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Stroud Car Parking Study

Stroud

London and Continental Railways & Stroud District Council

05 March 2025

Stroud

London and Continental Railways & Stroud District Council

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EXECUTIVE SUMMARY

Overview

The Stroud Station Car Parking Study provides the findings of a review of the existing parking provision at Cheapside car park, the two GWR car parks and 5 car parks within Stroud town centre. It sets out the parking patterns observed at each car park and highlights where there are opportunities for improvement or the potential for the reallocation of parking.

Existing parking provision

There are a total of 193 available spaces at Cheapside car park and a total of 209 spaces at the two station car parks. During car park occupancy surveys undertaken on Thursday 18th of May and Saturday 20th of May, these three car parks were recorded at 75% occupancy on the Thursday and 105% occupancy on the Saturday.

Existing occupancy levels demonstrate that on the weekdays, there is overall spare capacity in the alternative car parks located in the town centre. However, during the Saturday, which coincided with the Stroud Festival of Food and Drink, car parks are pushed to capacity and offer little reserve, particularly seen at Parliament Street car park and Church Street car park. Occupancy levels were higher than anticipated for a 'typical' Saturday as a result of this festival taking place, but the data collected does demonstrate a worst-case peak operating scenario. There is limited on-street parking available, with all recorded spaces observed to be occupied for most of the day and would offer no space to take any remaining demand.

Five Valleys Multi-story car park (MSCP), Brunel Mall MSCP and London Road surface car park demonstrated that they had the lowest occupancy on both the weekday and the Saturday. Due to there being significant reserve capacity on the Thursday, there is scope to reallocate all the demand from Cheapside Car Park to these alternative car parks on a typical weekday.

Car parking ticket transactions recorded between 2019 and 2022 highlight that Saturday has periodically been observed as the busiest day for parking in Cheapside, but there is significantly more reserve capacity on a non-festival 'typical Saturday' at Brunel Mall MSCP and London Road surface car park.

Additional November Survey 2023

As a consequence of the Saturday survey coinciding with the Stroud Festival of Food and Drink, the results did not reflect a 'typical Saturday'. An additional parking survey was therefore undertaken on Saturday 18th November, to represent this. The survey took place during the peak market hours of 10:00 to 15:00, observing all original car parks except the Brunel Mall MSCP which was closed at the time of the survey.

During peak market hours and without the spaces provided by Brunel Mall MSCP, the demand for Cheapside car park can be reallocated into all other car parks to provide a maximum occupancy of 96%. This pushes each car park to capacity, but if the additional parking space at Brunel Mall was available the maximum occupancy would drop to 69% to leave a 31% reserve capacity across all the car parks in the study area.

Additional November and December Survey 2024

Following engagement with Gloucestershire County Council and Stroud District Council, four additional surveys were undertaken on 21st November 2024, 23rd November 2024, 6th December 2024 and 7th December 2024 in order to represent parking demand at Cheapside and other town centre car parks during both 'typical' periods and peak months. The surveys took place between 07:00 to 19:00 on all days, with an extended survey period of between 07:00 to 22:00 on Friday 6th December in order to account for the Goodwill Festival taking place in Stroud and analyse the impact of late-night shopping on parking demand.

During a typical weekday and weekend the demand for Cheapside car park can be reallocated into all other car parks to provide a maximum occupancy of 77% and 98% respectively. During peak periods, such as the build up to Christmas on Friday 6th and Saturday 7th, demand for parking in Cheapside can still be accommodated within town centre car parks to provide a maximum occupancy of 99% and 90% respectively.

Recommendations

An improved signing strategy is essential to ensure that the alternative car parks within Stroud Town Centre are fully utilised. Variable Message Signs (VMS) would aid in directing road users to key car parks, particularly Brunel Mall MSCP, London Road, Five Valleys, Church Street and Parliament Street. Wayfinding signs at the entrances and exit points of these car parks would also help to direct pedestrians to the railway station.

Active Travel and sustainable transport promotion measures should be utilised to reduce private vehicle parking at the railway station. Methods that should be considered to provide this involve the implementation of a mobility hub which could provide secure cycle parking and Car Club spaces. Reviewing the car parking charges and lengths of stay across the car parks could aid in making alternative car parks more attractive to users.

1 INTRODUCTION

1.1 Context

1.1.1 NRP has been providing transport input into the Stroud railway station redevelopment project. Stroud Town Centre, located in Gloucestershire is approximately 20 miles north of Bristol and is situated south of Cheltenham. The town is considered a commercial centre and offers wide accessibility to the surrounding towns and villages with use of the local railway station. The railway line at Stroud station provides access to the south and east, running trains to London Paddington; Reading; Didcot parkway; Swindon; Kemble; Stonehouse; Gloucester and Cheltenham.

1.1.2 Stroud railway station is the focal point for a potential future regeneration project being undertaken in partnership between London and Continental Railways (LCR) and Stroud District Council. NRP has therefore been commissioned to investigate the extent to which the existing Cheapside car parking spaces could be accommodated in existing car parks located elsewhere in Stroud town centre. The town and the associated car parks within the study area can be seen in Figure 1.1 below.

Figure 1.1: Site Location

1.1.3 Figure 1.1 shows the 8 car parks considered in this study. Cheapside is highlighted in purple, the two station car parks are shaded in blue and the five alternative car parks in red. These locations have been labelled and cross-referenced in Table 1.1 below.

Table 1.1: Car Parks Considered in the Study.

Street	Total Capacity
Stroud Station – Southside (P1)	84
Stroud Station – Northside (P2)	125
Total Station Car Park Spaces	**209**
Cheapside (P3)	**193**
MSCP Five Valleys (P4)	266
Parliament Street (P5)	122
Church Street (P6)	106
Bunel Mall MSCP and London Road Surface (P7 and P8)	479
Total Spaces (Alternative Car Parks)	**988**
Total Spaces (All Car Parks)	**1390**

1.2 Objectives

1.2.1 The objectives of the study are to:

- Provide an understanding of the issues and opportunities for car parking in Stroud town centre;
- Analyse the existing car parking spaces within the study area to determine parking patterns and opportunities for relocation; and
- Review the scope to consolidate existing car parking elsewhere across Stroud.

1.3 Limitations

1.3.1 The focus of this study is to provide an understanding of the parking utilisation at Stroud railway station and determine if there is an opportunity for parking reallocation In equally accessible alternative car parking.

1.3.2 This report therefore does not provide an in-depth understanding of any wider design and strategy at the site. Further work would need to be undertaken to expand on policy that is separate to car parking.

Wider Scope

1.3.3 For the purpose of this study, only the key client group have been a focus for engagement and considered at each stage of the project. Stroud District Council have been involved in discussions to ensure that the needs of the town are met and considered, but we recognise that there is a need for further stakeholder engagement as the wider scheme begins to develop. This will help to ensure that all important stakeholders, such as the local highway authority, are considered in any future design or strategy.

2 POLICY AND GUIDANCE

2.1 Introduction

2.1.1 This chapter describes the planning and transport policy, guidance and relevant reports that have been reviewed and considered applicable to this study. The following have been discussed:

- National Planning Policy Framework (2023);
- Department for Transport Gear Change – A bold vision for walking and cycling;
- Net Zero Strategy: Build Back Greener (2021);
- Stroud District Council – The 2030 Strategy Master Plan
- Gloucestershire Local Development Plan;
- Gloucestershire Local Travel Plan;
- Manual for Gloucestershire Streets (2020);
- Stroud Town Centre Neighbourhood Development Plan 2015 -2035
- Stroud District Council Local Plan (2015);
- Stroud District Council Local Plan Review (2021)
- Stroud Station Travel Plan;
- Stroud Station Improvement Fund;
- Stroud Station Feasibility Study;
- Stroud Street Spaces – Final Report;
- Stroud Station Forecourt Movement Analysis;
- Mobility Hubs Toolkit – COMOUK
- CIHT Guidance Note – Residential Parking

2.2 National Planning Policy Framework (2023)

2.2.1 The National Planning Policy Framework (NPPF) was first published in March 2012 and replaced the previous national planning policies that were set out in the various Planning Policy Guidance Notes and Statements. With regards to transport, the NPPF replaced policy contained within PPG13 (Transport).

2.2.2 The NPPF was revised in 2023 and it sets out the government's planning policies for England and how these are expected to be applied.

2.2.3 The NPPF was also revised in July 2018 to include reforms previously announced through the Housing White Paper, the planning for the right homes in the right places consultation and the draft revised National Planning Policy Framework consultation.

2.2.4 The NPPF sets out a presumption in favour of sustainable development that recognises the importance of transport policies in facilitating sustainable development.

2.2.5 The NPPF aims to promote sustainable transport whilst recognising that opportunities vary between urban and rural areas.

2.3 DFT Gear Change – A bold vision for walking and cycling

2.3.1 The Department for Transport Gear Change report outlines the plan to provide safe and efficient walking and cycling infrastructure across the UK, aiming to encourage a shift to these modes.

2.3.2 Between 2017 and 2018, 40% of journeys under two miles in urban areas were made by car. The overall goal is to ensure that half of all journeys are cycled or walked, and so a big shift in behaviour is required to achieve this.

2.3.3 The report outlines important actions that need to be undertaken to achieve a shift in mode, provided under four key themes. These aim to embed active travel into wider policy and decision making and are:

- Better streets for cycling and people;
- Putting cycling and walking at the heart of transport, place-making and health policy;
- Empowering and encouraging local authorities;
- Enabling people to cycle and protection people when they cycle.

2.3.4 Each theme outlines schemes that place active travel at the top of the hierarchy. These investments will ensure that journeys made by walking or cycling match the convenience of a car.

2.4 Net Zero Strategy: Build Back Greener (2021)

2.4.1 The UK government Net Zero Strategy report outlines the UK's priority to reach net zero emissions by 2050. The report discusses a long-term strategy to achieve this and highlights the role of reducing emissions from domestic transport as a section of the process.

2.4.2 The key priority outlined for transport is to ensure that infrastructure is 'greener, faster and more efficient'. There are several key policies discussed that aim to decarbonise the transport sector and these are as follows:

- Grants and funding of £620 million will be provided for zero emission vehicles and local EV infrastructure. This funding will support on-street residential parking;
- An investment of £2 billion will be made to support walking and cycling in towns and villages, with the aim to 'enable half of journeys to be walked or cycled by 2030'; and
- Provide investment into city transit systems and electrification of rail.

2.5 Stroud District Council – The 2030 Strategy Master Plan

2.5.1 Stroud District Council issued a climate emergency motion on the 24th of January 2019, pledging to 'do everything within the council's power to make Stroud District carbon neutral by 2030. The Stroud 2030 Master Plan details the approach to tackling the climate emergency impacting us now and, in the future, by defining the vision and targets required to undertake by 2030.

2.5.2 Mobility targets are set up within the report to ensure that low-carbon choices are provided, and that modal shift is accelerated. These targets are as follows:

- *'To have 90% of commuters currently travelling less than 5km by car using public/active travel;*
- *The districts main town centres, with the exception of resident vehicles, will be car free; and*
- *To have increased rail use in the district to 50% up on the 2010/11 baseline'*

2.5.3 These targets prioritise active travel and public transport and place single occupancy vehicles at the bottom of the hierarchy. These targets are in line with the government goal to be net zero by 2050.

2.6 Gloucestershire Local Development Plan

2.6.1 The Gloucestershire Local Development Plan was published in 2021 and sets out the requirement for sustainable development to support sustainable infrastructure. It outlines the transport requirements and support that is available for new developments.

2.6.2 New developments are required to demonstrate impacts on the transport network are insignificant and consider modal shift in their plans. They must also ensure public transport accessibility and a move towards electric vehicle requirements.

2.6.3 For any funding, Gloucestershire County Council (GCC) state that:

- *'Where a mitigation package for transport is needed, GCC will look favourably upon proposed measures that will seek to limit the number of additional car journeys upon the local network; deliver modal shift and aid walking and cycling over short distances;* and
- *contributions sought through S106 planning obligations must solely assist in mitigating the adverse impacts of new development on the local transport network'.*

2.7 Gloucestershire Local Travel Plan

2.7.1 The Gloucestershire Local Travel Plan sets out several local transport plans to help provide public stakeholders and investors with an idea about the projects that are to be delivered. This report sets out Stroud as a key service centre within the area.

2.7.2 The plan provides an understanding of the journey to work data and commuting flows between Stroud and other hubs along its rail route and discusses the opportunity to maximise connectivity between Swindon and Bristol.

2.7.3 In reference to active travel and public transport, ambitions to improve walking and cycling schemes are outlined, discussing improvements within the town centre, on the national cycle way and enroute to the railway station.

2.7.4 The report states that:

2.7.5 "Future development should prioritise sustainable interventions where possible. This can be achieved, by providing access to bus and rail service interchanges and by providing suitable dedicated pedestrian and cycle infrastructure."

2.8 Stroud Town Centre Neighbourhood Development Plan 2015 – 2035

2.8.1 The Neighbourhood Development Plan identifies areas within Stroud Town Centre that would benefit from improvements to the public realm. Several projects and improvement methods are highlighted within the plan to develop Stroud Station.

