2	1.94	1.32
Soresby Stret	1.9	15.63	10.66
Holywell Cross	1.2	10.6	7.23
Devonshire Street Part 1	0.6	4.92	3.36
Durrant Road	0.7	6.15	4.19
Theatre Lane	0.3	2.22	1.51
St Mary's Gate	0.5	4.13	2.81
Station Road	0.5	4.76	3.25
Spa Lane	0.08	0.82	0.56

Name	Site Area (Ha)	Total potential solar power generation in MWh at 22%	Total potential solar power generation in MWh at 15%
Hollis Lane	0.9	9.58	6.53
Queen's Park North	0.7	6.26	4.27
Queen's Park South	0.4	3.76	2.56
Devonshire Street Part 2	0.17	1.55	1.06
Coach Station	0.13	1.14	0.78

As is evident from the analysis there is significant potential for the CBCs car park sites to produce energy, these canopies would allow the authority to produce some of the load required for future EV charging points along with giving the option for capturing any surplus in battery storage. This additional energy will allow the authority to utilise some of the excess to power street lighting etc.

Examples of how solar PV canopies could be used in car parks are shown in Figure 16.

Figure 16: Examples of Solar PV in car parks



The implementation of the solar canopies at this time would be reliant on planning policies. As there are no current policies contained within the local plan that support or deter their development, there is an option to include a supportive statement for the installation of solar canopies during the next Local Plan review in 2025/26. However, the current lack of a policy requirement to provide these would not prevent CBC from considering solar canopies across its own car parking sites and planning policy would be generally supportive of planning applications for them.

4.4.9 Car Park Greening Principles

A sketchbook of landscape opportunities is provided alongside this Strategy document. The landscape interventions focus on nature-based solutions and urban greening, such as that shown in Figure 17, which utilise nature and the power of healthy ecosystems to improve infrastructure and ensure a stable and biodiverse future whilst also protecting people and communities. In urban environments, a design approach that promotes nature-based solutions is key in embracing the direction of national government policy that acknowledges the essential value of the natural environment underpinning our economic prosperity, health and well-being. In 2019, CBC declared a climate emergency, and they have set an ambition for Chesterfield to become a carbon neutral borough by 2050. The landscape proposals in the sketchbook help to ensure sustainability and climate change are central to the upgrading of car parking in Chesterfield. This approach seeks to create healthier and more socially cohesive and biodiverse urban environments, as well as a connected city ecosystem for people and wildlife. It also builds resilience against climate change in the form of storm, flood, heat, drought and pollution protection. Implementing smaller scale green infrastructure across parking facilities in towns such as Chesterfield, which is expanded on in the sketchbook, are vital in positively utilising pressurised urban space for sustainable design. Indicative costs for the greening proposals are provided in Appendix C.

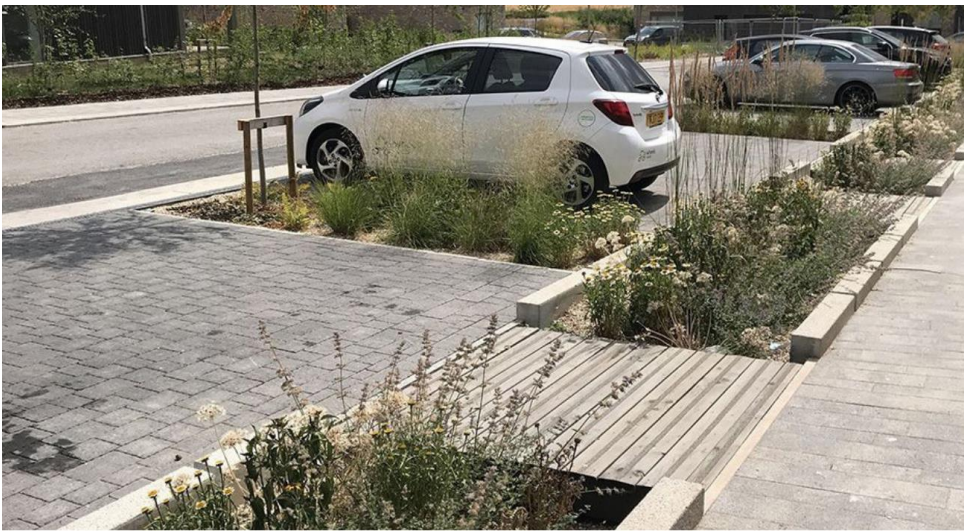


Figure 17: Lovedon Fields, Hampshire

4.4.10 Impact of net zero ambitions on parking demand

Current net zero ambitions determine that driving (and therefore parking) habits will require adaptation. EV use will in part help to achieve net zero targets but there will also need to be adaptations to private vehicle trends on a whole. There has been a range of targets set out by other local authorities on the reduction of private vehicle journeys to achieve this. Greener Transport Solutions is a not-for-profit organisation that researches the decarbonisation of transport. Greener Transport Solution estimates that a 20%-27% reduction in car journeys by 2030 is necessary to achieve UK net zero ambitions. For council owned car parks, given analysis outlined earlier in this report explores the demand on the number of car parking spaces in the town centre, an approximation can be made of the demand on parking spaces given an annual linear approach to this 2030 reduction in demand. This results in a peak demand of 1,140 spaces across the town centre parking network by 2030. This equates to 422 less vehicles than this year acting as demand on parking spaces at peak periods.

4.5 Regeneration

4.5.1 Regeneration Potential of Car Park Sites

As part of this study, the future regeneration potential of all of CBC's car park sites has been assessed, with the exception of the Saltergate MSCP given the very recent investment in its development. The following section outlines the relevant Local Plan policies that could impact future development along with looking at what potential uses the car park sites could be used for.

4.5.1.1 Planning Policy Review

On review of the policies that could impact any future redevelopment of the car park sites there are six policies that have been identified that could potentially impact or support any future redevelopment. These are:

- CLP3 Built-up Area
- CLP8 Vitality and Viability of centres
- CLP21 Town Centre Historic Core
- CLP6 Economic Growth
- CLP17 Open Space
- SS1 Chesterfield Town Centre

Full details of the relevant policies are provided in Appendix D.

By considering the relevant policies and exploring potential uses, this will provide valuable insights for CBC on how to maximize the regeneration potential of their car park sites.

4.5.2 Methodology

To assess the regeneration potential of each of CBCs car park sites, a methodology has been developed that incorporates both quantitative and qualitative analysis. This methodology takes into account all relevant policies that could impact future development of the sites.

Quantitative Analysis

Firstly, the potential for each site to deliver both employment and housing development has been evaluated. For employment uses, four scenarios were created that assume varying proportions of the site would be taken up by development: a quarter, a third, two-thirds, and the whole site. The amount of floorspace that would be produced in square metres was calculated, if the developed buildings were one, two, or three stories tall.

For housing development, three density figures to demonstrate the capacity of each site were analysed. The density figures used were 40 dwellings per hectare, which was the same as the density used in the 2018 Land Availability Assessment (LAA), 50 dwellings per hectare (a 20% uplift on the 2018 density), and 100 dwellings per hectare to show the potential capacity if the CBC decided to implement a densification policy in the town centre.

Qualitative Analysis

After the quantitative analysis, qualitative analysis was undertaken to evaluate the impacts of local plan policies and other relevant information on the sites. This analysis was then incorporated into the following tables and formulated conclusions for each site by combining the quantitative and qualitative analysis.

By utilising this methodology, we aimed to provide a comprehensive evaluation of the regeneration potential of each car park site, which will inform the Authority's decision-making process for future redevelopment plans.

Summary

A summary of the regeneration potential of each car park is provided in Appendix E. This does not include the New Beetwell Street MSCP which is subject to a separate study.

It is clear that the majority of the sites would be suitable for redevelopment, as long as there is enough capacity within the remaining car parks to accommodate any displaced carparking requirement. However, certain sites including Albion Street, Spa Lane, Devonshire Street (Part 2) fall under the threshold set in the LAA so would not be of a sufficient size to impact on the housing supply to be allocated with the local plan. This would not prevent sites coming forward outside of the Local Plan. The Coach Station would not be suitable for redevelopment, due to its function (i.e. supporting the coach station). The car park sites that sit within the Spire Neighbourhood have the most potential for redevelopment as they are supported through Local Plan policies for this. The subsequent capacity analysis considers the implications on parking supply and demand should these car parks, along with the New Beetwell Street MSCP, be redeveloped.

4.5.3 Removal of Car Parks – Implication on Parking Supply and Demand

Under a scenario of removing the car parks outlined as proposed redevelopment sites (Spire Neighbourhood car parks and Beetwell Street Multi-Storey), the number of parking spaces would broadly match the peak demand (with an estimated 10 spaces spare), assuming that the relationship between maximum occupancy, demand and income is the same for all the car parks overall as it is for the car parks for which detailed hourly data exists (Soresby Street, Rose Hill, New Beetwell Street MSCP and Saltergate MSCP).

In the survey period analysed New Beetwell Street MSCP reaches a maximum occupancy of 50.3% meaning there is demand for 234 parking spaces at this peak period. If New Beetwell Street car park were to be removed, this demand remained and there was a policy of providing for it there would need to be appropriate available capacity in the alternative car parks. In the survey period analysed for Saltergate MSCP occupancy reached a peak of 40% of capacity, meaning there were 315 available spaces in the MSCP. This in itself would provide for the New Beetwell Street MSCP peak demand in the peak “worst-case scenario” period.

However, Saltergate may not be a viable option for all current users of New Beetwell Street due to the additional distance towards main attractors in the town centre as well as a level change along the walking route into the centre of Chesterfield. In this instance, analysis has shown that Vicar Lane car park, at its peak occupancy in the survey period, had 63 available spaces. This is equal to 30% of the total demand from the removal of New Beetwell Street and potentially represents an appropriate number of spaces for those users who would be unable to use Saltergate instead.

Under the low case NTEM scenario, if all sites considered for redevelopment (Spire Neighbourhood car parks and New Beetwell Street Multi-Storey) were to be removed all parking demand would be anticipated to be accommodated for. There would be an estimated 146 spaces free at the time of peak demand. This estimate assumes that the relationship between maximum occupancy, demand and income is the same for all the car parks overall as it is for the car parks for which detailed hourly data exists. In this scenario, the council could consider releasing additional small car parks for regeneration.

Under the high case NTEM scenario, if all car parks outlined as proposed redevelopment sites (Spire Neighbourhood car parks and New Beetwell Street Multi-Storey) were removed there would be an estimated 45-space shortfall when parking demand is compared to supply, assuming that the relationship between maximum occupancy, demand and income is the same for all the car parks overall as it is for the car parks for which detailed hourly data exists. Retention of New Beetwell Street MSCP, either in its current form or with reduced capacity, would satisfy this shortfall in supply. Retention of a down-sized New Beetwell Street MSCP may be a preferred option given a strategic provision of car parking in the south of the town centre.

5. Recommendations

5.1 Income and Operational Change

5.1.1 Suggested Changes to Parking Prices

It is evident the current income targets for car parking revenue are not being met and there is limited scope to induce demand for car parking through pricing incentives. Though a low elasticity has been established between car parking charges and car parking demand, there is still a very marginal relationship and any changes in parking tariffs must be addressed through a policy lens as well as from an income perspective. Parking charge changes must be in line with the CBC's declaration of a climate emergency and the Local Plan's prioritisation of active modes of transport. Any impact on the attractiveness of private motor vehicle use to travel to and from the town centre of Chesterfield through a significant change in parking charges should reflect an overall strategic vision for the whole Chesterfield transport network. With increased parking charges, given continued present levels of parking demand, there may be opportunity to generate an increase in revenue to then fund other more sustainable modes through service improvements. Any significant change to the parking charges, in the pursuit of income generation, should also consider the income associated with alternative uses for the car parking land and opportunity for regeneration.

The current impact of high levels of inflation brings into question the bi-annual parking charge reviews the council currently operates. Though it is incredibly difficult to predict the outlook of inflation and RPI, bi-annual reviews are deemed to be often enough to sufficiently capture the impact of inflation.

There is currently not sufficient evidence to suggest that parking charges have a significant impact on the economic success of town centres. There is limited evidence to suggest that overarching decline of town centres, experienced more generally, may be accelerated by higher town centre parking charges.

The analysis set out in this strategy has resulted in a forecast of parking charges year-on-year until 2035 that would satisfy income targets, assuming demand grows in line with NTEM core scenario, inflation grows in line with ONS / OBR forecasts and BoE targets, and target income increase in line with this inflation rate. This fee structure can be seen in Table 9. The suggested fee structure for 2024 is set out in Table 19.

Table 19: Suggested 2024 parking charge

Year	Up to 30 Mins	Up to 1 Hour	Up to 2 Hours	Up to 3 Hours	Up to 4 Hours	Over 4 Hours / Up to 12 Hours
2024	£1.00	£1.90	£3.35	£3.55	£5.30	£5.85

Price increases are expected to be subject to political will and sensitivities and this analysis solely looks at the supply and demand and does not consider external factors.

The resident parking permit is an area of income loss and is estimated to represent lost income as seen in Table 20. Should income levels prove an ongoing concern, removal or adjustment to the terms of the resident parking permit should be considered as a cash-releasing intervention.

Table 20: Income loss due to resident parking permit

Income loss per day	Income loss per year
£787.80	£287,547.00

5.1.2 Other suggested operational changes

Pay-By-Phone, the current mobile payment operator in Chesterfield allows integration of automatic barriers at its sites. Automatic barriers could be used to reduce ongoing operational costs associated with ticket wardens as well as reducing instances of fare evasion. Indicative costs associated with the infrastructure needed for automatic ticket barriers are outlined in Table 21.