2.8.2 Statement NP1 provides an overview of what should be offered in respect to parking allocation. It is stated that sufficient public parking must be provided close to the town centre, and that poor signage is an issue facing the town, making it difficult for drivers to locate quieter car parks.

2.8.3 Stroud Town Council offer support in ensuring that parking standards are met, whilst encouraging walking and cycling in the Town Centre. They state that:

2.8.4 "The Town Council will advocate changes to the tariffs to maximise ease of use, provide short-stay off-street car parking, extra and improved signage and real information about spaces".

2.9 Stroud District Council Local Plan (2015)

2.9.1 The Stroud Local Plan was published in November 2015 to replace the 2005 document. It sets out the key issues that the area is facing and outlines steps to evolve over the coming decades. It focuses on transport with the aim to deliver and improve new and existing infrastructure to maximise growth at the heart of Stroud Town Centre. A focus on reducing short car journeys will help to achieve this goal.

2.9.2 The Local Plan discusses the redevelopment of Cheapside car park to the south of the railway station. It is vital that development maintains and enhances the public realm, whilst encouraging walking and cycling links to the Town Centre.

2.10 Stroud District Council Local Plan Review (2021)

2.10.1 The Stroud District Local Plan Review became available for review in 2021 and sets out the requirement for Stroud Town Centre to meet local needs over the next 20 years.

2.10.2 The Local Plan sets out the transport and travel goals in policy SO4, highlighting the importance of prioritising healthier alternatives to the private car. The process to achieve this involves enhancing the rail network and delivering a 'strategic walking and cycling network' to main movement corridors in the area.

2.10.3 The policy states that:

2.10.4 'Where possible the strategy will integrate housing and employment localities together, thereby reducing the need to travel and offering opportunities to live and work within the same neighbourhood.'

2.11 Stroud Station Travel Plan

2.11.1 The Stroud Station Travel Plan outlines the findings of a passenger survey undertaken between June and August 2022. This data is useful to analyse the parking patterns and commuter habits of the railway station car parks across an average working week. Some of the key survey results produced from this analysis are as follows:

2.11.2 Data suggests that occupancy has increased since 2021 and that there are no occupancy issues to the south side of the station at the time of data collection. It was recorded that 63% of those surveyed parked in the north side of the station, with the remaining 37% recorded to use the south side.

2.11.3 The average weekday occupancy at the southside of the station was recorded to be highest on a Tuesday. Occupancy was recorded at 65% at its highest peak. In comparison, the northern side of the station saw the greatest occupancy on a Monday. Maximum occupancy was recorded at 70% in the AM Peak compared to 100% in the PM peak.

2.11.4 In reference to the walking routes available at the station, 56% of those surveyed stated that they walked to the station. Improvements are essential to enhance the number of people walking to and from the station, as there are no accessible footpaths from the south of the station to the north. This could limit the possibility of any adjustments to parking spaces at the railway station in this location.

2.12 Stroud Station Improvement Fund

2.12.1 Stroud Station Improvement Fund outlines the existing facilities available at the railway station, and any opportunities for improvement.

2.12.2 It is stated that there has been a steady increase in passenger numbers over the recent years. Several facilities are already offered at the train station that provide some sustainable alternatives to active travel. Cycle parking is provided off of Platform 2 within the GWR southside car park along with two disabled bays. On the GWR North Car Park, a taxi waiting area is provided at the entrance along with two disabled bays.

2.12.3 Several opportunities for improvement are identified within the report. The following are discussed:

- Creation of a new pedestrianised walkway from multi story car park and new safe walk route through the car park;
- Dedicated taxi waiting area and short stay/drop off spaces;
- Improved parking provision within the land to the east of the station;
- Improved lighting;
- Potential cycle hub/cycle hire facility in the station building;
- Dedicated taxi bay and drop off point to improve vehicle flows and movements;
- Potential lift to existing footbridge; and
- Slight changes in parking allocation at northside forecourts.

2.13 Stroud Station Feasibility Study

2.13.1 Stroud Station Feasibility Study outlines the connections between the site and Stroud town centre and highlighted the existing issues facing the railway station parking. The following issues are raised regarding the parking available at the station:

- There are a few vehicle access points and active travel corridors through the site;
- There is limited diversity of parking options due to there being no existing step free cross platform access at the site. Four disabled parking spaces are offered and are split evenly across the site, but accessibility is limited;
- Transport interchange at the south GWR car park is poor, with no provision of designated bus stops and poor pedestrian infrastructure linking between the south GWR car park, Cheapside car park and Stroud town centre.

2.13.2 The study outlines some opportunities for improvement at the site, by reallocating long-term parking spaces to different car parks within Stroud and keeping parking closest to the station short-term. The following parking provisions are recommended, to reallocate parking spaces without losing too much access:

- The introduction of SMART Bays. This could become either a car club or car share bay, an EV bay or a disabled bay to give priority to more sustainable methods of driving and ensure accessibility is provided.
- Movement of short-term flexi bays to Russel Street and Kings Street.
- Create a designated area for drop off and collection outside of key pedestrian desire lines.

2.14 Stroud Street Spaces – Final Report

2.14.1 The Stroud Street Spaces report outlines the opportunities to improve the street space for walking, and cycling, as well as considerations for an approach to parking.

2.14.2 The report outlines an initial car park utilisation analysis undertaken at Cheapside, Parliament Street, Church Street, Rowcroft, London Road Surface and Brunel Mall MSCP. It gives an understanding of the pre-covid parking utilisation at these car parks using the transactions recorded of vehicles arrival times and duration of visit.

2.14.3 The main findings of this analysis are as follows:

- *'All car parks are busiest on Saturdays – with all apart from the Brunel Mall Multi-Story Car Park reaching maximum capacity.*
- *The typical weekday capacity utilisation (Monday to Friday) across all car parks apart from Rowcroft Road is typically around 60%-80%.'*

2.14.4 Additional research was undertaken at the site to determine if the existing road infrastructure was suitable to link pedestrians and cyclists to the railway station. The main finding was that the A46 and A419 (the main routes between Five Valleys MSCP and the town centre) felt like a threatening environment. London Road was also seen as concerning due to its narrow pavement, limiting the access from London Road Surface car park and Brunel Mall MSCP and the town centre to some users.

2.15 Stroud Station Forecourt Movement Analysis

2.15.1 The Stroud Station Forecourt Movement Analysis highlights the key movement trends amongst user groups within the vicinity of Stroud railway station. These findings outline how the station should be reorganised to prioritise pedestrians and cyclists using the station.

2.15.2 In reference to the existing habits of vehicles at the station, some of the key findings included:

- Vacant taxi and informal bays were utilised for picking up and dropping off activity. The station was 'insufficiently catered' to support this activity, with informal positions adjacent to the Station entrance being taken up by these drivers.
- Vehicles take priority at the station, with narrow footways and a complete lack of crossing points provided for pedestrians and cyclists.
- Inconsiderate parking behaviour was observed on both sides of the station. This activity blocked key pedestrian desire lines and supported high speeds within both car parks.

2.15.3 Mitigation strategies for these issues were discussed and it was recommended that desire points and movement strategies should be understood in full, in order to successfully reconfigure the parking situation.

2.16 Mobility Hubs Toolkit – COMOUK

2.16.1 The Mobility Hubs Toolkit offers guidance on the feasibility of mobility hubs, and advice on setting up a model. Mobility hubs are defined as 'highly visible, safe and accessible spaces where public, shared and active travel modes are co-located alongside improvements to public realm and, where relevant, enhanced community facilities.'

2.16.2 Six factors need to be considered when implementing a successful mobility hub. These are as follows:

- 'Visibility and accessibility - being a clear part of the transport network with services easily accessible by all.
- Choice of sustainable modes - including public and shared modes, along with proper consideration of the needs of pedestrians
- Ease of switching between modes - designed and organised to facilitate easy access between different modes, and ensuring the modes are linked both physically and digitally.
- Safety - the design and facilities should ensure traveller safety is a key factor.
- Practical facilities - the inclusion of non-transport additions, such as cafes or workspace
- Visual, social, and community appeal - being a positive addition to the area and providing a contribution to the social and community fabric'.

2.17 Manual for Gloucestershire Streets (2020)

2.17.1 The Manual for Gloucestershire Streets Report provides guidance on the best practice design for transport systems. The manual sets out parking provision requirements for towns within the county to support residential development. The following guidelines for parking are set out for Stroud:

- 1 bedroom: 1 parking spaces
- 2 bedrooms: 2 parking spaces
- 3 bedrooms: 2 parking spaces
- 4 bedrooms: 3 parking spaces
- 5 bedrooms: 3 parking spaces

2.18 CIHT Guidance Note – Residential Parking

2.18.1 The Residential Parking Guidance Note outlines a 'maximum and minimum approach' to parking policy dependant on location. According to guidance, evidence is provided that limited provision of parking within controlled areas can correspond with lower levels of car ownership, provided that sustainable options of transport are provided to account for this.

2.18.2 This method compares average car ownership levels with occupiers of private market housing. This data can then be used to determine the target (or optimum) levels of car parking.

3 EXISTING DATA ANALYSIS

3.1 Introduction

3.1.1 As highlighted in the local and national policy context, Stroud District Council has declared a climate emergency and are committed to becoming carbon neutral by 2030. In order to achieve this, the volume of direct and indirect CO2 emissions needs to be reduced.

3.1.2 By providing for sustainable modes of transport and discouraging the use of single occupancy vehicles, we can work towards achieving this goal. The Stroud Station Car Parking Study will help to understand the existing utilisation of car parks in the area and recognise if there are any alternative spaces offering spare capacity.

3.1.3 Data derived from existing reports and past transactions at each of the car parks within this study have been analysed to determine how utilisation and occupancy levels have changed. If existing occupancy at the railway station and surrounding car parks is low, it could be possible to reallocate parking spaces to alternative car parks within 800m of the station, without negatively impacting the existing infrastructure.

3.1.4 The data collected and analysed in this report has been done on a typical weekday, identified as a Thursday, and on a Saturday. Stroud Town Centre hosts a market every Saturday, which has been reported as very well visited. Consequently, Saturday can be considered a peak day for parking in Stroud and has been used in this study to represent a busy period.

3.2 Initial Car Park Accumulation Analysis

3.2.1 A high-level initial car park accumulation analysis has been undertaken to compare the utilisation of the London Road car parks and Cheapside car park pre-Covid and post-Covid. This data details the maximum occupancy in the London Road surface car park and London Road Brunel Mall MSCP to identify if these car parks offer any significant reserve capacity. Comparisons of the parking accumulation in Cheapside between 2019 and 2022, can then be used to determine if the maximum number of arrivals and departures on these dates would fit into any reserve capacity available at the London Road car parks.

3.2.2 The Stroud Street Spaces Report (2021), outlined in Section 2 of this report, undertook a base analysis of typical car park capacity utilisation of Cheapside, Brunel Mall MSCP and London Road surface car parks in September 2019. This data was analysed using all transactions recorded across a month and calculated an approximate occupation of car park spaces by looking at the duration of stay. This data only accounts for the paid duration of stay, and so cannot be considered an exact replication of the occupancy experienced at the time.

3.2.3 NRP has undertaken a similar analysis of Cheapside car park, London Road surface car park and Brunel Mall MSCP using the transactions recorded in April 2022 and September 2022. This data has been used to compare the maximum occupancy seen in each car park between 2019 and 2022 to determine if there has been a percentage change in occupancy. As this analysis also used records of transactions, it does not account for vehicles that may have paid for a longer duration than required and so should not be considered as an accurate representation of occupancy.

London Road Surface Car Park

3.2.4 London Road Surface Car Park has a capacity of 144 spaces. Table 3.1 below outlines the occupancy seen on a weekday and on a Saturday.

Table 3.1: London Road Surface Car Park Occupancy Comparison

	Max Occupancy (Sept 2019)	Max Occupancy (April 2022)	Max Occupancy (Sept 2022)	Difference (%)
Weekday	83%	66%	46%	-37%
Saturday	115%	106%	59%	-56%
Whole Week	115%	106%	59%	-56%

3.2.5 Maximum occupancy has declined on a weekday, recorded at a 37% decrease between September 2019 and September 2022 and not reaching maximum capacity.

3.2.6 A similar decline can be seen across an entire week and on a Saturday, which has been recorded as the busiest day of the week for this car park. Maximum capacity is exceeded in April 2022, but the car park offers significant reserve capacity in September 2022 with a percentage decrease of 56% when compared to 2019 data.

Brunel Mall MSCP

3.2.7 Brunel Mall MSCP has a capacity of 335 spaces. Table 3.2 below outlines the occupancy observed on a weekday and on a Saturday.

Table 3.2: Brunel Mall MSCP Occupancy Comparison

	Max Occupancy (Sept 2019)	Max Occupancy (April 2022)	Max Occupancy (Sept 2022)	Difference (%)
Weekday	37%	23%	29%	-8%
Saturday	82%	59%	77%	-5%
Whole Week	82%	59%	77%	-5%

3.2.8 Brunel Mall MSCP does not reach maximum capacity on any days of the week, with a slight decline observed between 2019 and 2022. This indicates some reserve capacity at the car park, even on the busiest day of the week.