Table 21: Indicative costs associated with automatic ticket barriers (Source: NORTECH)

Investment	Price range
Video camera cost (excl. server and software)	£470-£700
Specialised ANPR camera cost (one off)	£1,000-£3,000
Average installation cost range	£700-£1,000
Barrier or gate installation charge	£1,500-£3,000

5.1.3 Regeneration opportunities on car park sites

The car park sites owned by CBC have been assessed for their regeneration potential for employment and residential development. This has been carried out over a range of residential density and employment site yield. Significant regeneration potential has been identified. When coupled with analysis carried out exploring the use of car park sites New Beetwell Street MSCP has been evaluated as an appropriate site for redevelopment (although is subject to a separate study). If demand to remain the same across the Council-owned car parks, Saltergate has been identified as having sufficient available capacity to facilitate the displaced New Beetwell Street MSCP demand. Alongside this, Vicar Lane has also been identified as having sufficient space for limited numbers of this displaced demand which may specifically require closer parking to the existing New Beetwell Street MSCP location. In summary, New Beetwell Street MSCP and the Spire neighbourhood car parks (Albion Road, St Mary’s Gate, Spa Lane, Hollis Lane and Derbyshire Times) are particularly recommended for redevelopment. Under a no growth scenario this is estimated to leave 116 spaces available across the town centre car park network at peak times, with the core growth scenario there would be a 20-space shortfall and with a high growth scenario there would be a 75-space shortfall. However, considering CBC’s declaration of a climate emergency and commitments to carbon neutrality, investments in encouraging mode shift to more sustainable modes of transport may result in the estimated shortfall not materialising as demand for car parking reduces with an increase in active travel and public transport use.

This report outlines the significant potential for the authority’s car park sites to produce energy through solar PVs. These canopies would allow the authority to produce some of the load required for future EV charging points along with giving the option for capturing any surplus in battery storage. This additional energy will allow CBC to utilise some of the excess to power street lighting etc. This is an additional income stream that could be explored as part of a car park regeneration whilst retaining the function of the site as a car park. It is recommended that CBC explore a further study on potential electricity generation from solar PVs on CBC car park assets and an assessment of the potential income generation from solar canopy installation.

5.2 Electric Vehicle Charging Provision

There is a high level of uncertainty around future EV charging demand, with estimates for peak daily demand for chargers in the CBC-owned town centre car parks ranging from approximately 35 to 230, depending on EV uptake and changing consumer patterns of charging behaviour. The charger types that are in highest demand also vary based on different behavioural scenarios. This means that any future approach would need to be capable of adaptation to trends around emerging EV uptake, charging behaviour and government policies including subsidies. A suggested approach would initially include implementing a mix of charger types at car parks across the town centre. In the future, the programme would be shaped by government policies, including subsidies, and changing patterns of demand. The lowest-case scenario suggests a minimum CBC EV charging provision of 35 chargers by 2035 which would require an increase of 12 chargers on CBC car park sites. Exploration of this minimum initial increase is recommended. It is recommended to carry out market engagement with private sector charger operators to gauge the appetite for further roll out of chargers in order to mitigate scenario risk to CBC.

An alternative approach would be to tailor EV charging provision in the town centre to the match the prevailing local use cases around each of the car parks, given that the varying speeds of EV charging are best suited to different lengths of stay. This also creates a potential role for Chesterfield to encourage certain uses of the town centre by providing the speed/s of EV charging best suited to the desired use case- for example, attracting commuters of longer-stay leisure users through the provision of slow and fast chargers, or high-

street style quick shopping trips by providing rapid and ultra-rapid charging at car parks close to these facilities.

Under all scenarios considered, EV charging demand continues to grow after 2035 and so there is likely to be a need to continue to increase EV charging provision into the late 2030s or the 2040s. Continued regular market testing for EV charger operator interest is recommended.

5.3 Climate resilience steps

Research carried out by Greener Transport Solutions estimates a 20-27% reduction in car journeys by 2030 will be necessary to meet net zero ambitions. Table 22 outlines council-owned car parking supply to satisfy peak demand should car parking use fall in line with this net-zero reduction in car journeys.

Table 22: Council car parking spaces to achieve net-zero

Year	Overall Car Parking Spaces
2023	1,562
2024	1,502
2025	1,442
2026	1,381
2027	1,321
2028	1,261
2029	1,201
2030	1,140

	Current Year (2023)	Future Demand			
		Low Case (2035)	Core Scenario (2035)	High Case (2035)	Climate Resilient (2030)
Estimated Peak Demand	1,479	1,479	1,615	1,670	1,140
Parking Supply (2023)	2,311				
Less Regeneration Sites:					
New Beetwell Street	1,849				
Albion Road	2,281				
St Mary's Gate	2,245				
Spa Lane & Hollis Lane	2,217				
Derbyshire Times	2,256				
Spaces Remaining After Removal of All Regeneration Sites	1,601				
Excess Capacity After Removal of All Regeneration Sites (Shortfall if negative)	116	116	-20	-75	461

Table 23: Summary table of future parking demand and supply under scenarios

In summary, the future NTEM demand core scenario results in a shortfall in car parking spaces against demand, in 2035, of 20 spaces. However, in order for the borough to be on track to achieve its climate change goals, demand would need to reduce on parking spaces (through promotion and investment into more sustainable modes of transport) such that there would be a 461-space excess in supply by 2030 when compared with demand. It is therefore recommended that CBC approach future car parking demand planning via a holistic attitude to increased and sustained investment in public transport and active travel infrastructure.

5.3.1 Car park greening

Undertaking landscaping opportunities at the car parking sites will result in improvements to air quality, surface water flooding and water quality, biodiversity and microclimates as well as providing opportunities for renewable energy generation, carbon sequestration and habitat creation. In terms of social impacts landscaping will also improve health and well-being, increase social interactions whilst providing identity and a sense of place and connect people to nature. The selection of landscaping interventions explored in the landscaping opportunities sketchbook should be assessed for suitability for each council-owned car parking site and applied appropriately. An extract of this, showing a potential scheme for Scoresby Street, is shown in Figure 18.



Figure 18: Exploration of landscape interventions at Soresby Street Car Park

Implementing sustainable urban drainage interventions alongside tree / meadow / hedge plantings will support the council’s climate resilience ambitions and protect car park assets and visitors to the town centre from flood risk and heat island effect from the high levels of asphalt in the car park sites. Implementing seating, use of sustainable materials, improved lighting, opportunities for public art, opportunities for interpretation and overall beautifying of car park sites will generate a sense of place and provide a gateway to the town centre for visitors arriving by car. There is also an opportunity to boost uptake of sustainable travel modes to the town centre by providing high quality bike and e-scooter storage and hire points at existing car park sites. This would further mitigate any impact of car park site regeneration and encourage mode shift. It is recommended that funding sources for car park greening are identified and preliminary cost estimations are undertaken. It is also recommended that a further review of the integration of a landscape strategy with a strategy for solar power generation is undertaken to ensure the combination of both opportunities act cohesively, e.g. so that shade associated with solar canopies does not negatively impact greening and plantings.