Cheapside Car Park

3.2.9 Cheapside car park has a capacity of 193 spaces. Table 3.3 below outlines the occupancy observed on a weekday and on a Saturday.

Table 3.3: Cheapside Car Park Occupancy Comparison

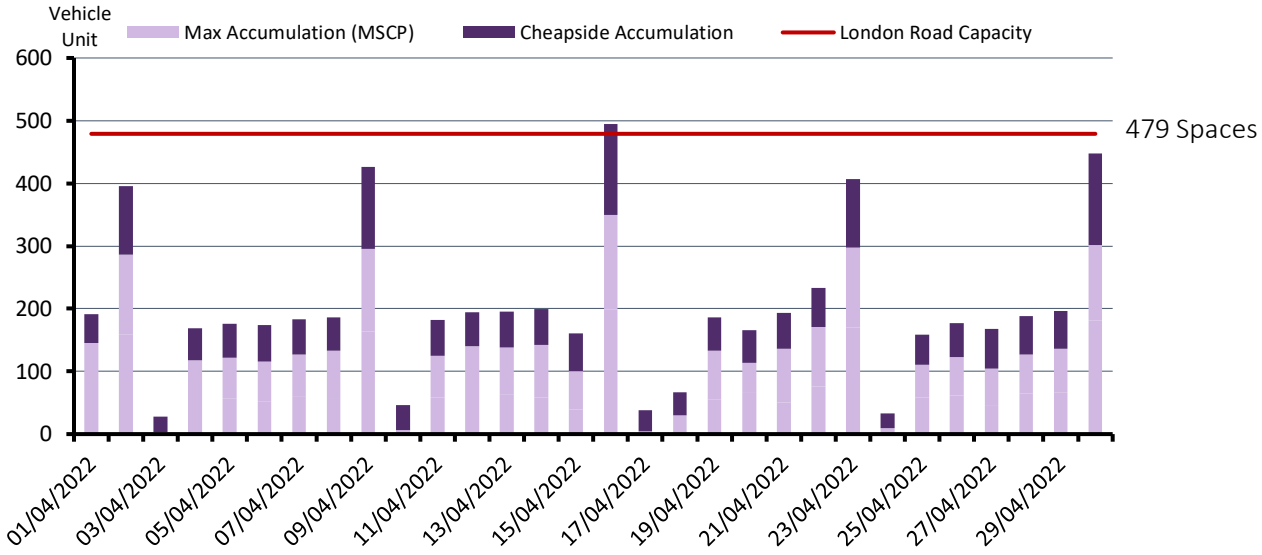
	Max Occupancy (Sept 2019)	Max Occupancy (April 2022)	Max Occupancy (Sept 2022)	Difference (%)
Weekday	57%	33%	37%	-21%
Saturday	104%	76%	78%	-26%
Whole Week	104%	76%	78%	-26%

3.2.10 Between 2019 and 2022 there has been a 26% decrease in maximum occupancy on a Saturday, taking parking levels back to below capacity. Occupancy has also decreased on a weekday between 2019 and 2022. This data is useful to provide an understanding of the typical utilisation of the car park and provides an indication of the typical demand experienced on a Saturday.

Reserve Capacity

3.2.11 The following analysis has been done to test whether the typical occupancy observed on a weekday and a weekend at Cheapside car park could be re-allocated into the Brunel Mall Multi-Storey car park.

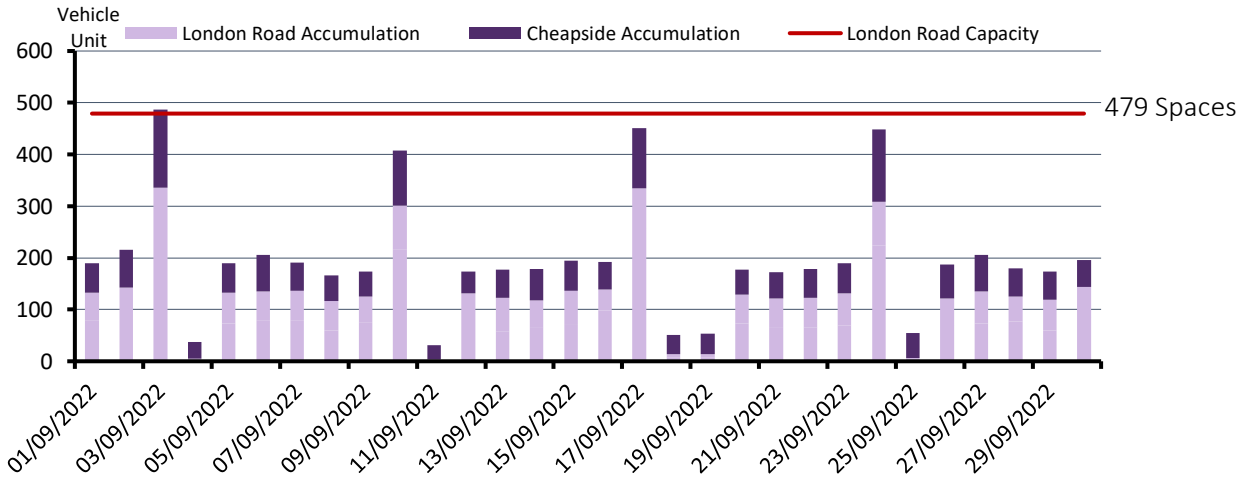
Figure 3.1: Reserve Capacity April 2022



3.2.12 Figure 3.1 shows the maximum accumulation seen at the Cheapside car park moved into the maximum accumulation seen at Brunel Mall MSCP in April 2022. The red line represents the capacity of both London Road surface car park and Brunel Mall MSCP combined.

3.2.13 When adding the maximum occupancy observed at Cheapside to the maximum occupancy observed at both London Road car parks, the data suggests that there is reserve capacity on both the weekdays and weekends. Capacity has been exceeded on the 16th of April (a Saturday), which may indicate that capacity could have been reached in this scenario on this occasion.

Figure 3.2: Reserve Capacity September 2022



3.2.14 Figure 3.2 shows the maximum accumulation of both the London Road car parks and the Cheapside car cark combined in September 2022. The red line represents the capacity of London Road surface car park and Brunel Mall MSCP combined to total 479 spaces.

3.2.15 The data indicates that there is reserve capacity of over 200 spaces at Brunel Mall MSCP, even when adding the accumulation of Cheapside car park. This indicates a typical reserve capacity of approximately 60% on a weekday. Despite this, maximum occupancy is close to capacity on Saturdays, shown to exceed it on Saturday 3rd September.

3.2.16 As this ticketing information was not available for all car parks surrounding the railway station it is not known whether there were alternative car parks that may have been able to offer the additional reserve capacity on days identified as reaching maximum occupancy.

3.2.17 As mentioned in Paragraph 3.2.3 this ticketing information data has limitations and its results were used merely as a testing indicator for whether any re-allocation from Cheapside car park might have been possible. The data does also not allow for a holistic view to be reached as the status of the occupancy of all the additional car parks surrounding the railway station were unknown during these times, which might have indicated additional areas of capacity.

3.3 Ticketing Data Analysis Summary

3.3.1 Following the analysis of the car park ticket data, it is identified that the parking demand at the railway station car parks may need to be reallocated to multiple car parks across Stroud town centre. As outlined in Paragraph 3.2.17, this would allow for an informed holistic view to be reached on maximum car park occupancies and therefore inform the potential for any car park space reallocation to take place.

3.3.2 In order to obtain this information NRP commissioned a large-scale study of 8 car parks across Stroud town centre. As a potential reallocation exercise, this analysis included:

- Cheapside (GL5 2AD)

3.3.3 In addition to this, the two station car parks were considered including:

- Stroud Station – Southside (GL5 3AP);
- Stroud Station – Northside (GL5 3AP); and

3.3.4 The study then considered five alternative car parks within 800m of the railway station. These are:

- MSCP (London Road Brunel Mall (GL5 2AU);
- London Road Surface (GL5 2AJ);
- Church Street (GL5 1JL);
- Parliament Street (GL5 2HL); and
- MSCP Five Valleys (GL5 1RR).

3.3.5 This data collected will be used to provide details of any reserve capacity at the alternative car parks. A detailed analysis of the data collection process and surveys undertaken is provided in section 4 below.

4 DATA COLLECTION

4.1 Overview

4.1.1 A baseline study of the parking spaces within Stroud was undertaken to determine the existing levels of accumulation. The car parking surveys were undertaken on Thursday 18th May and Saturday 20th May 2023 at the following car parks:

- Stroud Station – Southside (GL5 3AP);
- Stroud Station – Northside (GL5 3AP);
- Cheapside (GL5 2AD)
- London Road Surface (GL5 2AJ) and MSCP (London Road Brunel Mall (GL5 2AU;
- Church Street (GL5 1JL);
- Parliament Street (GL5 2HL); and
- MSCP Five Valleys (GL5 1RR).

4.2 Car Parks

4.2.1 A total of eight car parks have been used in this study. These were chosen due to their close proximity to the railway station and the number of spaces they provided. Table 4.1 below outlines each car park, their capacity and their cost.

Table 4.1: Car Park Capacity and Cost Comparison

Street/Car park	Total Space Capacity	Weekday Price	Weekend Price
Cheapside	193	£3	£3
Stroud Station - Southside	84	£4	£2.80
Stroud Station - Northside	125	£4	£2.80
MSCP Five Valleys	281	£3	£3
Parliament Street	122	£3	£3
Church Street	106	£4.70	£4.70
London Road Surface and Brunel Mall MSCP	479	£3 (free after 3pm)	£3 (free after 3pm Saturday)

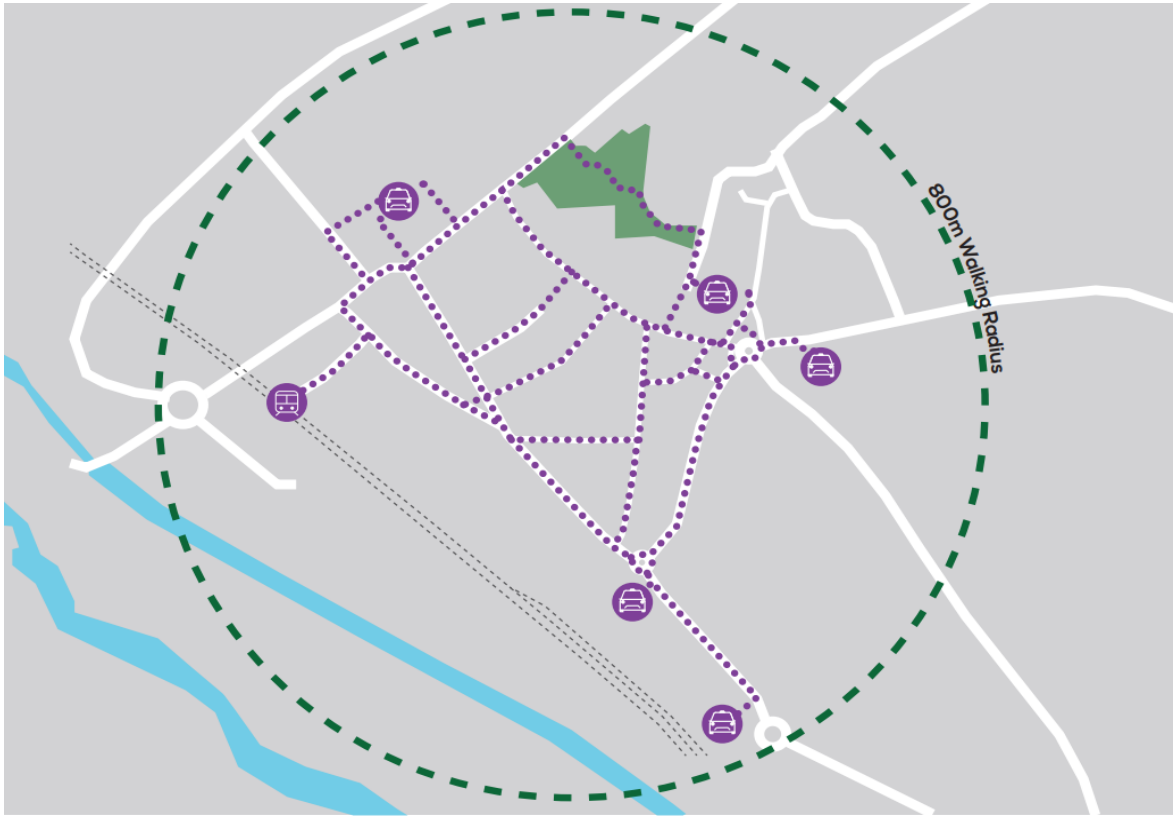
4.2.2 Cheapside car park has a capacity of 193 spaces. It is important to understand how this car parks is utilised, in order to determine where there is existing reserve capacity and if any spaces can be reallocated.