Appendix A

Council-owned Car Park Occupancy Analysis

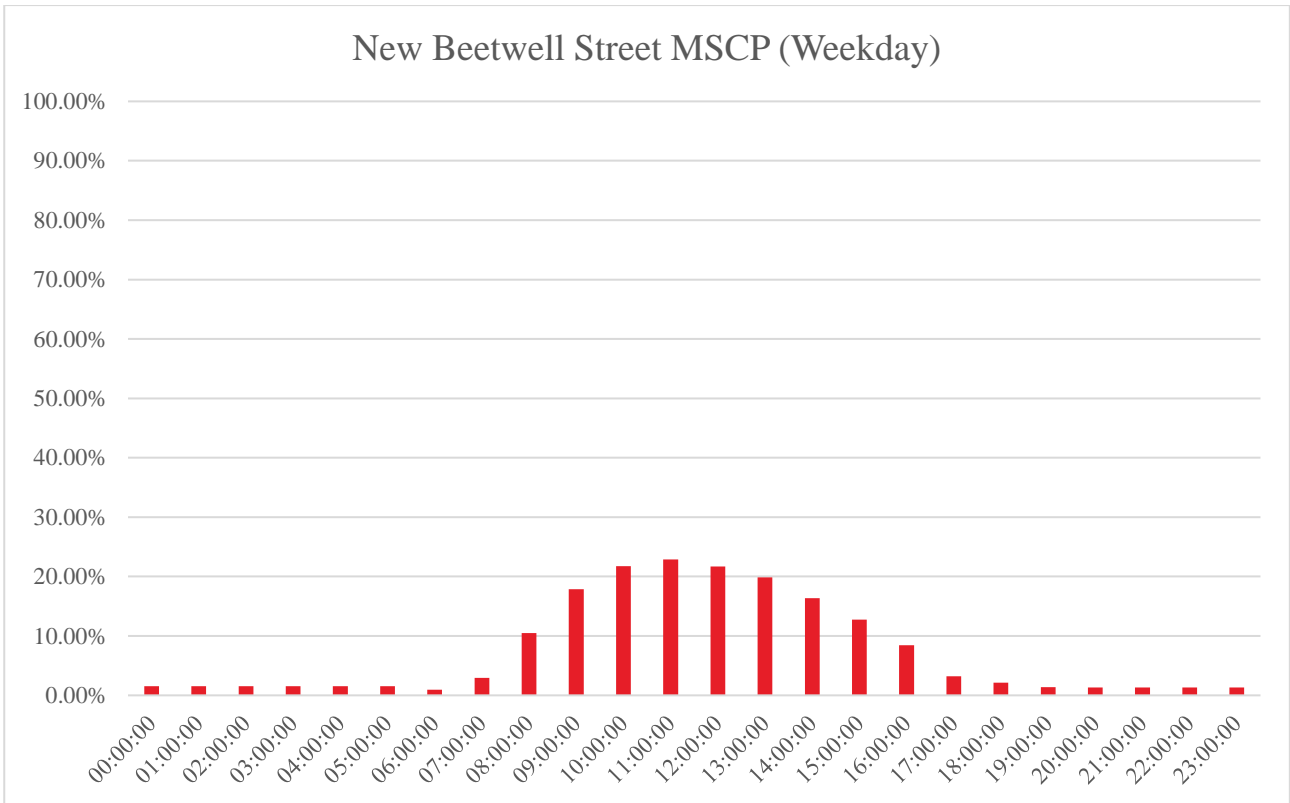


Figure 19: Average weekday occupancy at New Beetwell Street MSCP

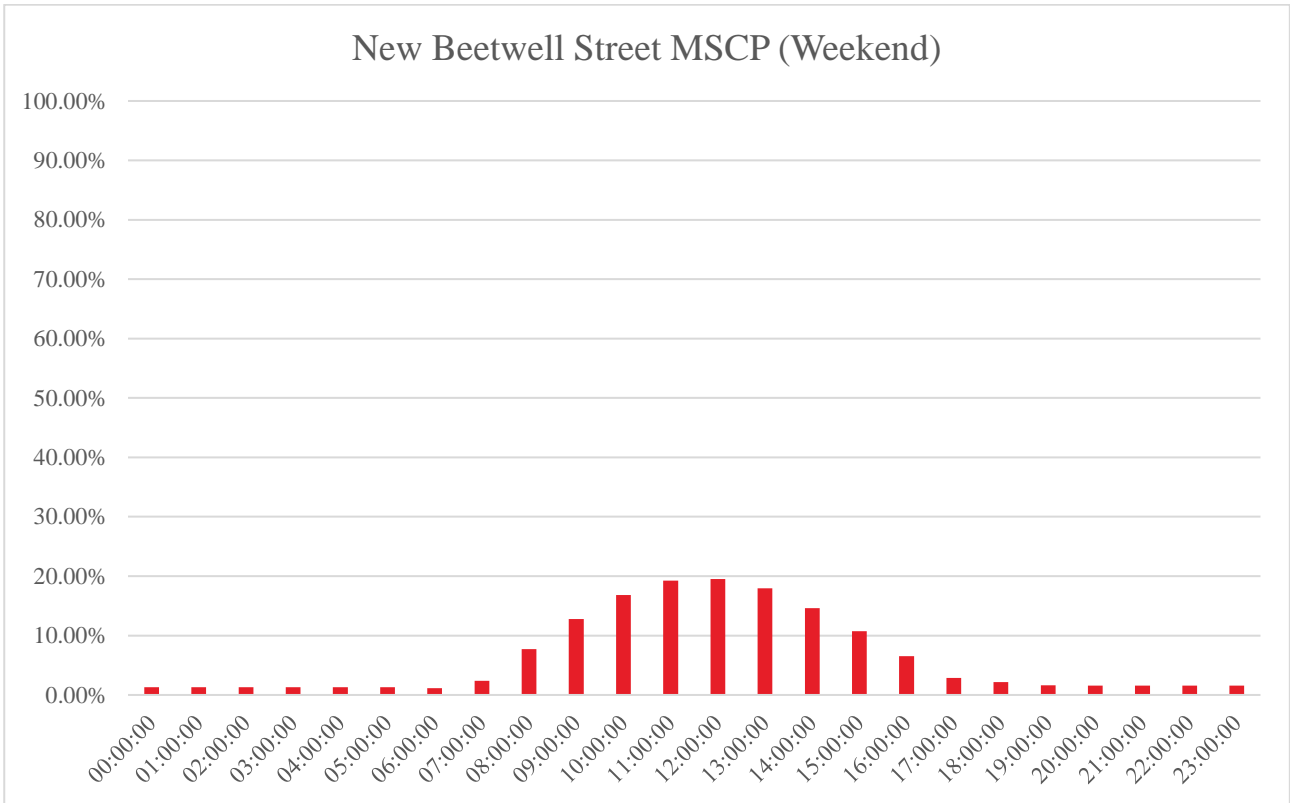


Figure 20: Average weekend occupancy at New Beetwell Street MSCP

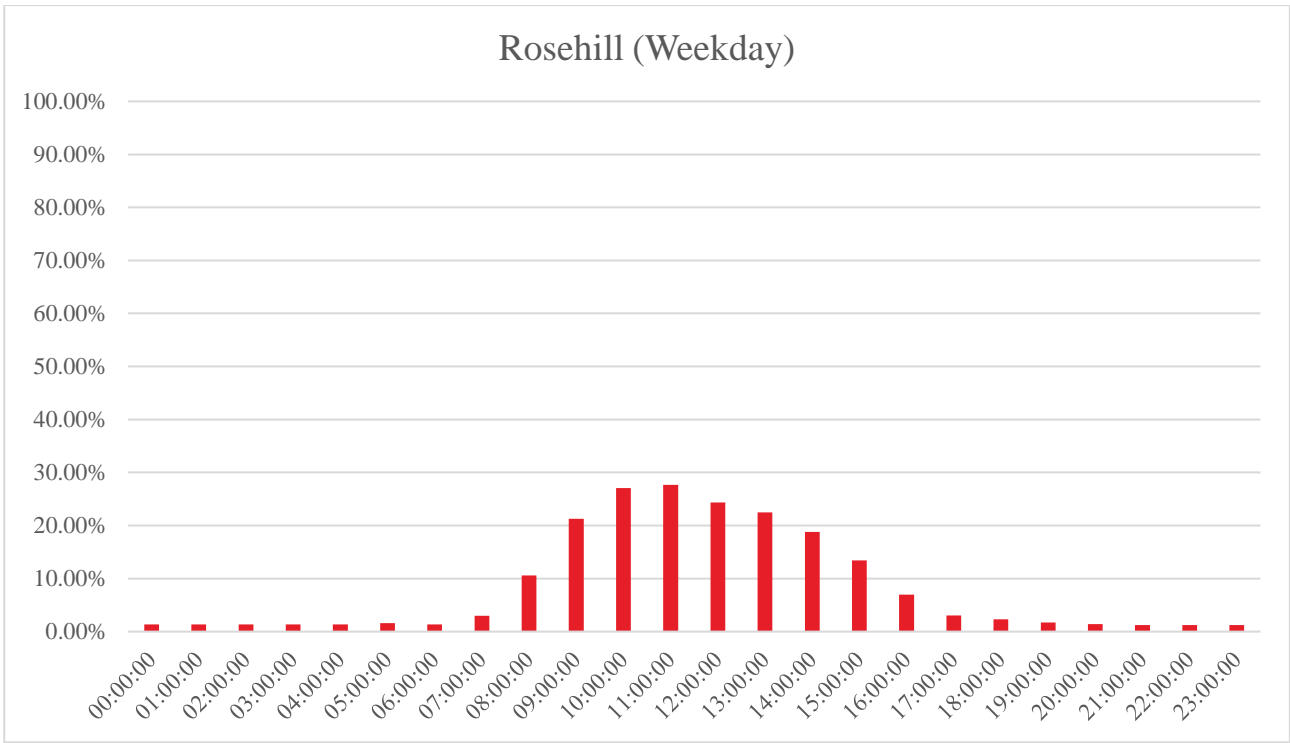


Figure 21: Average weekday occupancy at Rosehill

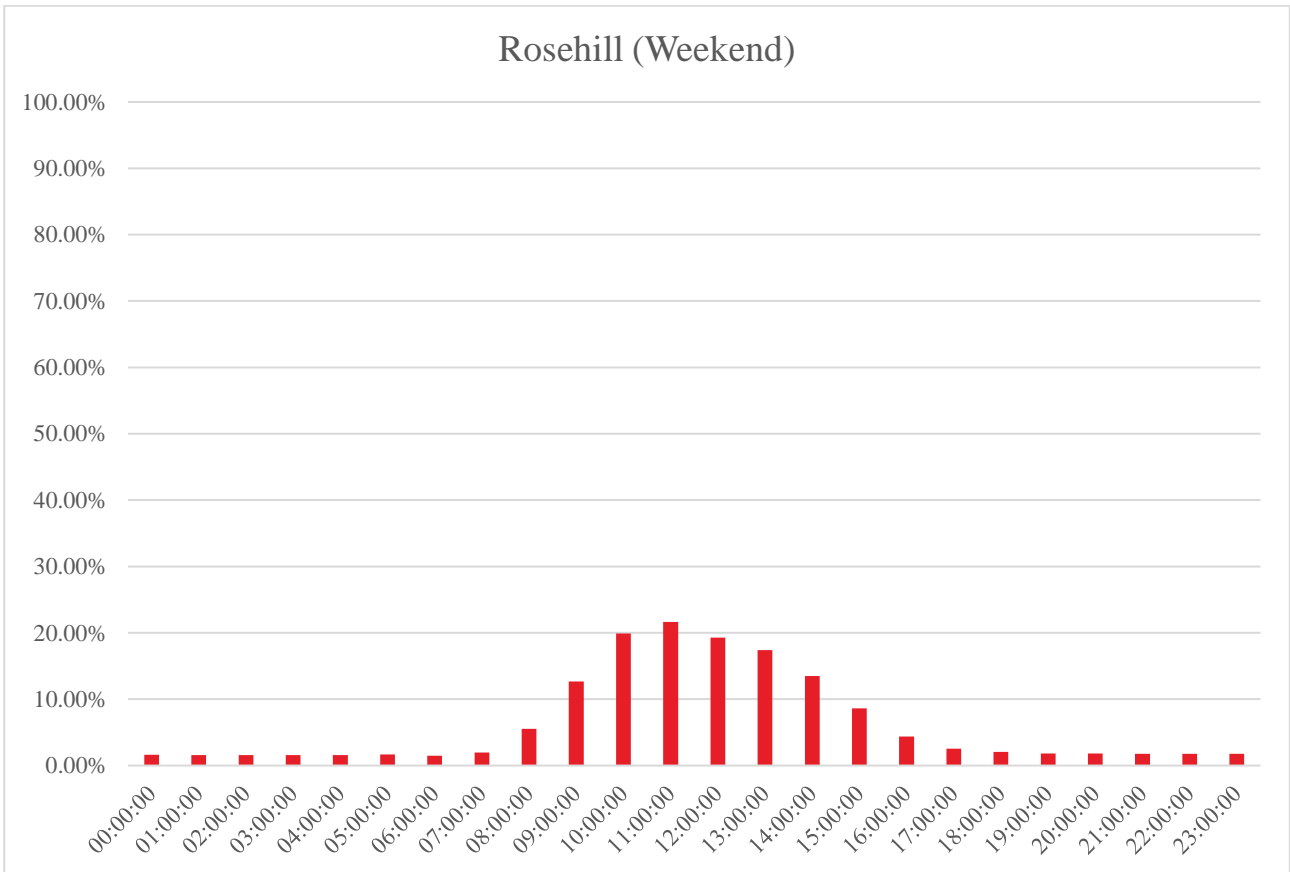


Figure 22: Average weekend occupancy at Rosehill



Figure 23: Average weekday occupancy at Soresby Street



Figure 24: Average weekend occupancy at Soresby Street

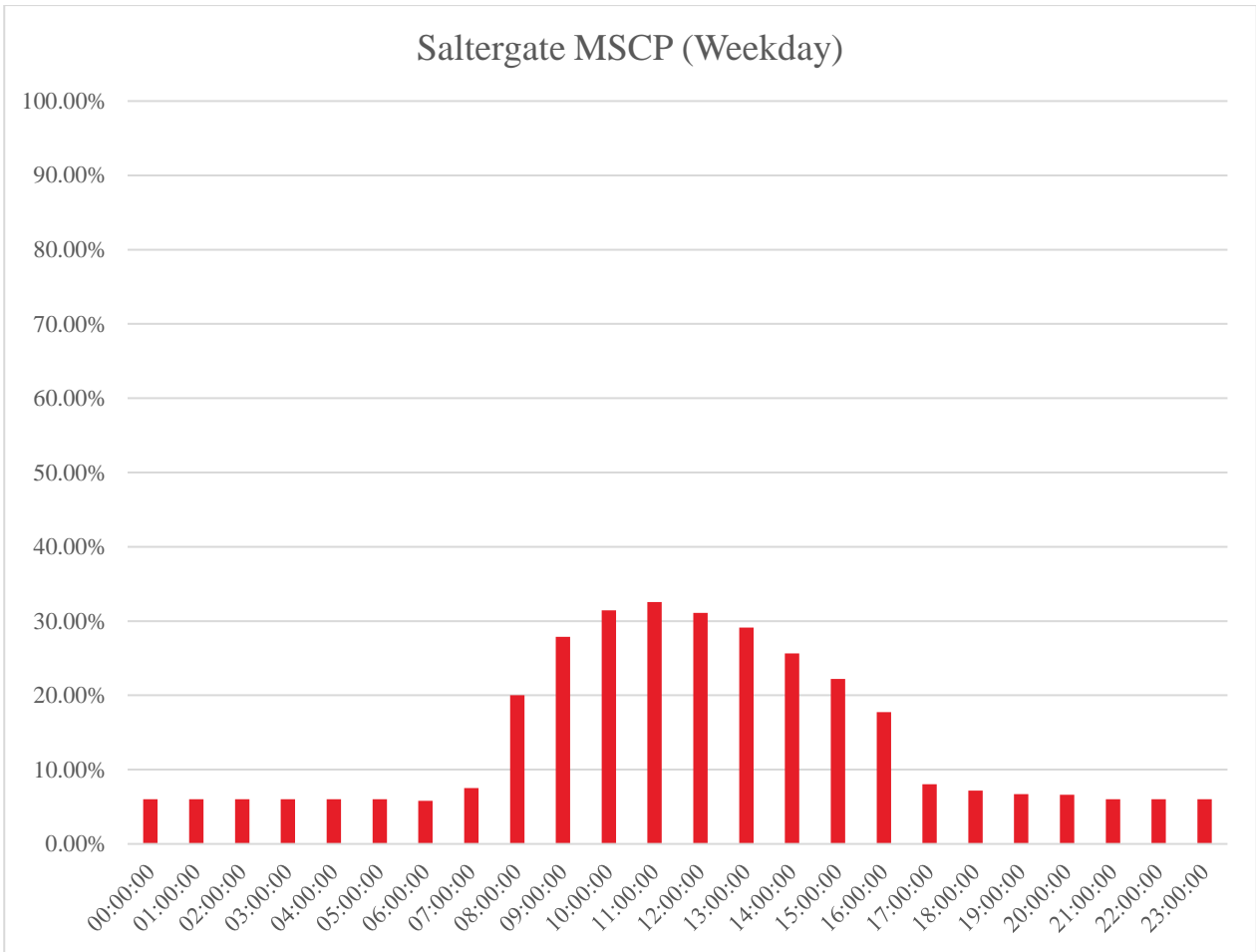


Figure 25: Average weekday occupancy at Saltergate MSCP

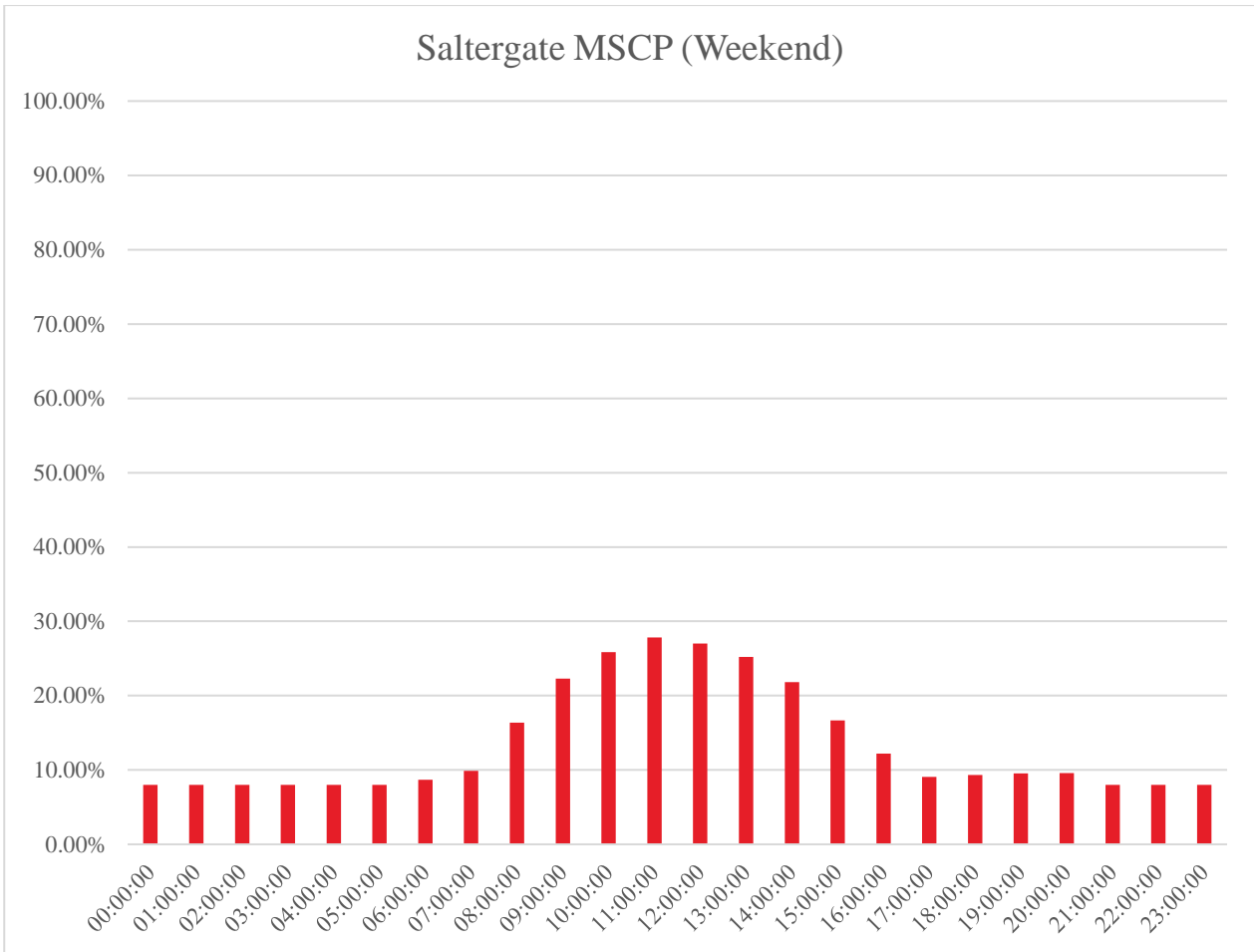


Figure 26: Average weekend occupancy at Saltergate MSCP

Appendix B

Private Car Park Data Analysis

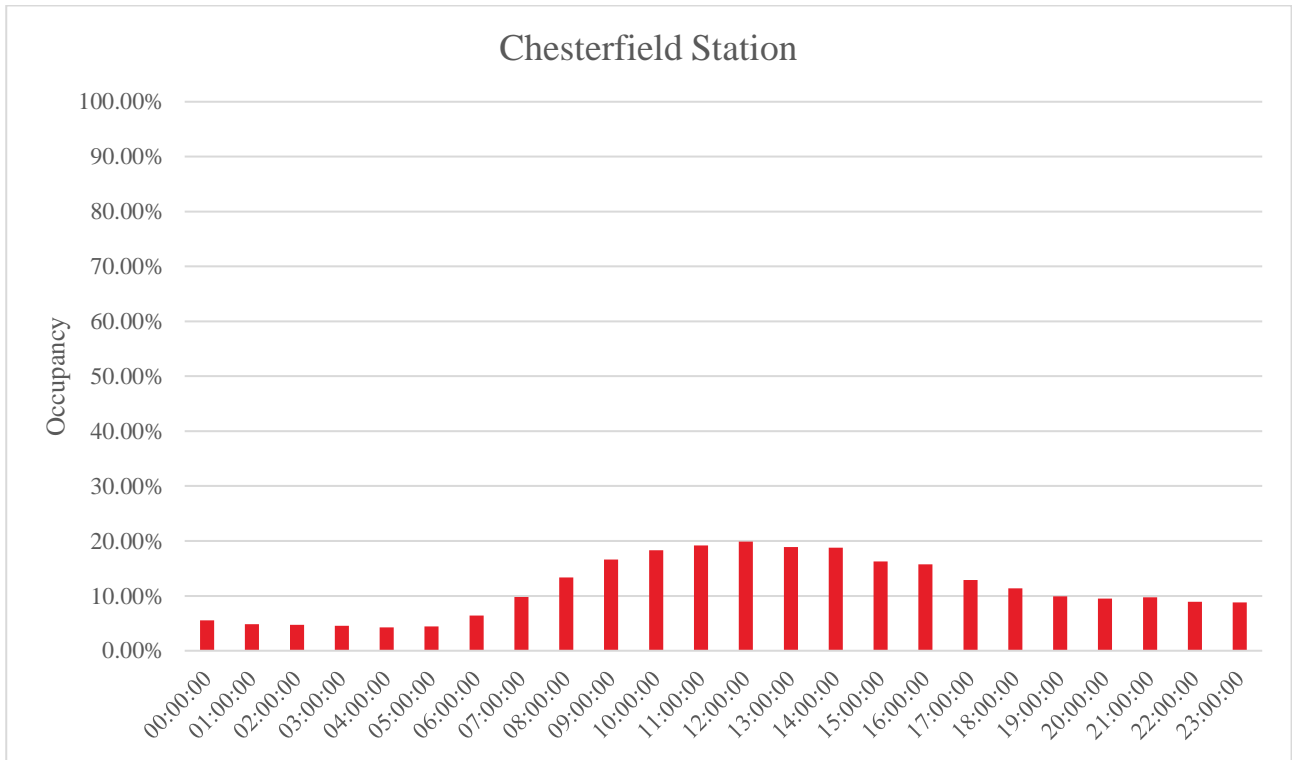


Figure 27: Average daily occupancy at Chesterfield Station

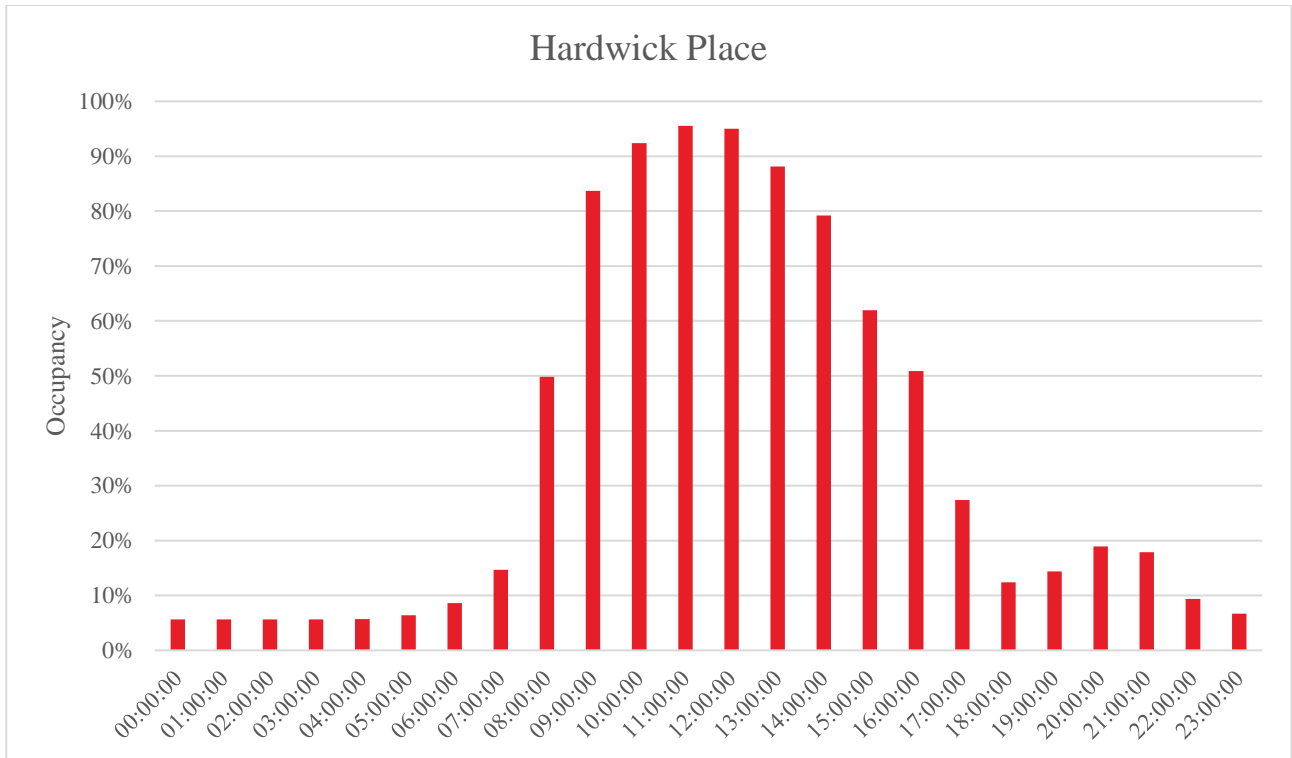


Figure 28: Average daily occupancy at Hardwick Place

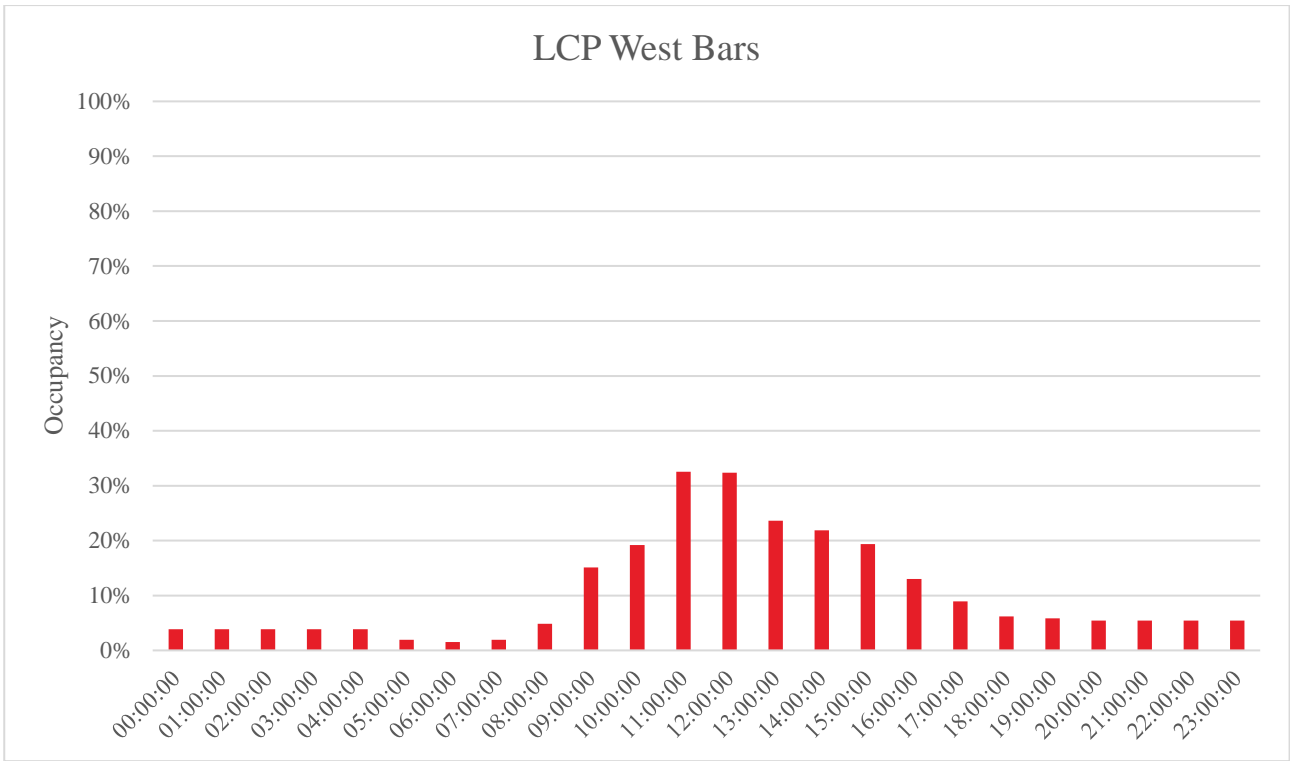


Figure 29: Average daily occupancy at LCP West Bars

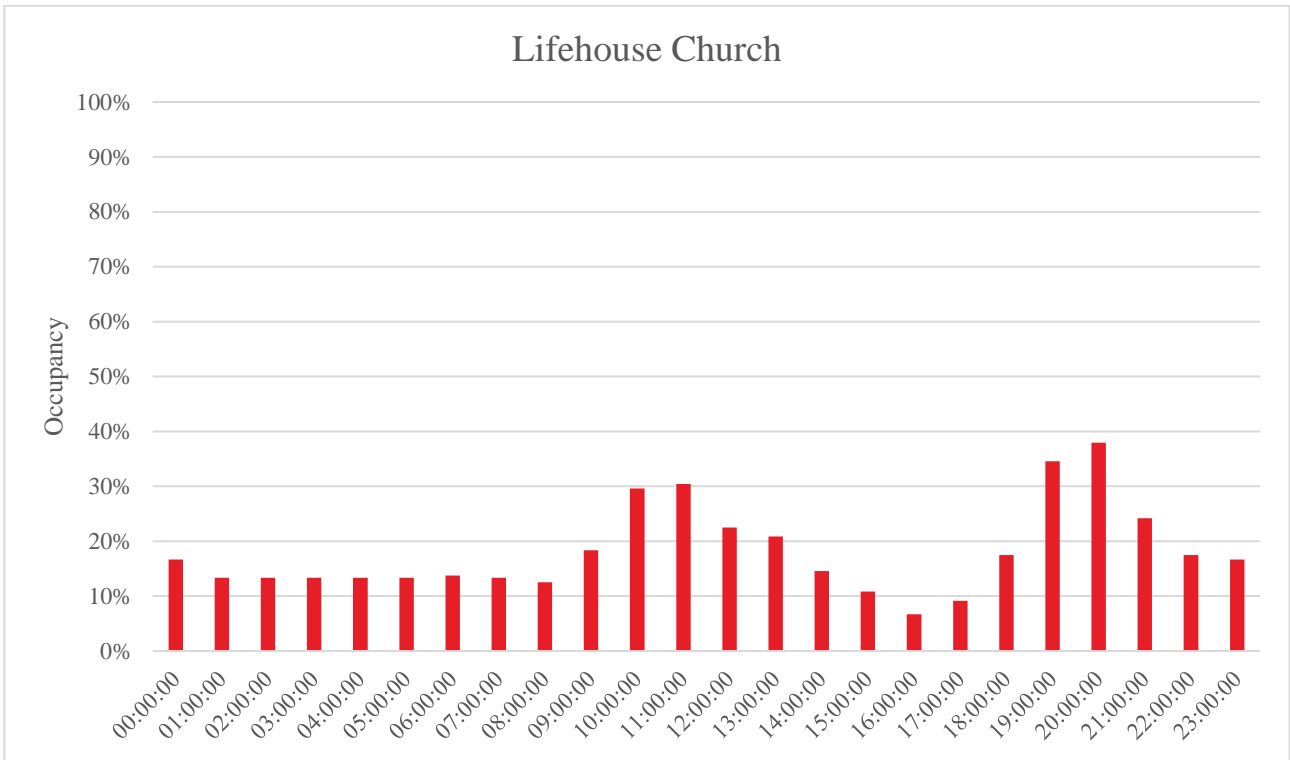


Figure 30: Average daily occupancy at Lifehouse Church

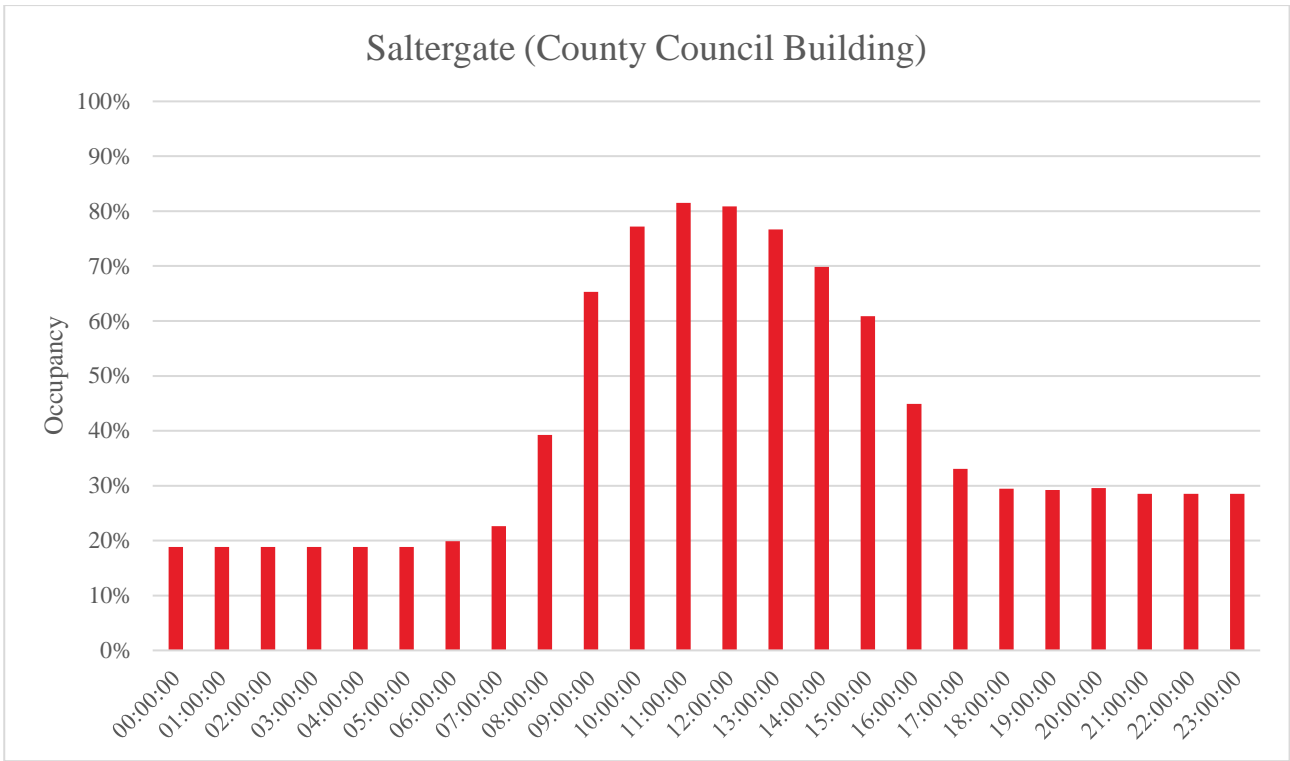