4.2.3 The two station car parks have a combined capacity of 209 spaces. The remaining five alternative car parks have a combined capacity of 988 spaces. These provide the ideal location should any reallocation of car parking spaces be required. By looking at arrival and departure data at these car parks, the total accumulation can be determined across the survey period. This will highlight any car parks with enough capacity to reallocate spaces.

4.3 Walking and Cycling Links

4.3.1 The five alternative car parks chosen for this study have been included due to their close proximity to Stroud railway station. Each car park is within 800 metres, or a 10-minute walking distance from the railway station and could be used as an alternative parking location. Figure 4.1 below shows some of the possible walking routes to the railway station from these car parks.

Figure 4.1: Walking Routes to Alternative Car Parks from Railway Station



4.3.2 Stroud town centre offers several pedestrian links between each car park and the railway station. Figure 4.1 doesn't take into account route directness but offers an understanding of the numerous links between the car parks and the station.

4.3.3 Out of the five alternative car parks studied, the two which offer the most capacity and are closest to the station are Five Valleys Multi-Storey car park (MSCP) and Brunel Mall MSCP. These will be the focus when analysing how much space can be re-allocated.

4.4 Methodology

4.4.1 Parking accumulation and duration of stay data was acquired at Cheapside, the two station car parks and for the five alternative car parks, to determine the level of utilisation experienced on a typical Thursday and Saturday. In order to gain a clear picture of the overall usage of each car park, a baseline capture of the number of occupied spaces prior to the survey period was undertaken, along with manual classified counts at car park entrances and automatic number plate recognition at the railway station car parks. These surveys took place over a 12-hour period between 07:00 and 19:00 on both days.

4.4.2 In addition to this, interview surveys were undertaken at Cheapside and the two station car parks. These were done to determine how the car parks were being used, enquiring about:

- People's origin;
- People's destination;
- People's journey purpose; and
- People's reason for parking.

4.4.3 Interview surveys took at Cheapside and the two station car parks between 07:00 and 19:00 on both Thursday and Saturday. The purpose of these surveys was to provide an understanding of people's parking behaviours and whether they used the station car parks to access the station or the town centre. The interview surveys used in the study can be seen in Appendix A.

4.4.4 It should be noted that a large-scale food and drink festival took place on Saturday 20th May alongside the usual market activities. It can be assumed that the data collected for this day doesn't represent a 'typical' Saturday in the Stroud town centre but reflects a much busier than average weekend day.

4.4.5 As a consequence of these results, an additional parking survey was undertaken on Saturday 18th November, to represent a 'typical Saturday'. This took place during the peak market hours of 10:00 to 15:00 and surveyed all original car parks except the Brunel Mall MSCP which was closed at the time of the survey. The results of these surveys can be seen in Appendix B.

4.4.6 Following pre-application engagement SDC and GCC requested that an extended period of surveying be undertaken to highlight the trends in parking demand at Cheapside and other car parks within the town centre, particularly during the build up to the Christmas period. All car parks were resurveyed between 07:00 and 19:00 on Thursday 21st November, Saturday 23rd November and Saturday 6th November. They were also surveyed between 07:00 and 22:00 on Friday 6th December to account for the late-night shopping occurring on that day. The results of these surveys can be seen in Appendix C.

Manual Classified Counts

4.4.7 High mast video cameras were installed at the entrance and exit points of each alternative car park. These locations were recorded across the entire survey period, counting every car that arrived and departed across the day.

Automatic Number Plate Recognition

4.4.8 Three ANPR cameras were installed at the entry of Cheapside and both station car park. These cameras recorded the exact time of arrival and departure of vehicles to determine an overall accumulation result and duration of stay. Site overview cameras were also installed to determine a sample rate of number plates extracted.

Demand Analysis Methodology

4.4.9 The arrival and departure data has been used to determine the maximum number of cars parked in hourly intervals between 07:00 and 19:00. The number of vehicles parked in each car park at the beginning of the period was noted and added to the arrivals observed. This figure and the total capacity of each car park has been used to derive the maximum occupancy and the average occupancy of each individual car park. The maximum occupancy represents the worst case overall when analysing across a whole day. Additionally, analysis has been provided across the whole study period to visually demonstrate the peak occupancy between 07:00 and 19:00.

4.5 Car Park Occupancy Results

Car Park Occupancy - Thursday 18th May 2023

4.5.1 The maximum occupancy at all car parks was below capacity on Thursday 18th May. The percentage occupancy of each car park can be seen in Table 4.2 below.

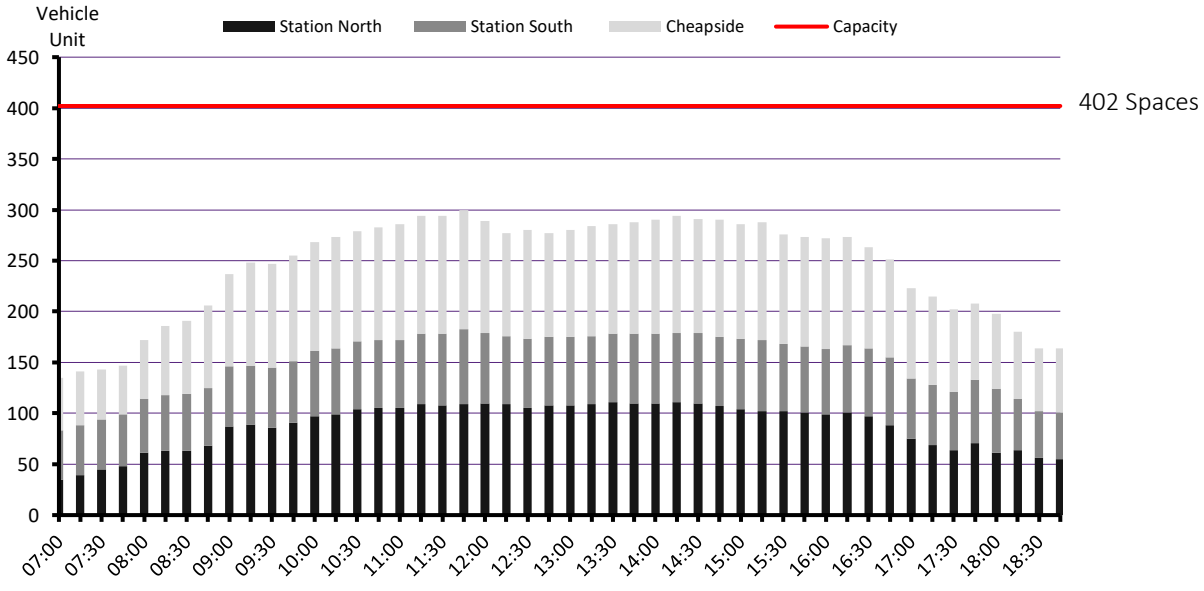
Table 4.2: Maximum Occupancy across all Car Parks - Thursday 18th May

Car Park	Maximum Occupancy	Average Occupancy
Stroud Station – Southside	88%	74%
Stroud Station – Northside	89%	70%
Cheapside	61%	49%
MSCP Five Valleys	62%	32%
Parliament Street	89%	59%
Church Street	74%	45%
London Road (Surface and Brunel Mall MSCP)	41%	26%

4.5.2 All railway station car parks, alternative car parks and Cheapside are operating under capacity at present. Stroud station northside and Parliament Street experience the highest occupancy during the peak period but have a significantly lower average occupancy percentage of 70% and 59% respectively. Whilst this doesn't indicate typical occupancy is lower, it does suggest that each car park is not pushed to capacity throughout the day.

4.5.3 The existing accumulation of Cheapside and both station car parks is below capacity. Figure 4.2 shows how all three car parks combined are occupied during the day.

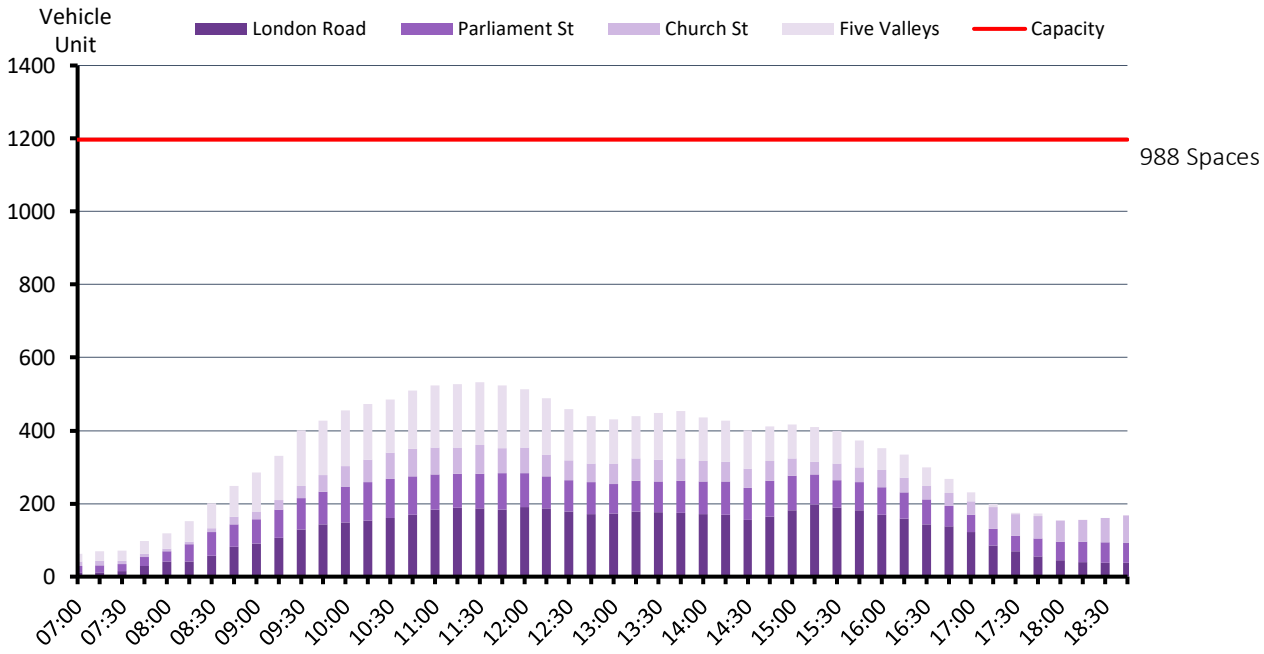
Figure 4.2: Existing Capacity at Cheapside and the Station Car Parks - Thursday 18th May



4.5.4 The maximum accumulation of northside, southside and Cheapside at any one time between 07:00-19:00 is 300. These car parks have a combined capacity of 402 suggesting that they have a combined maximum occupancy of 75% on a typical Thursday.

4.5.5 Figure 4.3 below shows the maximum occupancy recorded across a 12-hour period at the alternative car parks. London Road surface and Brunel Mall MSCP have been combined to demonstrate the occupancy of each car park as a whole.

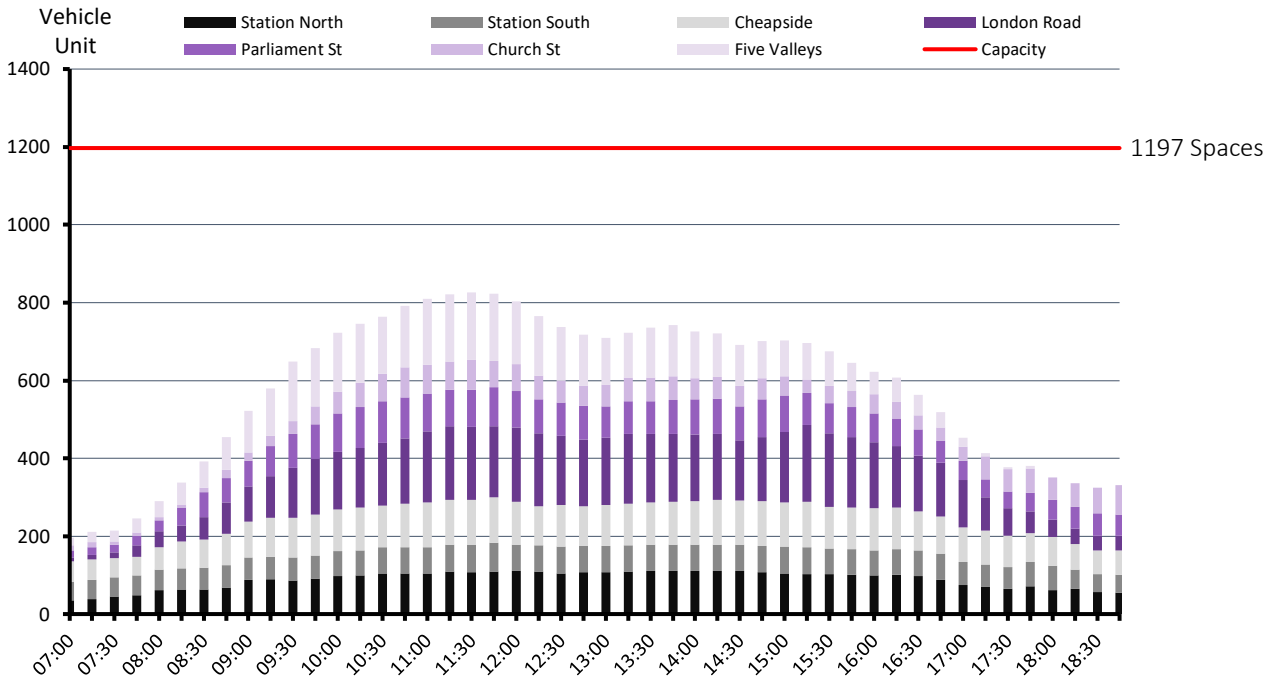
Figure 4.3: Existing Capacity at the Alternative Car Parks - Thursday 18th May



4.5.6 All alternative car parks operated below capacity on the Thursday with a maximum combined accumulation of 514 spaces out of a total capacity of 988 spaces. This provides a reserve capacity of 474 spaces, with the highest recorded accumulation being reached at 11:30am.