Figure 31: Average daily occupancy at Saltergate (County Council Building)

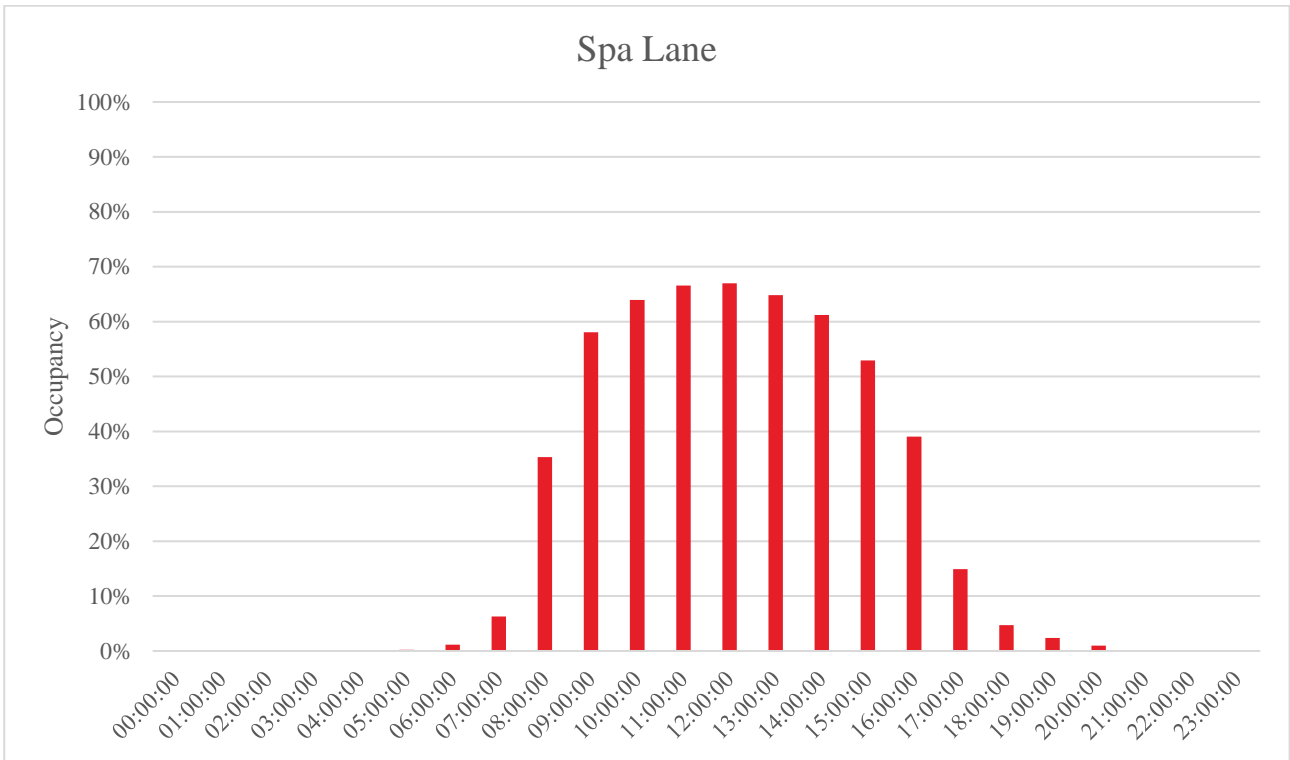


Figure 32: Average daily occupancy at Spa Lane

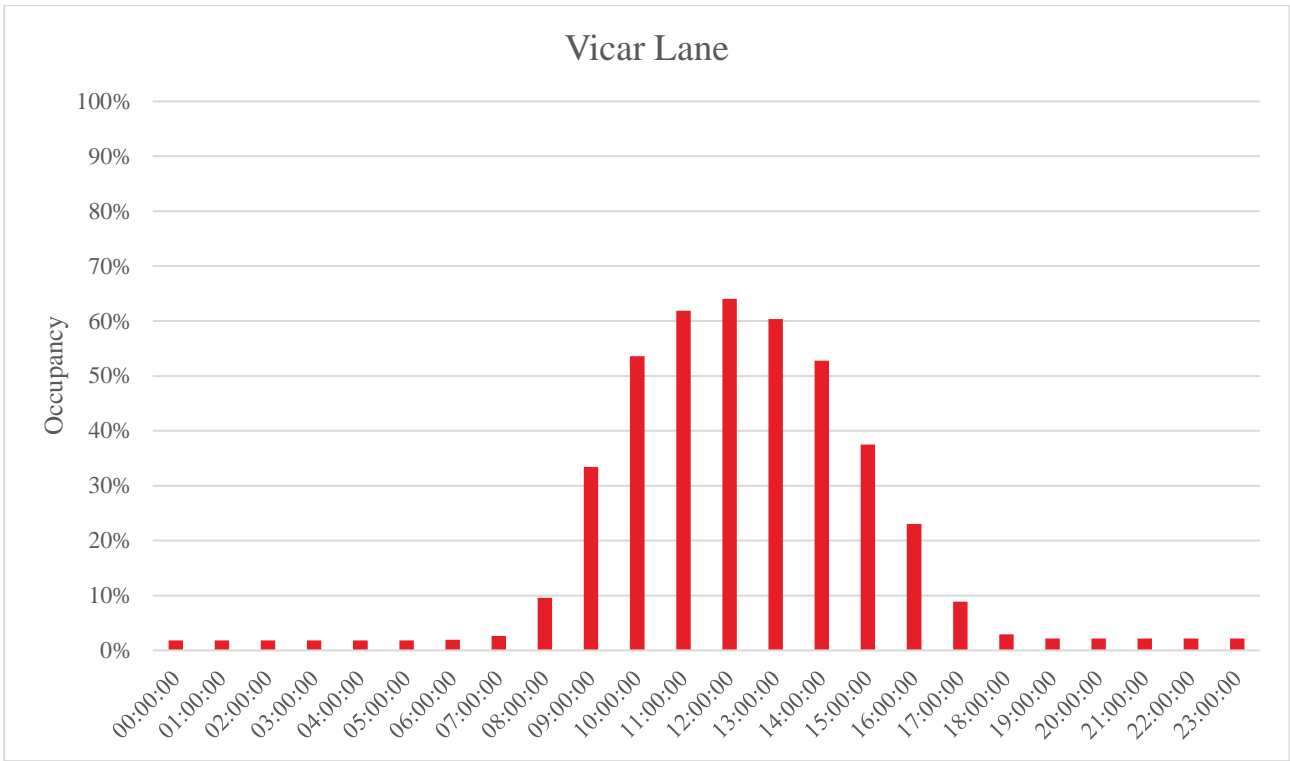


Figure 33: Average daily occupancy at Vicar Lane

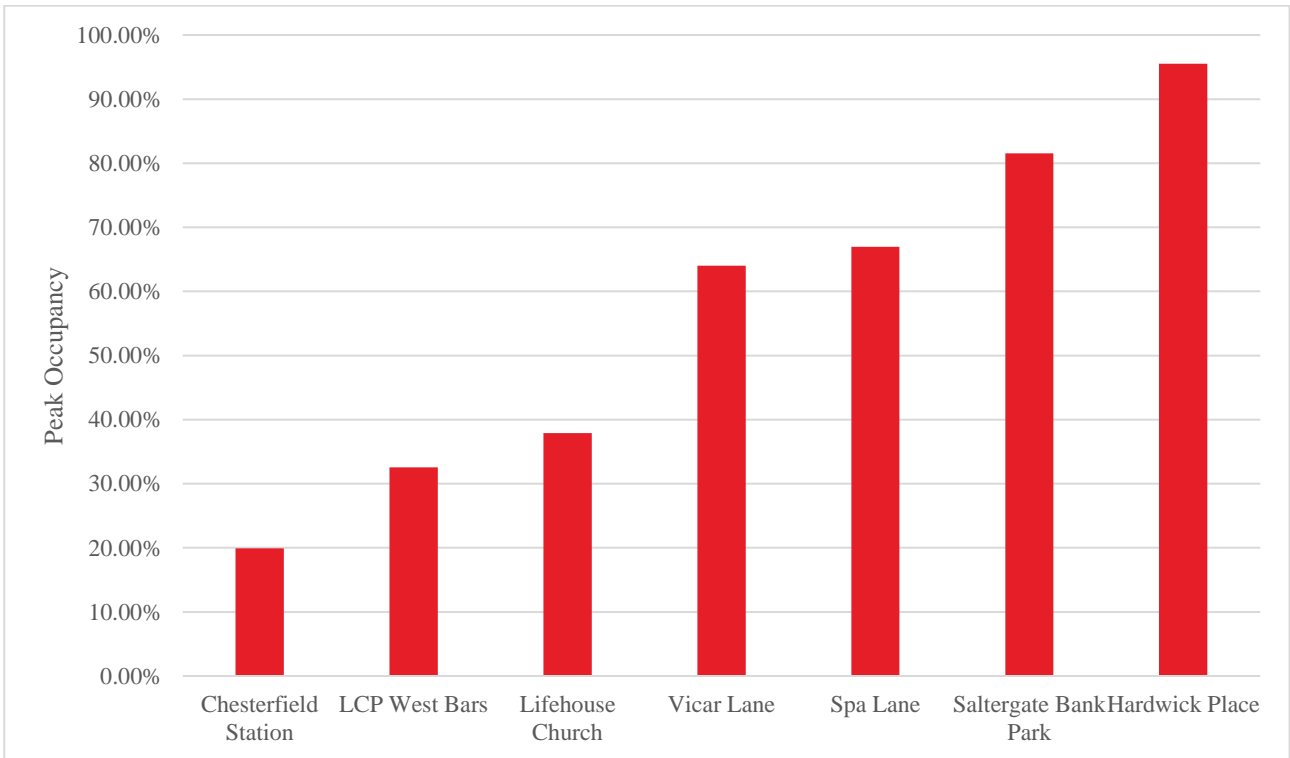


Figure 34: Peak occupancies recorded at private car parks

Appendix C

Indicative Costs

293767-00/LS **Chesterfield Parking Strategy - Landscape Indicative Costings**
06/08/2023

Notes

Please note prices are high level and indicative only. They are based on Spons External Works and Landscape Price Book 2023 and other guidance.

Detail of exact items costed below is for reference only and does not demonstrate recommended design - Detailed design required for all interventions.

Does not include prelims, site set up, plant hire etc.

Approvals costs and associated fees where required are not included.

Site clearance, surface prep costs are not included as these will vary significantly depending on where a provision is being installed and what is there currently.

Intervention number	Intervention (incl. description of items costed)	Unit	Cost
1	Rain gardens/ swales		
	Breaking out existing hardstanding; excavating trench down to depth (not exceeding 1.00m); disposal of inert arising off-site and discposal of hardstanding; providing support to opposing faces of excavation- timber (distance between faces not exceeding 500mm). Drainage layer assumed to be gravel, geotextile layer. Filter medium assumed sandy loam and half battered kerb straight or curved.	per m2	£290
	The soft landscape comprises 100% planting; planting at 400mm ccs – 2–3 litre plants.	per 100m2	£9,800
		per m2 total	£388
2	Tree planting		
	Excavate tree pit deep by machine; fork over bottom of pit; plant rootballed tree using telehandler where necessary; backfill with excavated material, incorporating Melcourt Topgrow bark/manure mixture at 1 m3per 3m3 of soil; Platipus underground guying system; tree pits 1500x1500x1500mm deep inclusive of Platimats; excavated material not backfilled to treepit spread to surrounding area 16–18 cm girth; PC £110.00	each	£470

	Extra to the above for imported topsoil moved 25 m from tipping area and disposal off site of excavated material.		
	Tree pits 1500x1500x1500mm deep 16–18 cm girth	each	£345
		per tree total	£815
3	Meadow planting		
	Topsoil stripping for wild flower planting. Stripping to subsoil layer 300m deep spreading locally	per m2	£3.80
	Cultivation and preparation of seedbeds for wildflower meadows Cultivate stripped, filled or existing surface prior to application of herbicides and leave fallow for seedbank eradication period; by hand drawn rotavator including hand raking, and handgrading, to medium tilth	per 100m2	£27.29
	Seeding to wildflower meadows; Spreading of selected wildflower seed to manufacturers specifications; by pedestrian drawn seeder DLF Seeds Ltd; Pro Flora 8 Old English Country Meadow Mix; 5g/m2	per 100m2	£30.09
		per m2 total	£4.37
4	Hedge planting		
	Readyhedge Ltd; Fully preformed hedge planting excavate trench by machine 700mm wide x 500mm deep; add compost at 100 mm/m2 mixed to excavated material; plant mature hedge plants; backfill with excavated material and compost; allow for disposal of 50% of excavated material to spoil heaps 50m distant		
	Beech or hornbeam hedging 1.75m x 400 mm wide at 500 mm centres		
		per m	£100
5	Option 1 - Permeable/ porous paving		
	Excavate 450mm and prepare base of 150mm Type 3 open; work to falls, crossfalls and cambers not exceeding 15° mark out car parking bays 5.0 x 2.4m with thermoplastic road paint; surfaces all mechanically laid; edgings not included		
	Conservation Piora – Silver Grey 200x400x65 mm		
		per m2	£120
	option 2 - Green surfacing		

	Grass Concrete Grasscrete in situ continuously reinforced cellular surfacing; fill with topsoil and fertilizer at 35 g/m ² ; seed with dwarf rye grass at 35 g/m ² ; excludes marking GC1; 100mm thick for cars and light traffic; per bay; 5.0×2.4 m		
		each parking bay	£1,275
6	Benches and seating		
	In grassed area excavate for base 2500 × 1575 mm and lay 100 mm hardcore, 100mm concrete, brick pavers in stack bond bedded in 25mm cement: lime: sand mortar; supply and fix where shown on drawing proprietary seat, hardwood slats on black powder coated steel frame, bolted down with 4 nr 24 × 90mm recessed hex-head stainless steel anchor bolts set into concrete		
		set	£2,150
7	Food growing		
	Container planting; fill with 50mm shingle and cover with geofabric; fill with screened topsoil incorporating 25% Topgrow compost and Enmag Planters 1.00m deep 1.00m dia. × 1.00m deep Does not include seeding or vegetation.		
		each	£85
9	Cycle stand		
	Supply and fix cycle stand 1250 m × 550mm of 60.3mm black powder coated hollow steel sections, one-piece with rounded top corners; set 250mm into paving		
		each	£570
10	Canopy		
	Pergolas; construct timber pergola; posts 150×150mm×2.40m finished height in 600mm deep minimum concrete pits; beams of 200×50mm × 2.00m wide; fixed to posts with dowels; rafters 200×38mm notched to beams; inclusive of all mechanical excavation and disposal off site Pergola 3.00m wide in green oak; posts at 1.50m centres rafters at 600mm centres		
		each	£690
11	Green/ living wall		

Living wall; Scotscape Ltd; design and installation of planted modules with automatic irrigation systems.

Does not include pricing for connections to drainage outlets, water storage system (or connection to water mains), water treatment systems (if storage needed) and any associated costs/approvals it would require. Nor does overall price include prelims/design costs or maintenance (which would be in the region of £5500 per year).

Fabric based systems; indicative area rates as shown

Wall 50m2

per m2

£600

Appendix D

Regeneration Policy Review

Policy Number	Policy Wording
CLP3 Built Up Area	<p>Planning permission will be granted for residential development on the sites allocated on the Policies Map and as set out in Table 4, provided they accord with other relevant policies of the Local Plan.</p> <p>Outside of the built-up area (as set out on the Policies Map), and subject to other relevant policies of the Local Plan, new residential development on sites not allocated in Table 4 will only be permitted where:</p> <ul style="list-style-type: none"> a) The development can demonstrate that it would have reasonable access to a range of key services as set out in Policy CLP2; and b) It re-uses redundant or disused buildings and enhances their immediate setting; or c) It is for the sub-division of an existing residential dwelling; or d) It is for the redevelopment of previously developed land in a manner that would not harm the intrinsic positive character of the countryside; or e) It represents the optimal viable use of a heritage asset or would be appropriate enabling development to secure the future of the heritage asset; or f) It meets a specific demonstrable housing need for a rural worker; or g) It is of exceptional quality of design quality, in that it: <ul style="list-style-type: none"> i. is truly outstanding or innovative, reflecting the highest standards in architecture, and would help to raise standards of design more generally in rural areas; and ii. would significantly enhance its immediate setting, and be sensitive to the defining characteristics of the local area.
CLP8 Vitality and Viability of centres	<p>Role of centres</p> <p>The Council will support the role of the town, district, local service centres and local centres in providing shops and local services in safe, accessible and sustainable locations. New development within centres shown on the Policies Map should make a positive contribution to the centre's vitality and viability and be of an appropriate scale. To ensure the vibrancy, inclusiveness and economic activity of the borough's centres, main town centre uses including health, leisure, entertainment, community facilities, sports, offices, art, food and drink, cultural and tourism facilities will be supported. Within centres and Chesterfield Town Centre Primary Shopping Area (PSA) planning permission will normally be granted for A1 retail uses. For main town centre uses other than A1 retail, consideration will be given to the extent to which proposals accord with criteria a) to e) below:</p> <ul style="list-style-type: none"> a) have a positive impact on vitality and/or viability; b) provide active ground floor uses; c) cater for a wide public through diversity of leisure and cultural attractions and events; d) contribute to an appropriate mix of licensed premises; and e) contribute to efforts to tackle vacant, under-used and derelict buildings within centres, particularly in historic buildings. Within Secondary shopping areas of Chesterfield Town Centre planning permission will normally be granted for any main town centre uses.

	<p>Residential uses (C3) will be permitted at first floor level and above (with the exception of suitable provision for access) and on appropriate redevelopment sites where it would not undermine the vitality of the centre. The Council will support the temporary occupation of empty buildings and cleared sites by creative industries and cultural and community organisations where they contribute to regeneration and enhance the character of the area. Proposals for comprehensive redevelopment of a centre or part of a centre will be considered where the proposals can demonstrate the community benefits of redevelopment and justify any loss of retail facilities. The provision of new local centres may be considered where a need arises.</p>
<p>CLP21 Town Centre Historic Core</p>	<p>In assessing the impact of a proposed development on the significance of a designated heritage asset, the council will give great weight to the conservation of designated heritage assets and their setting and seek to enhance them wherever possible.</p> <p>In order to ensure that new development conserves or enhances the significance of designated and non-designated heritage assets and their settings, the council will:</p> <ul style="list-style-type: none"> a) apply a presumption against development that would unacceptably detract from views of St Mary’s Church (the Crooked Spire) by virtue of its height, location, bulk or design; b) protect the significance of designated heritage assets and their settings including Conservation Areas, Listed Buildings, Scheduled Monuments and Registered Parks and Gardens; c) use Conservation Area Appraisals and associated Management Plans to ensure the conservation or enhancement of the individual character of each of the borough’s Conservation Areas; d) identify and, where appropriate, protect important archaeological sites and historic environment features; e) identify and, where appropriate, protect non-designated heritage assets of local significance, set out in and referred to as the Local List; f) enhance the character and setting of Queens Park, Chesterfield Market Place, the Hipper River Valley, Chesterfield Canal and locally important Historic Parks and Gardens. g) within the Town Centre Core and other areas of archaeological significance, require relevant development proposals to demonstrate appropriate consideration of archaeological impact. Where a development is likely to result in harm to, or a degree of loss of significance of designated heritage assets and/or their setting, planning applications should be accompanied by evidence that sets out: <ul style="list-style-type: none"> 1. a description of the significance of the affected assets and their setting and an assessment of the nature and degree of impact on this; 2. an evaluation of how harm or loss would be avoided, minimised or mitigated; and 3. a clear and convincing justification for the development and the resulting harm or loss. <p>Development that would result in substantial harm to or total loss of significance to a designated heritage asset will not be permitted unless:</p> <p>Either:</p> <ul style="list-style-type: none"> i) it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss; or all of the following apply: ii) the nature of the heritage asset prevents all reasonable uses of the site; <p>and</p>

	<p>iii) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation;</p> <p>and</p> <p>iv) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and</p> <p>v) the harm or loss is outweighed by the benefit of bringing the site back into use.</p> <p>The council will consider the use of measures including Article 4 directions and Local Development Orders where they are appropriate to ensure the conservation and enhancement of heritage assets.</p> <p>The council has a presumption in favour of retaining non-designated heritage assets on the Local List. Development that involves substantial harm or loss of</p> <p>a non-designated heritage asset will be assessed as part of a balanced judgment which considers:</p> <p>I. whether or not the asset is structurally unsound and poses a safety risk;</p> <p>II. the viability of repairing or maintaining the asset;</p> <p>III. whether or not alternative uses have been fully explored;</p> <p>IV. whether or not the proposal would have wider social, economic or environmental benefits as part of a master planned regeneration scheme. Where a proposal that involves unavoidable harm or loss of a non-designated heritage asset on the Local List meets the criteria above, the council will seek a replacement development which is of an equivalent standard of design to the non-designated heritage asset and where possible retains the features of the non-designated heritage asset.</p> <p>In the exceptional circumstances where loss or partial loss of designated or non-designated heritage asset is considered to be justified, the council will</p>
<p>CLP6 Economic Growth</p>	<p>Development should deliver sustainable economic growth by supporting existing jobs and businesses and delivering inward investment. Proposals that facilitate a mix of uses will be encouraged. Planning permission will be granted for new employment developments where they accord with the council’s overall spatial strategy as set out below:</p> <p>a) B1(a) Office development within and on the edge of existing town and district centres and at developments at Chesterfield Waterside and Markham Vale as set out in policies SS3, SS4 and SS5.</p> <p>b) B1(b&c) Light Industrial in locations within and close to existing town and district centres.</p> <p>c) B1(b&c) and B2 Industrial uses within Established Business Areas (as shown on the Policies Map) and at areas at Markham Vale, the Staveley and Rother Valley Corridor, and the Chatsworth Road Corridor.</p> <p>d) B8 uses at Markham Vale and the Staveley and Rother Valley Corridor. In other Established Business Areas, new B8 uses will be permitted where they would not have an unacceptable adverse impact as a result of traffic movements.</p> <p>Within Established Business Areas (as shown on the Policies Map) other business and industrial uses, not falling within the B1, B2 or B8 classes, and ‘B’ class uses outside of the criteria set out above will be considered based upon the locational criteria set out in policy CLP2, the suitability of the use for the location and the employment generation of the proposed use when compared to the existing or previous use, and will normally be permitted where they would otherwise not have a significant adverse impact upon the surrounding</p>