4.5.7 Cheapside car park had a maximum percentage occupancy of 61% on Thursday 18th May. If these occupied spaces were to be considered for reallocation within the reserve capacity provided at the remaining car parks, then Figure 4.4 below gives an indication of this.

Figure 4.4: Reserve Capacity at all Car Parks – Thursday 18th May



4.5.8 The red capacity line represents the total capacity of every car park observed in the study excluding Cheapside. These results indicate that when all the occupied spaces observed on Thursday the 18th May are removed from Cheapside and placed within the occupied alternative car parks at the same period, there is still reserve parking space capacity. The number of spaces used is 814, below the capacity by 383 spaces.

4.5.9 This provides a clear indication that the existing car parks have enough reserve parking spaces to provide for the typical occupation observed at the Cheapside car park.

Duration of Stay – Thursday 18th

4.5.10 Figure 4.5 below shows the average duration of stay recorded at Stroud railway station Northside on Thursday 18th May.

Figure 4.5: Stroud Station Northside – Duration of Stay Thursday 18th May 2023

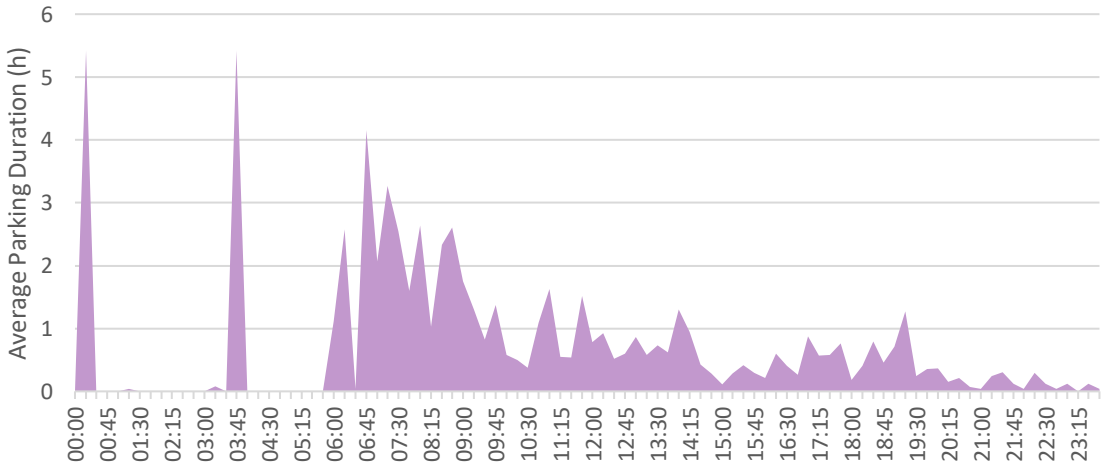
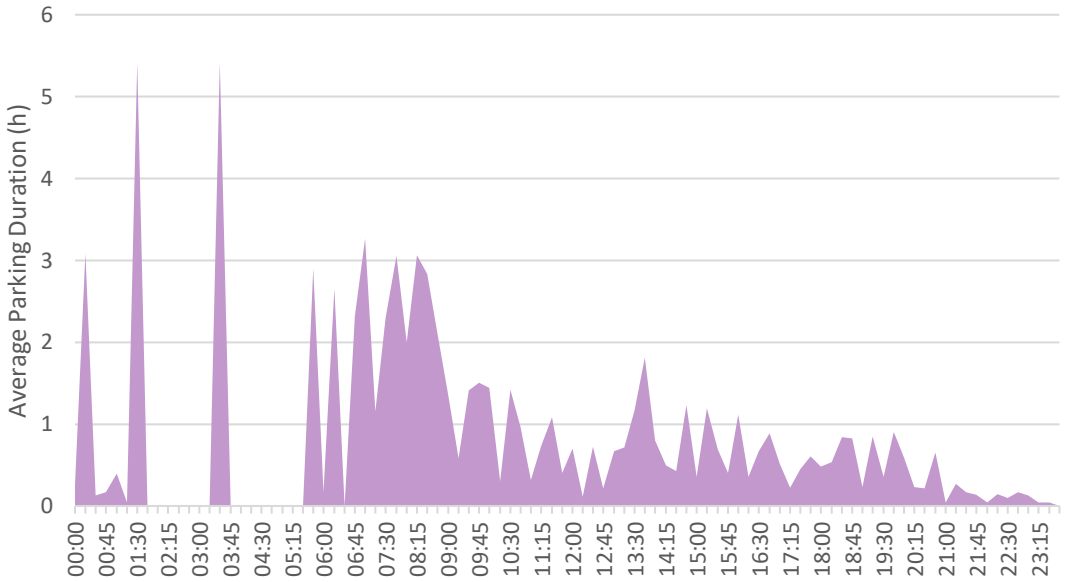


Figure 4.6: Stroud Station Northside – Duration of Stay Saturday 20th May 2023



4.5.11 The average duration is calculated across a 12-hour period, determining an average from when vehicles arrive. This result does hide some of the outliers, and so doesn't show where vehicles would park for more than 12 hours.

4.5.12 Despite this, it is evident that between 09:00 and 23:00, the average duration of stay observed at Stroud Station Northside is between 30 minutes and 1 hour. This indicates that the site is well used for short periods of time. Figure 4.6 replicates this result on the Saturday, indicating that the site is used for shorter stays on both the week and weekend.

4.5.13 Figure 4.7 and Figure 4.8 below shows the average duration of stay recorded at Cheapside on Thursday and Saturday

Figure 4.7: Cheapside – Duration of Stay Thursday 18th May 2023

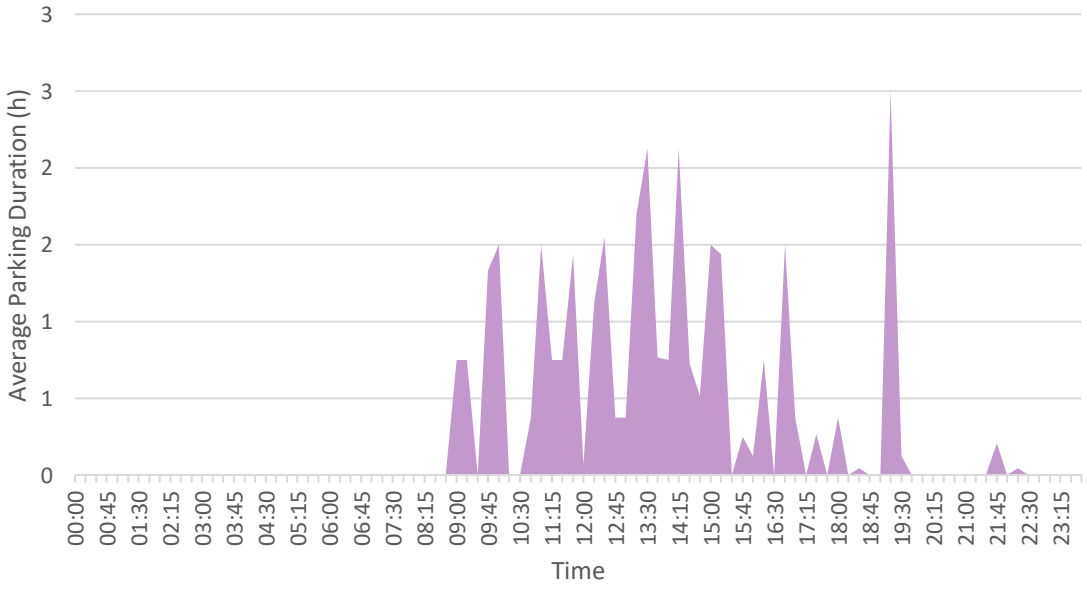
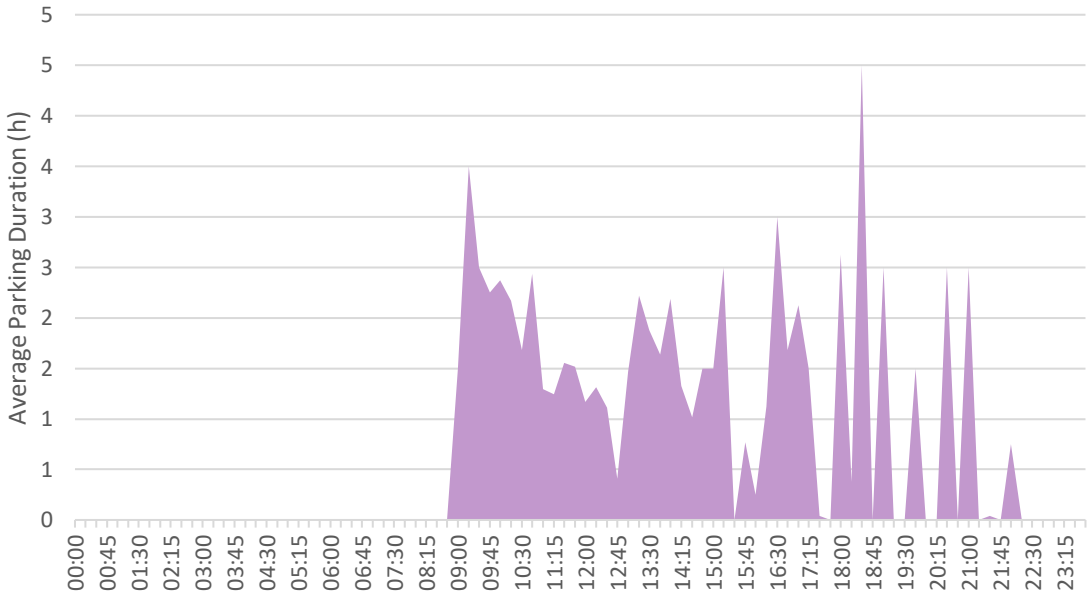


Figure 4.8: Cheapside – Duration of Stay Saturday 20th May 2023



4.5.14 Average parking durations were higher at Cheapside, ranging between 1 and 4 hours on the Thursday and Saturday, recorded at a total of 57% of arrivals. This indicates that the site is primarily used for longer term parking, likely to access the town centre.

On-Street Parking – Thursday 18th

4.5.15 An on-street parking survey of two streets adjacent to the alternative car parks was also undertaken. These streets are Parliament Street and Lansdown Street. Nelson Street was also part of the study but had to be disregarded due to waterworks closing the street into the foreseeable future.

4.5.16 Figures 4.9 and 4.10 show the on-street parking recorded every three hours from 09:00 to 18:00. It is clear that there is no reserve capacity at these sites, hitting capacity for majority of the day.

Figure 4.9: On Street Parking Parliament Street – Thursday 18th May

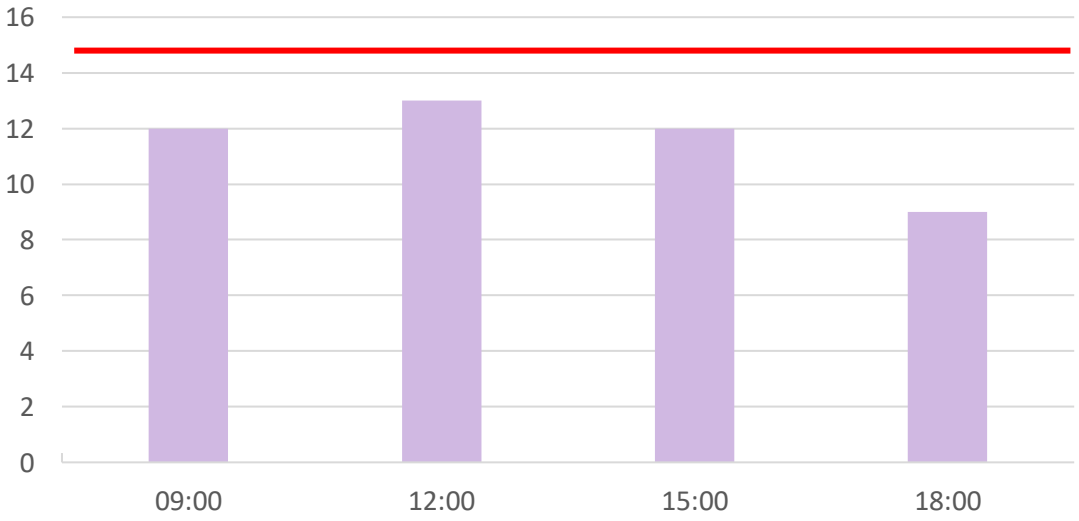
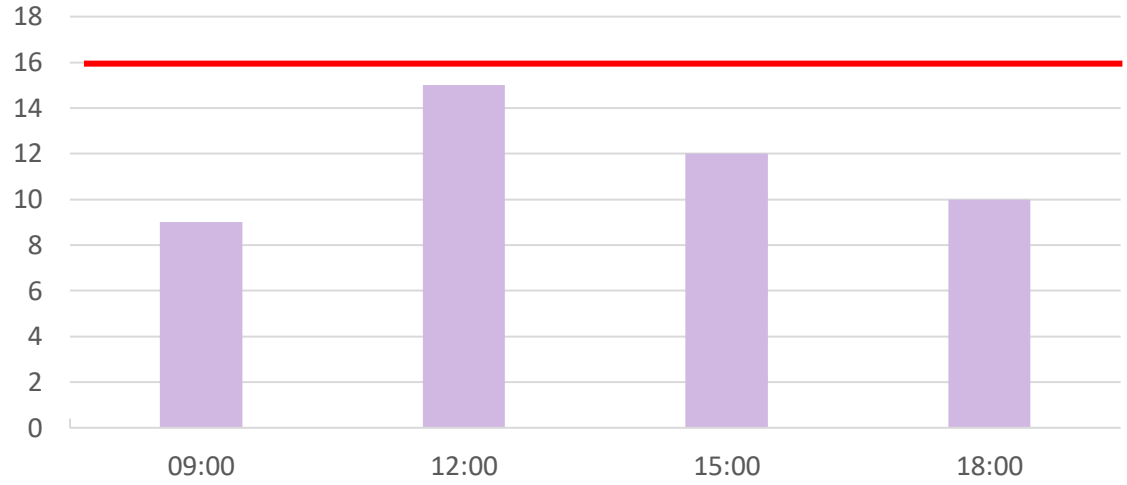


Figure 4.10: On-Street Parking Lansdown Street – Thursday 18th May



4.5.17 The maximum capacity at Parliament Street and Lansdown Street is 15 spaces and 16 spaces respectively. Occupancy is highest at 12:00 at both sites but is consistently full across the whole day. Several of the same vehicles were observed parked at these sites from between 09:00 and 18:00. It is not likely that the any residual parking demand could be reallocated to either of these locations.

Car Park Occupancy - Saturday 20th May 2023

4.5.18 The maximum occupancy at all alternative car parks was below capacity on Saturday 20th May. Southside Station car park and Cheapside were over capacity, with Northside recorded at maximum capacity at the peak period of the day. The percentage of each car park can be seen in Table 4.3 below.

Table 4.3: Maximum Occupancy across all Car Parks – Saturday 20th May

Car Park	Maximum Occupancy	Average Occupancy
Stroud Station – Southside	110%	79%
Stroud Station – Northside	100%	74%
Cheapside	112%	68%
MSCP Five Valleys	77%	41%
Parliament Street	91%	60%
Church Street	107%	64%
London Road (surface and Brunel Mall MSCP)	96%	48%

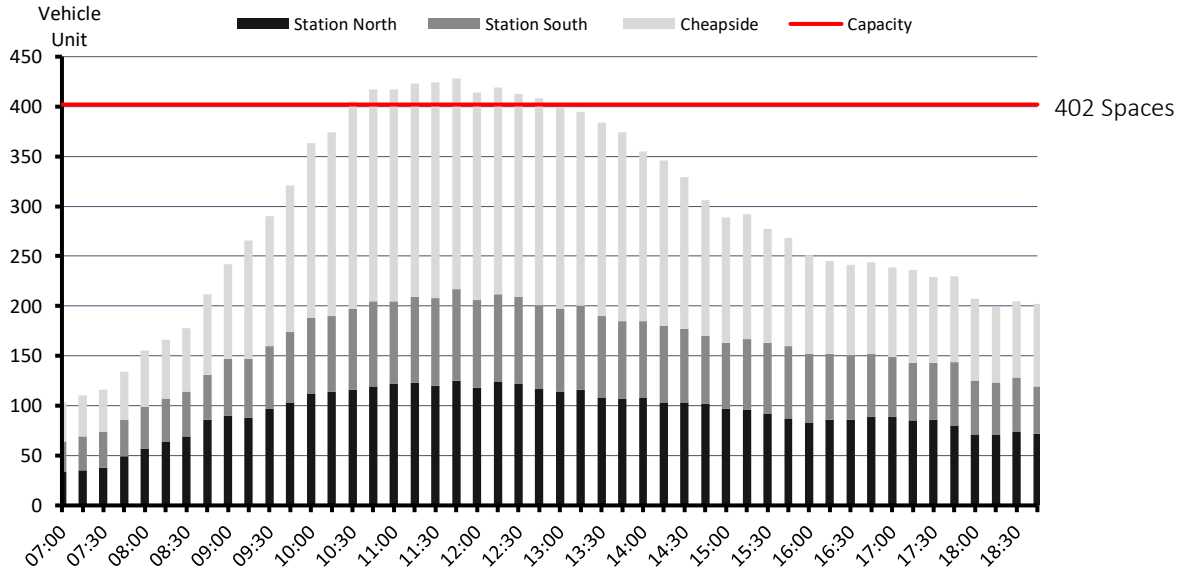
4.5.19 Cheapside car park and both railway station car parks are operating at or above capacity on Saturday 20th May. Station Southside and Cheapside car park provide an adequate capacity of marked bays, but also allow for opportunities to park illegitimately. Cars were observed parking adjacent to marked bays in these car parks at their busiest periods, pushing them slightly over identified capacity levels.

4.5.20 All the alternative car parks excluding Church Street were recorded below capacity on Saturday 20th May. Church Street was reported to be over capacity, however there is an additional private car park within the centre of this site which can accommodate up to 10 spaces. This is likely where the extra vehicles entered and parked. Parliament Street and London Road (surface and Brunel Mall MSCP) car parks were close to capacity, recorded at 91% and 96% occupancy respectively. These results indicate that the car parks are already well utilised, and this is reflected in the average occupancy percentages.

4.5.21 Average occupancy for the London Road surface and Brunel Mall MSCP car parks is 48%. This indicates that each car park has significant reserve capacity for long periods of the day but is pushed to capacity during peak periods.

4.5.22 The existing accumulation of Cheapside car park and the two station car parks is above capacity. Figure 4.11 shows how all the car parks combined are occupied during the day.

Figure 4.11: Existing Capacity at Cheapside and the Station Car Parks - Saturday 20th May

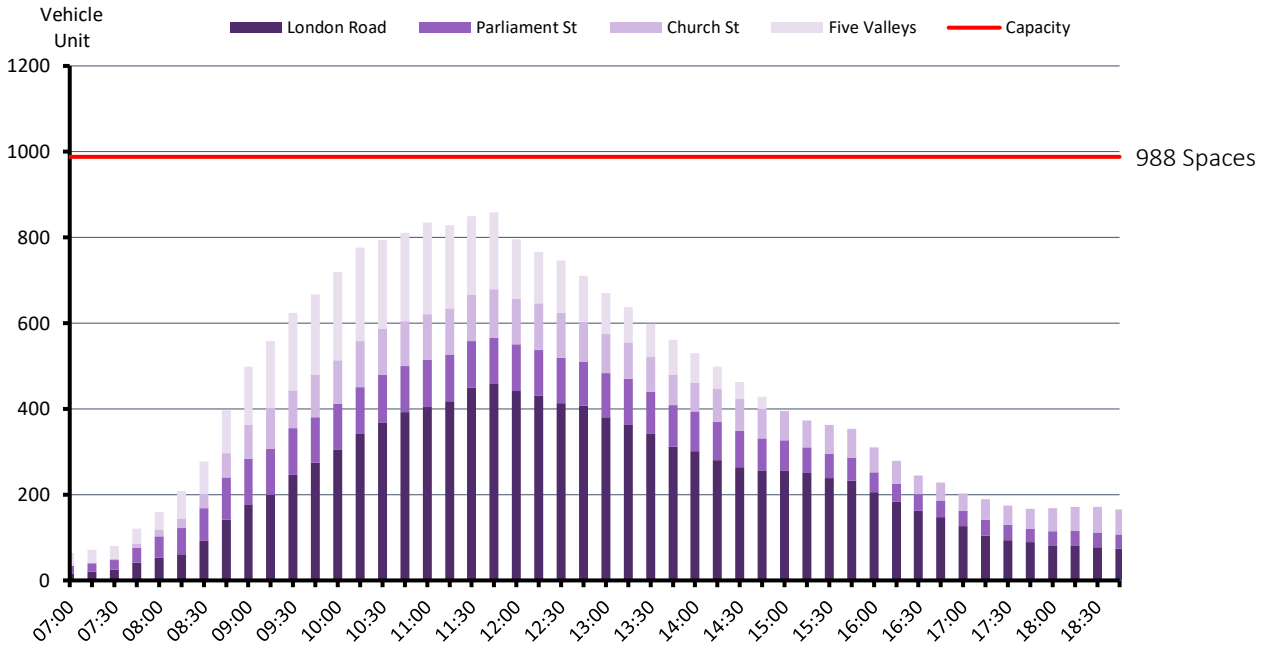


4.5.23 The combined capacity for Cheapside car park and the two station car parks is 402 spaces, as shown by the red capacity line. On Saturday the 20th of May, the peak accumulation exceeded the maximum capacity by 20 vehicles, indicating that the car parks experience a small amount of illegitimate parking. Station Southside and Cheapside have opportunities for this to occur due to the provision of space within the car parks that are outside of marked bays.

4.5.24 The average occupancy shows that both Station Southside and Cheapside are below capacity during most of the study period. This is represented in Figure 4.11 as the peak period ranges between 10:30 and 12:30 when people would arrive to attend the food and drink festival. It is realistic to assume that occupancy is likely to reduce on a typical Saturday.

4.5.25 When all the alternative car park spaces are accumulated, there is limited reserve capacity on Saturday 20th May. Figure 4.12 below shows the maximum occupancy recorded across a 12-hour period.

Figure 4.12: Existing Capacity at the Alternative Car Parks – Saturday 20th May

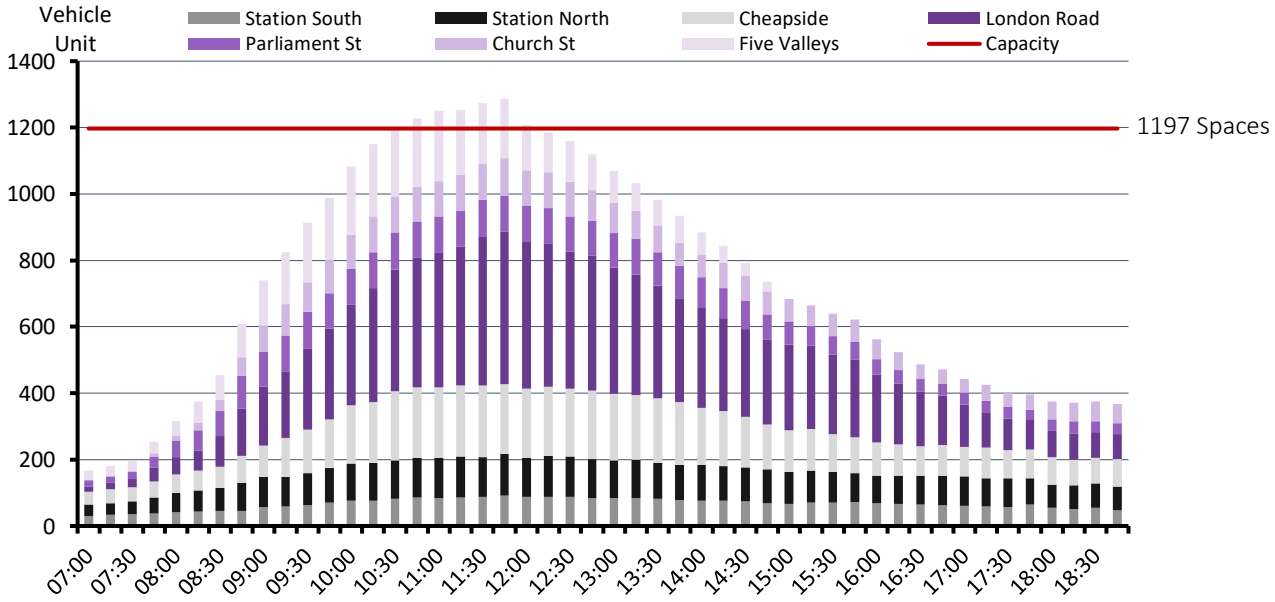


4.5.26 The maximum total occupancy of all alternative car parks is 859 vehicles. The combined capacity of all the car parks is 988 spaces, leaving a reserve capacity of 129.