	<p>area. Where appropriate, conditions will be used to manage the future use of developments, including the restriction of future permitted development rights where these are appropriate to ensuring the viability and vitality of employment areas in the future. Proposals for farm and rural diversification developments, live/work units and rural businesses will be supported where they are appropriate to the character and scale of the area and otherwise meet the policies of the plan.</p> <p>Subject to policy CLP2, the redevelopment or change of use of existing business and industrial sites within Established Business Areas (as shown on the Policies Map) for non-employment uses will only be permitted where:</p> <ul style="list-style-type: none"> i. It would not lead to a quantitative and/or qualitative deficiency in the supply of available employment land; and ii. It would not inhibit existing or future business and industrial activity on adjacent sites. <p>Where appropriate, conditions will be used to manage the use of such developments.</p> <p>For all major development proposals, the council will seek to negotiate agreements with developers and occupiers covering recruitment, training and procurement to benefit the local economy and supply chain, so as to contribute to the sustainability of the borough and the surrounding area, both during construction and on a long-term basis.</p>
CLP17 Open Space	<p>Where proposed development would result in a need for new open space and outdoor sports facilities and/or exacerbate existing deficiencies in provision, development must contribute to public open space, sports facilities and play provision in accordance with the council’s adopted standards as set out in Appendix B of the Local Plan and in line with the following requirements:</p> <ul style="list-style-type: none"> a) on-site in a suitable location taking account of accessibility wherever possible; or b) where on site provision is not feasible or suitable, as a financial contribution to the creation of a new facility off-site or the upgrading and improvement of an existing facility, secured by planning obligation or CIL; or c) where new public open space is to be provided on site, as multifunctional, fit for purpose space that supports local communities health and wellbeing and activity levels and the ecological network. Contributions to off-site provision will be secured through CIL and/or S106 agreements as appropriate. On-site provision will be incorporated into development proposals with suitable management and maintenance arrangements secured through S106 agreements. Planning permission will not be granted for development which would have a negative impact on, or result in the loss of, open space, play provision and/or sports facilities unless: <ul style="list-style-type: none"> i. the site is clearly surplus to requirements and the land is not needed or is not suitable to meet a deficiency in a different type of open space provision; or ii. equivalent or better alternative open space provision in terms of quantity, quality and accessibility will be provided on a replacement site; or iii. the development is for alternative sports and/or recreational provision, the benefits of which clearly outweigh the loss of the current or former use.
SS1 Chesterfield Town Centre	<p>Subject to other relevant policies of the plan, the council will support planning applications that contribute towards:</p> <ul style="list-style-type: none"> a) protecting and enhancing the centre’s sub-regional and local role in providing housing, employment, services, leisure, cultural venues and retail; b) supporting the objectives of Chesterfield Town Centre Masterplan;

- c) economic development and community safety by providing a diverse range of uses including retail, office, community facilities, leisure and food and drink uses;
- d) conserving and enhancing the historic character of the centre and the role of the Historic Market and Market Hall;
- e) improving accessibility between the centre and surrounding areas, including Chesterfield Railway Station, Waterside, Queen’s Park, Chesterfield College and Ravenside Retail park;
- f) enhancing walking, cycling and public transport provision;
- g) maintaining the overall level of provision of public car parking; new offstreet car parking will usually only be permitted when justified through a transport assessment or travel plan;
- h) reducing through traffic.
- i) enhancing the range and quality of residential uses within Chesterfield town centre;
- j) undertaking appropriate assessment, evaluation and, if necessary, recording of archaeological remains within the Town Centre Historic Core (as set out on the Policies Map). Outside of the Town Centre Primary and Secondary Shopping Areas, as shown on the Policies Map and set out in policy CLP8, planning permission will not normally be granted for new retail uses (A1) other than small shops as set out in policy CLP9. Planning permission will normally be granted for other main town centre uses, including B1(a) offices, health and education uses subject to the other policies of this plan.

Northern Gateway

Land between Newbold Road/Holywell Street and Saltergate, as shown on the Policies Map, will be safeguarded for the future expansion of Chesterfield Town Centre. Within this area, planning permission will only be granted for proposals that enhance and support the centre’s sub regional role in providing housing, employment, services, leisure and retail and where they can demonstrate that they would not prejudice the future development of the site.

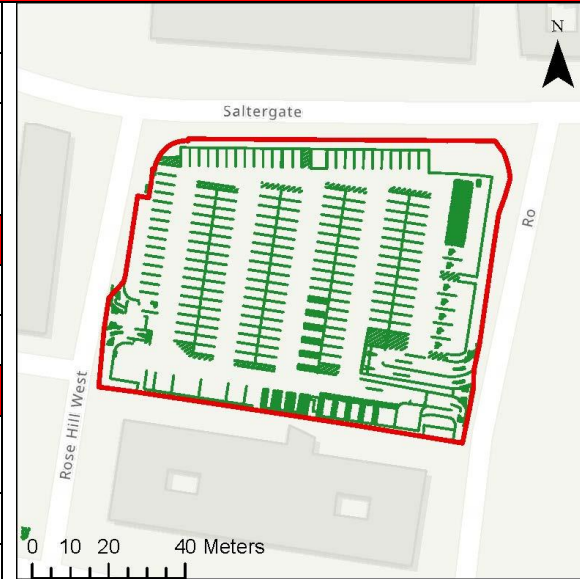
Spire Neighbourhood

Proposals will be supported for new residential development on land to the east of St Mary’s Gate and to the west of the A61 and to the north of Holywell Street and south of Brewery Street, subject to other relevant policies of the plan. Where development within this area results in the loss of public car parking, the effect of this on the viability of Chesterfield Town Centre should be assessed, and if necessary compensatory parking provided elsewhere within or closely related to Chesterfield Town Centre.

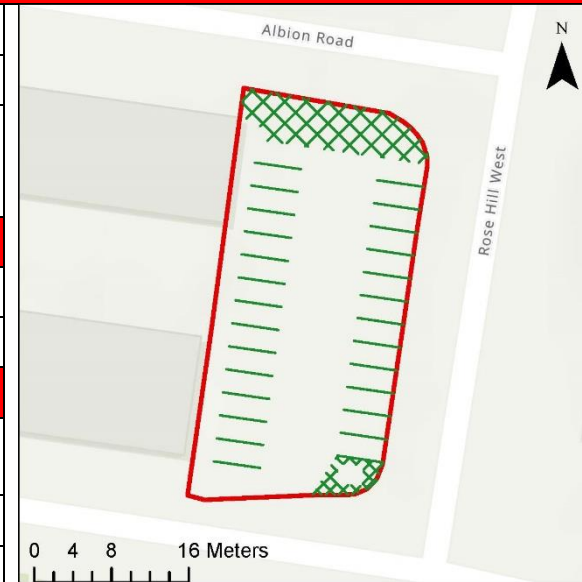
Appendix E

Car Park Site Regeneration Potential

Rose Hill				
Site Address:				
Site Area(ha):	1.7			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP8 Vitality and Viability of centres, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	16			
Solar Potential Generation in Mwh at 15% efficiency:	11			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	68			
Potential housing delivery at 50 dwellings per hectare:	85			
Potential housing delivery at 100 dwellings per hectare:	170			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	4,250	5,666	11,333	17,000
Two	8,500	11,333	22,666	34,000
Three	12,750	17,000	34,000	51,000
Conclusions:				
<p>The site is well placed within the town centre with access to a range of amenities. The site is one of the larger car parks that CBC has in its ownership and has the potential to generate a large amount of residential development or employment. The site sits within the SS1 Chesterfield Town Centre Local Plan policy area and development would accord with the town centre masterplan as outlined in SS1. The site would be suitable for both housing and economic regeneration with the potential to have a mix due to its location.</p>				



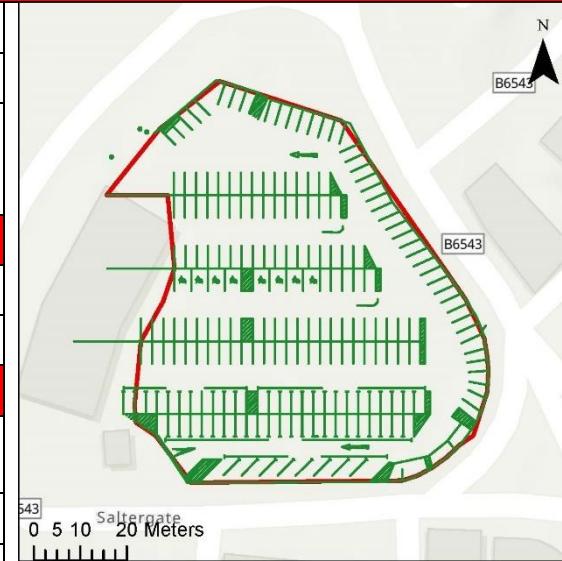
Albion Road				
Site Address:				
Site Area(ha):	0.2			
Local Plan policies impacting the site:	CLP3 Built Up Area,			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	2			
Solar Potential Generation in Mwh at 15% efficiency:	1			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	8			
Potential housing delivery at 50 dwellings per hectare:	10			
Potential housing delivery at 100 dwellings per hectare:	20			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	500	666	1,332	2,000
Two	1,000	1,332	2,664	4,000
Three	1,500	1,998	3,996	6,000
Conclusions:				
Development of the site is not fully assessed due to its small scale. Utilising the methodology set out in the 2018 Land Availability Assessment Stage 1 and 2a Site Assessment Criteria 2018 Methodology, the site is smaller than 0.25ha and is therefore deemed to be of a size that would not have a sufficient impact on housing supply to be allocated in the Local Plan. There may still be opportunity at this site for small scale development. However, given its proximity to other car parks (such as Rose Hill), a collective Local Plan allocation could be considered in the future.				



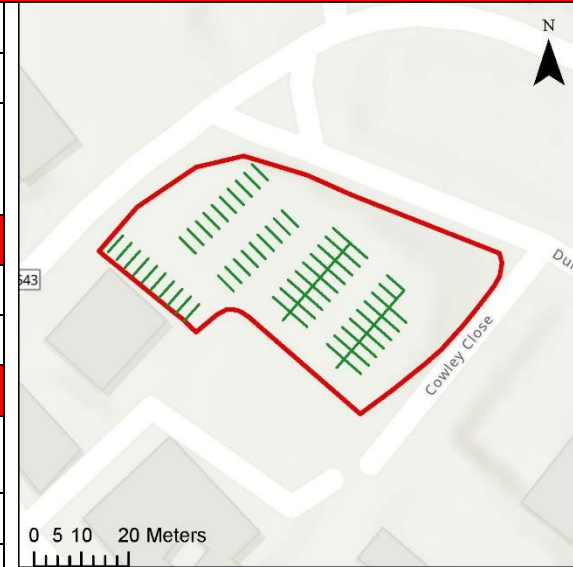
Soresby Stret				
Site Address:				
Site Area(ha):	1.9			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP8 Vitality and Viability of centres, CLP21 Town Centre Historic Core, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	16			
Solar Potential Generation in Mwh at 15% efficiency:	11			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	76			
Potential housing delivery at 50 dwellings per hectare:	95			
Potential housing delivery at 100 dwellings per hectare:	190			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	4,750	6,333	12,666	19000
Two	9,500	12,666	25,332	37,998
Three	14,250	18,999	37,998	56,997
Conclusion:				
Similarly to the Rose Hill site the site is well placed within the town centre with access to a range of amenities. The site is one of the larger carparks that CBC has in its ownership and has the potential to generate a large amount of residential development or employment. The site sits within the SS1 Chesterfield Town Centre Local Plan policy area and development would accord with the town centre masterplan as outlined in SS1. The ste would be suitable for both housing and economic regeneration with the potential to have a mix due to its location.				



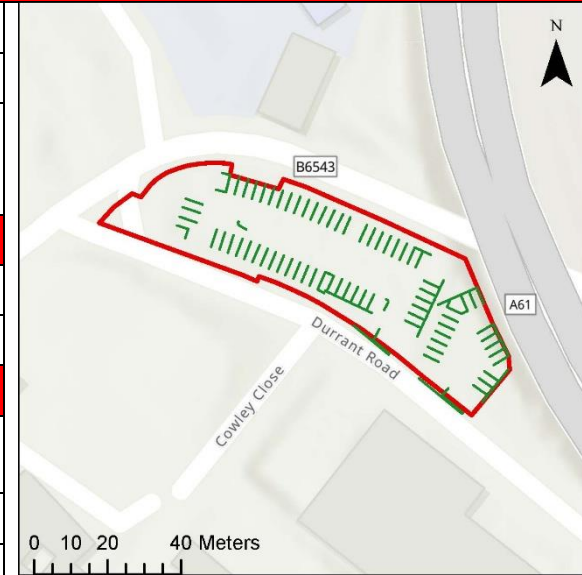
Holywell Cross				
Site Address:				
Site Area(ha):	1.2			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP8 Vitality and Viability of centres, CLP21 Town Centre Historic Core, Spire Neighbourhood Boundary, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	11			
Solar Potential Generation in Mwh at 15% efficiency:	7			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	48			
Potential housing delivery at 50 dwellings per hectare:	60			
Potential housing delivery at 100 dwellings per hectare:	120			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	3,000	4,000	8,000	12,000
Two	6,000	8,000	16,000	24,000
Three	9,000	12,000	24,000	36,000
Conclusion:				
This site has recently been redeveloped for an employment use. There is potential for the site to further accommodate redevelopment for both employment and residential uses though the site is constrained by the requirement of several local plan policies				



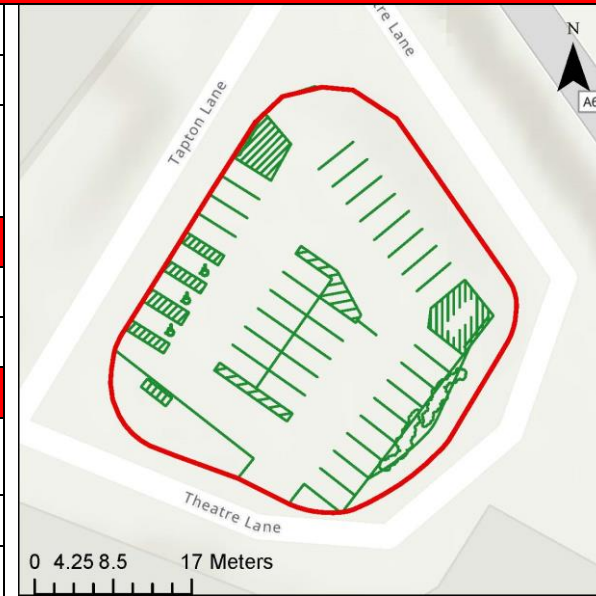
Devonshire Street Part 1				
Site Address:				
Site Area(ha):	0.6			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP8 Vitality and Viability of centres, CLP21 Town Centre Historic Core, Spire Neighbourhood Boundary, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	5			
Solar Potential Generation in Mwh at 15% efficiency:	3			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	24			
Potential housing delivery at 50 dwellings per hectare:	30			
Potential housing delivery at 100 dwellings per hectare:	60			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	1,500	2,000	4,000	6,000
Two	3,000	4,000	8,000	12,000
Three	4,500	6,000	12,000	18,000
Conclusion:				
This site is positioned to the northern edge of the town centre and has good connectivity to both the town centre and the towns train station. The site has the potential to be redeveloped for both residential and employment uses. The site is situated with a range of Local Plan policy areas but due to its location within the Spire Neighbourhood area it would be most suited for residential redevelopment.				