4.5.27 Each car park was close to reaching capacity, with the busiest car park recorded to be London Road surface and Brunel Mall MSCP. The reserve capacity identified as 129 spaces is smaller than the existing capacity of Cheapside car park at 193 spaces.

4.5.28 Figure 4.13 below shows the total accumulation of all car parks compared to the total capacity excluding Cheapside. This provides a good indication of whether the surveyed occupancy would push the alternative car parks over capacity.

Figure 4.13: Reserve Capacity at all Car Parks – Saturday 20th May



4.5.29 The total parking accumulation recorded on Saturday the 20th May was 1287, pushing over the existing capacity of all other car parks by 90 spaces. This reserve capacity includes any additional spaces available in the two station car parks.

4.5.30 At present, during the Stroud Food and Drink Festival, removing demand at Cheapside car park and placing it into the alternative car parks pushes them over capacity. This scenario however is considered a worst case and does not demonstrate a 'typical' Saturday occupancy at any of the car parks.

On Street parking – Saturday 20th May

4.5.31 Figures 4.14 and 4.15 outline the on-street parking at Parliament Street and Lansdown Street.

Figure 4.14: On Street Parking Parliament Street – Saturday 20th May

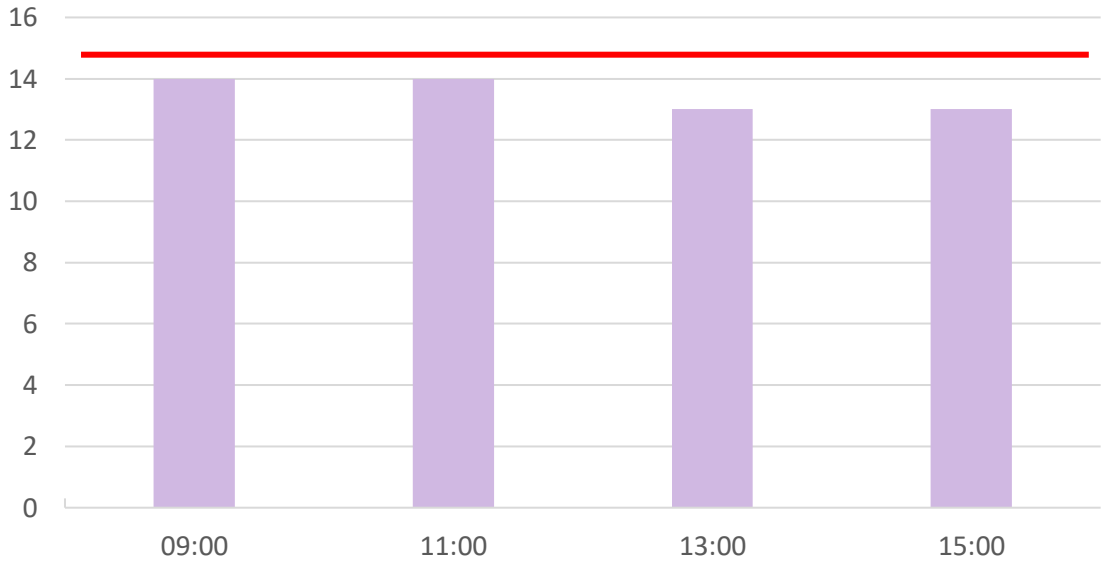
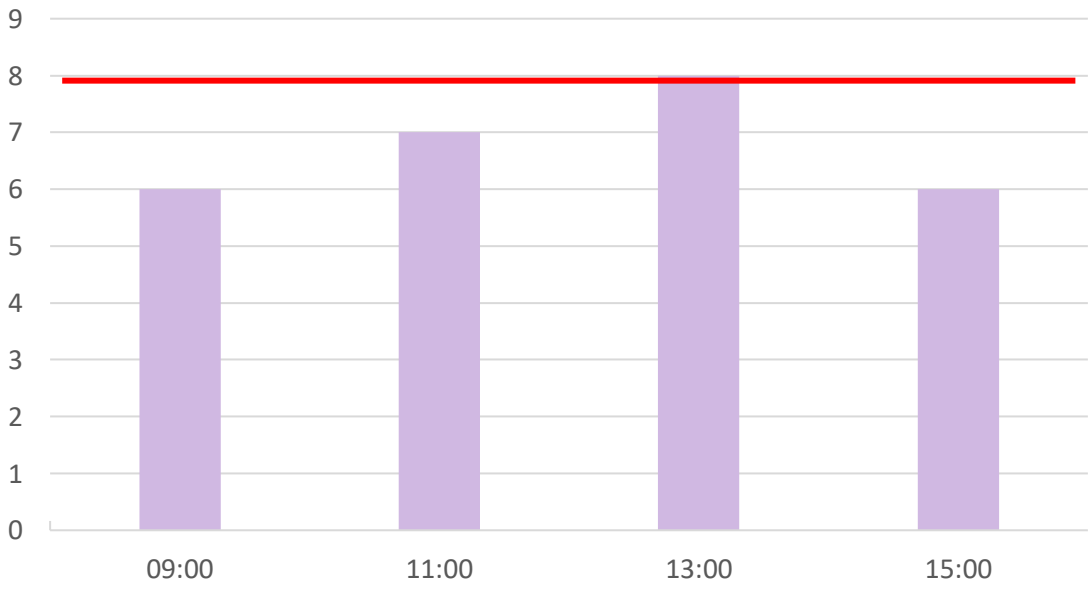


Figure 4.15: On-Street Parking Lansdown Street – Saturday 20th May



4.5.32 The Food and Drink Festival taking place on the Saturday, reduced the capacity at Lansdown Street from 16 available spaces to 8. It is clear that cars occupy spaces within Parliament Street and Lansdown for majority of the day, and so doesn't offer any reserve capacity to support additional demand.

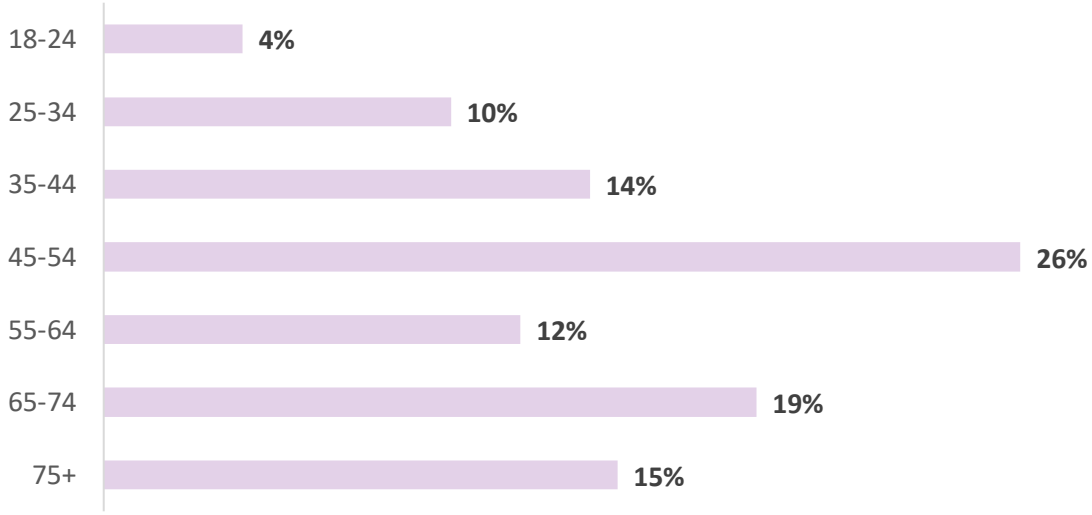
4.6 Interview Survey Results

4.6.1 An interview survey was undertaken on both the Thursday and Saturday to determine why people are using Cheapside and the two station car parks and whether it is solely for use of the railway station or if it is parking for access to Stroud town centre.

Thursday 18th May 2023

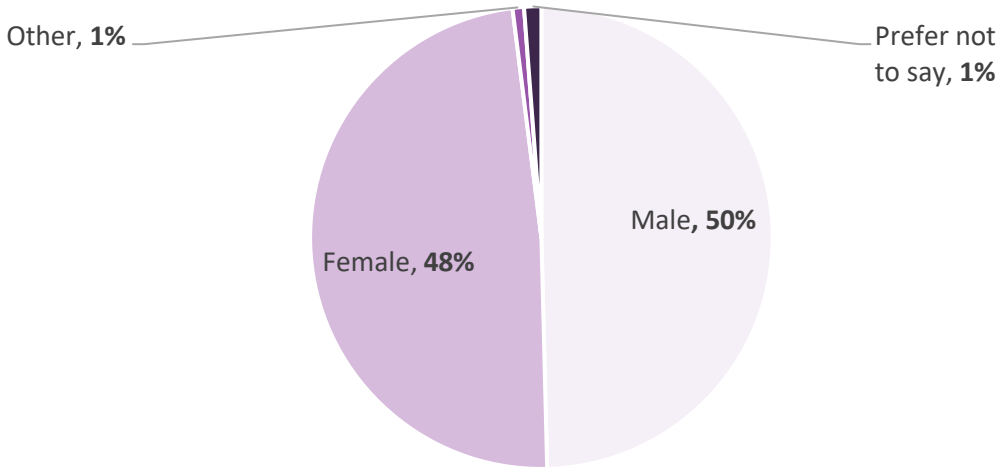
4.6.2 A total of 250 people responded to the survey on the Thursday between 07:00 and 19:00. These surveys were undertaken in Cheapside and the railway station car parks, providing a response rate of 20%.

Figure 4.16: Survey Results – What is your age?



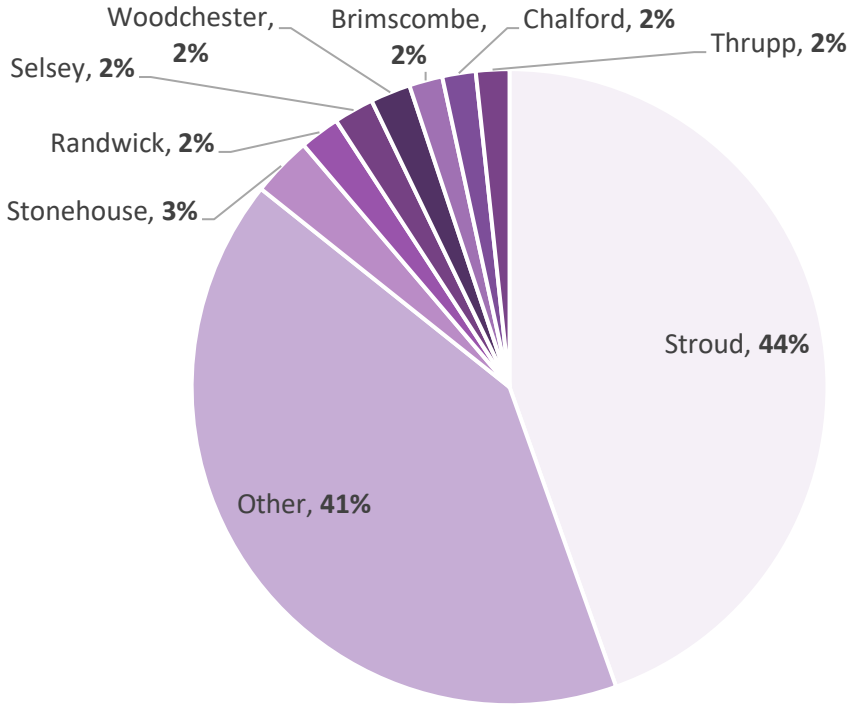
4.6.3 Figure 4.16 shows that 52% of respondents were aged between 35 and 64. A total of 34% were aged 65 or above with the remaining 14% aged 18-34. This split was also observed within the Saturday surveys.

Figure 4.17: Survey Results – What is your gender?



4.6.4 Overall, there was an even split between respondents when asked about their gender, indicating a good distribution of responses overall. This split was also observed within the Saturday surveys. These results can be seen in Figure 4.18.

Figure 4.18: Survey Results – What is your journey origin?



4.6.5 Majority of respondents (44%) said that their journey origin was Stroud. A significant proportion of responses were unique to each person and so have been represented as 'other' in Figure 4.18. Each location has been investigated to determine the county of origin, finding that (41) of 'other' responses originated in Gloucestershire, with several other respondents coming from Wiltshire, London, Woking, Somerset and Wales. A table showing all locations of origin can be seen in Appendix D.

4.6.6 A total of 54% of responses said that their journey destination was Stroud. This indicates that a large proportion of respondents parked in these car parks to use the town centre. A total of 30% of responses mentioned towns and cities on the national railway line from Stroud including London, Bristol, Swindon, Cheltenham to name a few. Of the 36 respondents that said 'other', there was a large variety of destinations, which can be seen in full in Appendix D. This included Gloucestershire, The Midlands, North Somerset, Wiltshire, Wales and Reading, the results of which can be seen in Figure 4.19 below.

Figure 4.19: Survey Results – What is your journey destination?