Durrant Road				
Site Address:				
Site Area(ha):	0.7			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP8 Vitality and Viability of centres, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	6			
Solar Potential Generation in Mwh at 15% efficiency:	4			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	28			
Potential housing delivery at 50 dwellings per hectare:	35			
Potential housing delivery at 100 dwellings per hectare:	70			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	1,750	2,333	4,667	7,000
Two	3,500	4,667	9,333	14,000
Three	5,250	7,000	14,001	21,000
Conclusion:				
Similarly to the Devonshire Street site, this site is positioned to the northern edge of the town centre and has good connectivity to both the town centre and the town's train station. The site has the potential to be redeveloped for both residential and employment uses. The site is situated with a range of Local Plan policy areas but due to its location within the Spire Neighbourhood area it would be most suited for residential redevelopment.				



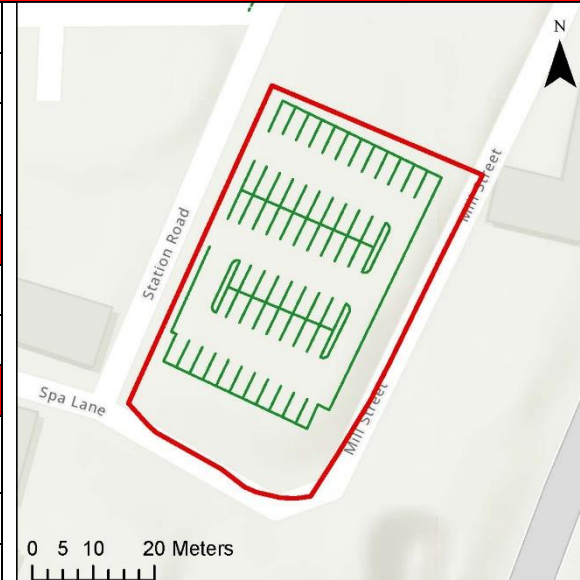
Theatre Lane				
Site Address:				
Site Area(ha):	0.3			
Local Plan policies impacting the site:	CLP3 Built Up Area, Spire Neighbourhood Boundary, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	2			
Solar Potential Generation in Mwh at 15% efficiency:	2			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	12			
Potential housing delivery at 50 dwellings per hectare:	15			
Potential housing delivery at 100 dwellings per hectare:	30			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	750	1,000	2,000	3,000
Two	1,500	2,000	4,000	6,000
Three	2,250	3,000	6,000	9,000
Conclusion:				
<p>This site is positioned to the northern eastern edge of the town centre and has fair connectivity to both the town centre and the town's train station. The site has the potential to be redeveloped for both residential and employment uses. The site is situated with a range of Local Plan policy areas but due to its location within the Spire Neighbourhood area it would be most suited for residential redevelopment, though it would require desiccation to be able to yield any substantial number of dwellings.</p>				



St Mary's Gate				
Site Address:				
Site Area(ha):	0.5			
Local Plan policies impacting the site:	CLP3 Built Up Area,CLP21 Town Centre Historic Core, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	4			
Solar Potential Generation in Mwh at 15% efficiency:	3			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	20			
Potential housing delivery at 50 dwellings per hectare:	25			
Potential housing delivery at 100 dwellings per hectare:	50			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	1,250	1,666	3,333	5,000
Two	2,500	3,333	6,666	10,000
Three	3750	4,998	9,999	15,000
Conclusion:				
<p>This site is situated to the east of the town centre and has good connectivity to both the town centre and the wider town. The site is located close to four other car parks and has the potential to be consolidated with these to create a potentially large scale site for redevelopment. The consolidation of these sites would mean that future redevelopment could have a mix of both residential and employment uses. The site is also situated within the Spire Neighbourhood and as such any residential redevelopment would be supported. As a stand alone site there is the potential to deliver a small number of dwellings though would potentially be suitable for employment redevelopment.</p>				



Station Road				
Site Address:				
Site Area(ha):	0.5			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP6 Economic Growth, CLP8 Vitality and Viability of centres, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	5			
Solar Potential Generation in Mwh at 15% efficiency:	3			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	20			
Potential housing delivery at 50 dwellings per hectare:	25			
Potential housing delivery at 100 dwellings per hectare:	50			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	1,250	1,666	3,333	5,000
Two	2,500	3,333	6,666	10,000
Three	3750	4,998	9,999	15,000
Conclusion:				
This site is situated to the east of the town centre and has good connectivity to both the town centre and the wider town. The site is located close to four other carparks and has the potential to be consolidated with these to create a potentially large scale site for redevelopment. The consolidation of these sites would mean that future redevelopment could have a mix of both residential and employment uses. The site is also situated with in Spire Neighbourhood and as such any residential redevelopment would be supported. As a stand alone site there is the potential to deliver a small number of dwellings though would potentially be suitable for employment redevelopment.				



Spa Lane				
Site Address:				
Site Area(ha):	0.08			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP6 Economic Growth, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	1			
Solar Potential Generation in Mwh at 15% efficiency:	1			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	3.2			
Potential housing delivery at 50 dwellings per hectare:	4			
Potential housing delivery at 100 dwellings per hectare:	8			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	200	267	533	800
Two	400	533	1,066	1,600
Three	600	800	1,599	2,400
Conclusion:				
Development of the site is not fully assessed due to its small scale. Utilising the methodology set out in the 2018 Land Availability Assessment Stage 1 and 2a Site Assessment Criteria 2018 Methodology, the site is smaller than 0.25ha and is therefore deemed to be of a size that would not have a sufficient impact on housing supply to be allocated in the Local Plan. There may still be opportunity at this site for small scale development.				



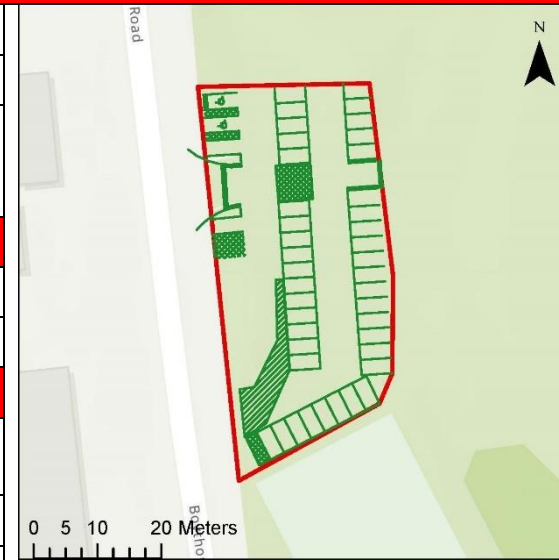
Hollis Lane				
Site Address:				
Site Area(ha):	0.9			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP6 Economic Growth, CLP8 Vitality and Viability of centres, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	10			
Solar Potential Generation in Mwh at 15% efficiency:	7			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	36			
Potential housing delivery at 50 dwellings per hectare:	45			
Potential housing delivery at 100 dwellings per hectare:	90			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	2,250	3,000	6,000	9,000
Two	4,500	6,000	12,000	18,000
Three	6,750	9,000	18,000	27,000
Conclusion:				
<p>This site is situated to the east of the town centre and has good connectivity to both the town centre and the wider town. The site is located close to four other carparks and has the potential to be consolidated with these to create a potentially large scale site for redevelopment. The consolidation of these sites would mean that future redevelopment could have a mix of both residential and employment uses. The site is also situated with in Spire Neighbourhood and as such any residential redevelopment would be supported. As a stand alone site there is the potential to deliver a large number of dwellings from its redevelopment. The site also has the potentially to be suitable for employment redevelopment being able to deliver a large amount of floorspace</p>				



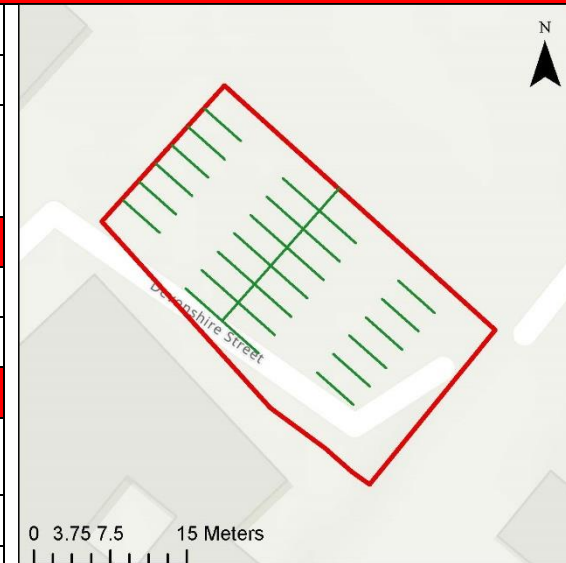
Queen's Park North				
Site Address:				
Site Area(ha):	0.7			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP17 Open Space			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	6			
Solar Potential Generation in Mwh at 15% efficiency:	4			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	28			
Potential housing delivery at 50 dwellings per hectare:	35			
Potential housing delivery at 100 dwellings per hectare:	70			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	1,750	2,333	4,667	7,000
Two	3,500	4,667	9,334	14,000
Three	5,250	7,000	14,000	21,000
Conclusion:				
As the site is situated in a designated open space, as per Local Plan policy CLP27 – Open Space the site will have to be shown as surplus to requirements and would not adversely impact the rest of the open space provision the carpark is utilised for. The site would be able to support both employment and residential development as long as these requirements could be met.				



Queen's Park South				
Site Address:				
Site Area(ha):	0.4			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP27 – Open Space			
Solar potential of site with solar PV canopy :				
Solar Potential Generation in Mwh at 22% efficiency:	4			
Solar Potential Generation in Mwh at 15% efficiency:	3			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	16			
Potential housing delivery at 50 dwellings per hectare:	20			
Potential housing delivery at 100 dwellings per hectare:	40			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	1,000	1,333	2,667	4,000
Two	2,000	2,667	5,334	8,000
Three	3,000	4,000	8,001	12,000
Conclusion:				
As the site is situated in a designated open space, as per Local Plan policy CLP27 – Open Space the site will have to be shown as surplus to requirements and would not adversely impact the rest of the open space provision the carpark is utilised for. The site would be able to support both employment and residential development as long as these requirements could be met.				



Devonshire Street Part 2				
Site Address:				
Site Area(ha):	0.17			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP8 Vitality and Viability of centres, CLP21 Town Centre Historic Core, Spire Neighbourhood Boundary, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy :				
Solar Potential Generation in Mwh at 22% efficiency:	2			
Solar Potential Generation in Mwh at 15% efficiency:	1			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	6.8			
Potential housing delivery at 50 dwellings per hectare:	8.5			
Potential housing delivery at 100 dwellings per hectare:	17			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	567	567	1,133	1,700
Two	1,133	1,133	2,267	3,400
Three	1,700	1,700	3,400	5,100
Conclusion:				
Development of the site is not fully assessed due to its small scale. Utilising the methodology set out in the 2018 Land Availability Assessment Stage 1 and 2a Site Assessment Criteria 2018 Methodology, the site is smaller than 0.25ha and is therefore deemed to be of a size that would not have a sufficient impact on housing supply to be allocated in the Local Plan. There may still be opportunity at this site for small scale development. However, given its proximity to other car parks (such as Devonshire Street Part 1), a collective Local Plan allocation could be considered in the future.				



Coach Station				
Site Address:				
Site Area(ha):	0.13			
Local Plan policies impacting the site:	CLP3 Built Up Area, CLP8 Vitality and Viability of centres, CLP21 Town Centre Historic Core, SS1 Chesterfield Town Centre			
Solar potential of site with solar PV canopy:				
Solar Potential Generation in Mwh at 22% efficiency:	1			
Solar Potential Generation in Mwh at 15% efficiency:	1			
Housing potential of site:				
Potential housing delivery at 40 dwellings per hectare as per LAA methodology 2018:	5.2			
Potential housing delivery at 50 dwellings per hectare:	6.5			
Potential housing delivery at 100 dwellings per hectare:	13			
Potential for employment use of site:				
	Area of site utilised for re-development			
Number of Stories	Potential for employment use yield utilising ¼ of the site in square meters	Potential for employment use yield utilising 1/3 of the site in square meters	Potential for employment use yield utilising 2/3 of the site in square meters	Potential for employment use yield utilising the whole of the site in square meters
Single	325	433	867	1,300
Two	650	867	1,734	2,600
Three	975	1,300	2,601	3,900
Conclusion:				
Due to the size of the site and its function supporting the coach station, it would likely be unsuitable for redevelopment. Should development be considered, utilising the methodology set out in the 2018 Land Availability Assessment Stage 1 and 2a Site Assessment Criteria 2018 Methodology, the site is smaller than 0.25ha and is therefore deemed to be of a size that would not have a sufficient impact on housing supply to be allocated in the Local Plan. There may still be opportunity at this site for small scale development.				