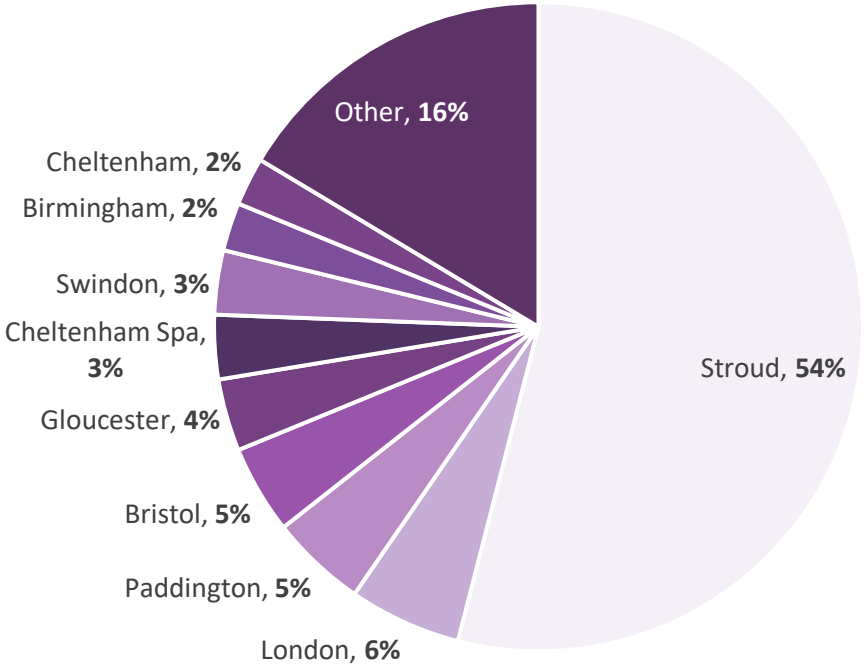
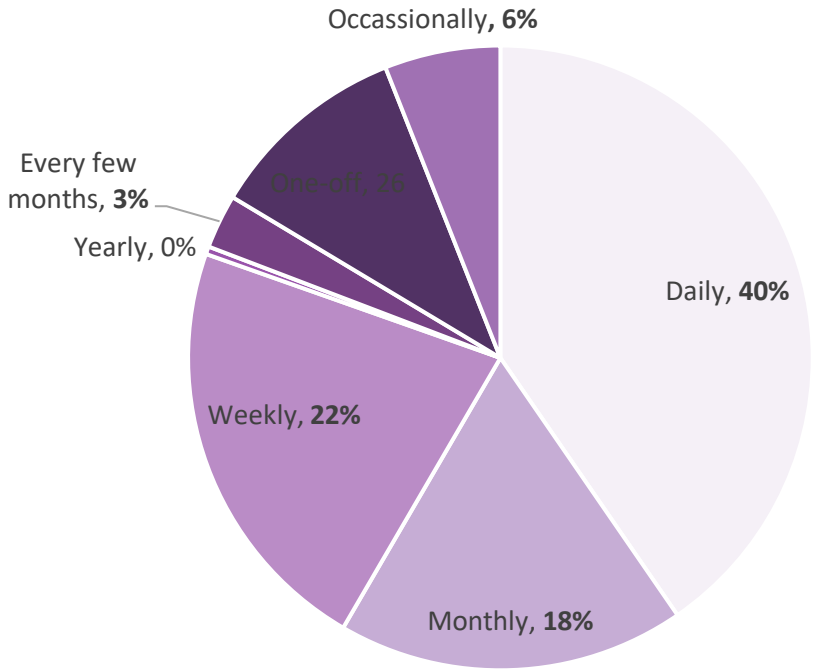


Figure 4.20: Survey Results - How often do you park at this car park?

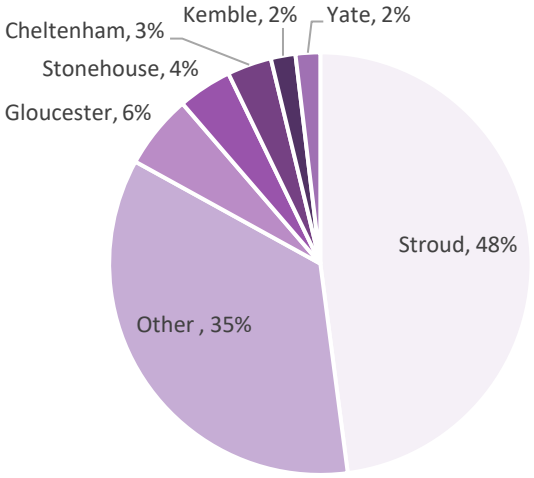


4.6.7 Figure 4.20 demonstrates how often people parked at the station car parks. A total of 40% of respondents said daily, with 22% responding weekly and 18% responding monthly. These results indicate that the car parks are visited regularly.

Saturday 20th May 2023

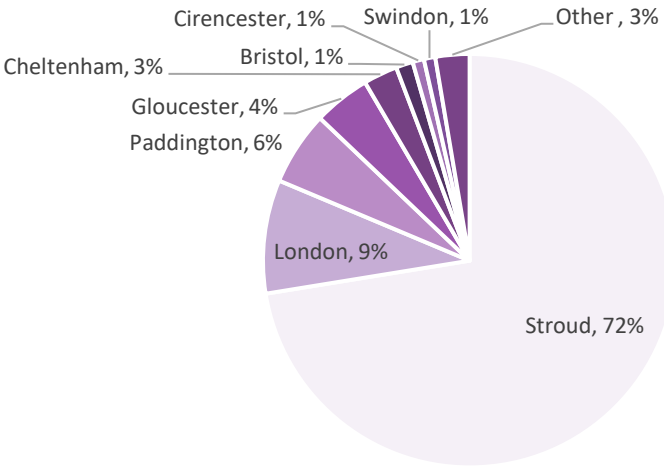
4.6.8 Figure 4.21 below outlines the journey origin of respondents at Cheapside and the two railway station car parks on Saturday the 20th of May. 48% of respondents said that their journey origin was Stroud, with 6% coming from Gloucester, 3% from Cheltenham and 2% from Yate. A significant proportion of responses were unique to each person and so have been represented as 'other'. These responses ranged from small towns in Gloucestershire to cities such as Manchester, but the results of which can be seen in Appendix D.

Figure 4.21: Survey Results – What is your journey origin?



4.6.9 A total of 72% of responses said that their journey destination was Stroud. This indicates that a large proportion of respondents parked in these car parks to use the town centre. A total of 30% of responses mentioned cities on the national railway line from Stroud including London, Bristol, Swindon, and Cheltenham to name a few. The results of this can be seen in Figure 4.22 below.

Figure 4.22: Survey Results – What is your journey destination?



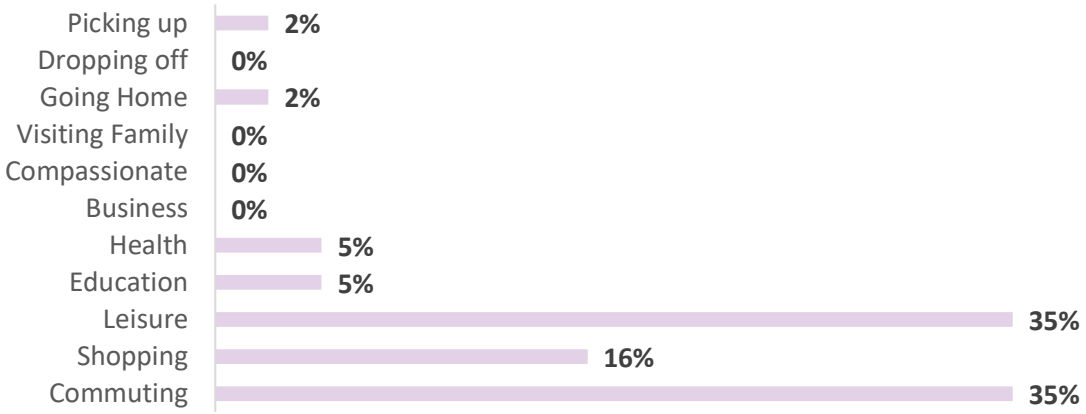
Individual Car Parks

4.6.10 Part of the analysis undertaken was looking at people's reason for parking at Cheapside or a railway station car park. This helped to determine whether they were using the car park for railway station access or to use the town centre. Additionally, it helped to confirm the main car parks used for picking up and dropping off.

Thursday 18th May 2023

4.6.11 Figure 4.23 below shows the results of those who used the Stroud railway station northside car park.

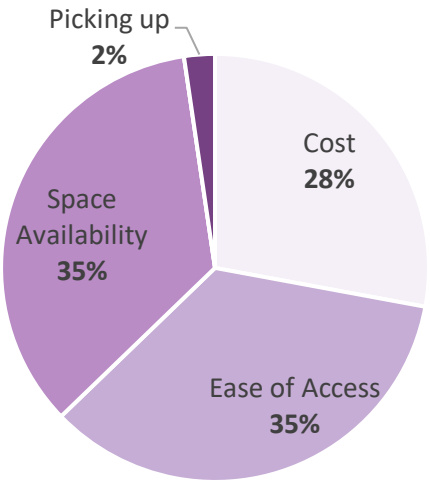
Figure 4.23: Stroud Station Car Park (N) Journey Purpose – Thursday 18th



4.6.12 In total, 35% of respondents said that they parked in the railway station north car park to commute. Differentiation was not made between commuting via train or commuting to Stroud, so it is realistic to assume that the results represent a mixture of both. Leisure and shopping were the second most popular responses, totalling 35% and 16% respectively. This suggests that a large proportion of people parking in the car park are parking to walk to the town centre. Only 2% of respondents said they used the north car park to pick up.

4.6.13 When asked what their main reason for parking in the car park was, there was an even split between responses. This can be seen in Figure 4.24 below.

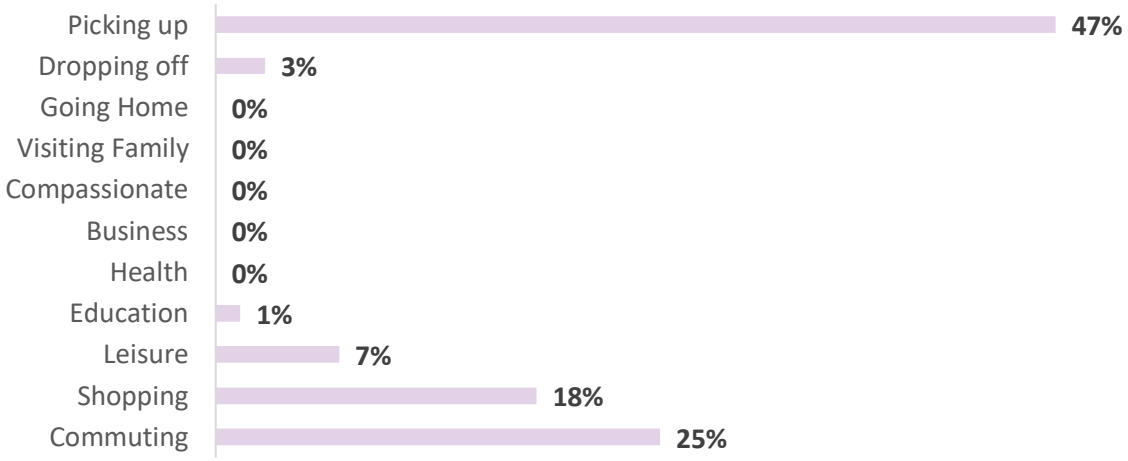
Figure 4.24: Stroud Station Car Park – Reason for parking – Thursday 18th



4.6.14 Several respondents (2%) mentioned picking up as a main reason for parking. Cost received the lowest percentage of responses, likely due to the £4 charge for all day parking on a weekday.

4.6.15 In contrast, Stroud railway station car park south was well utilised for picking up and dropping off passengers. The analysis of this car park can be seen in figure 4.25 below.

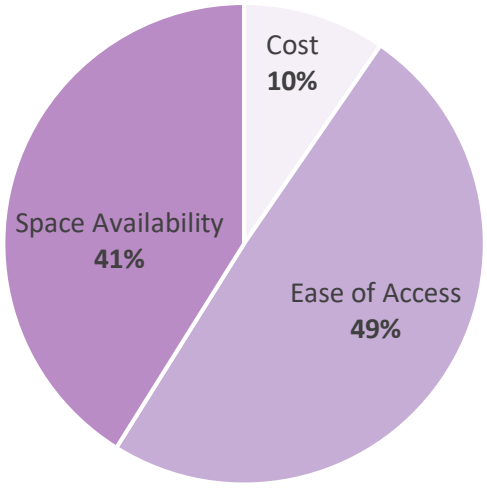
Figure 4.25: Stroud Station Car Park (S) Journey Purpose – Thursday 18th



4.6.16 50% of respondents stated that they were using this car park to pick up or drop off passengers to the station. 25% of respondents said they were using the car park to commute and 18% were using it to shop. Based on these results, it is clear that majority of respondents used the car park to access the railway station, but there is still a proportion of users who are utilising the car park to access the town centre.

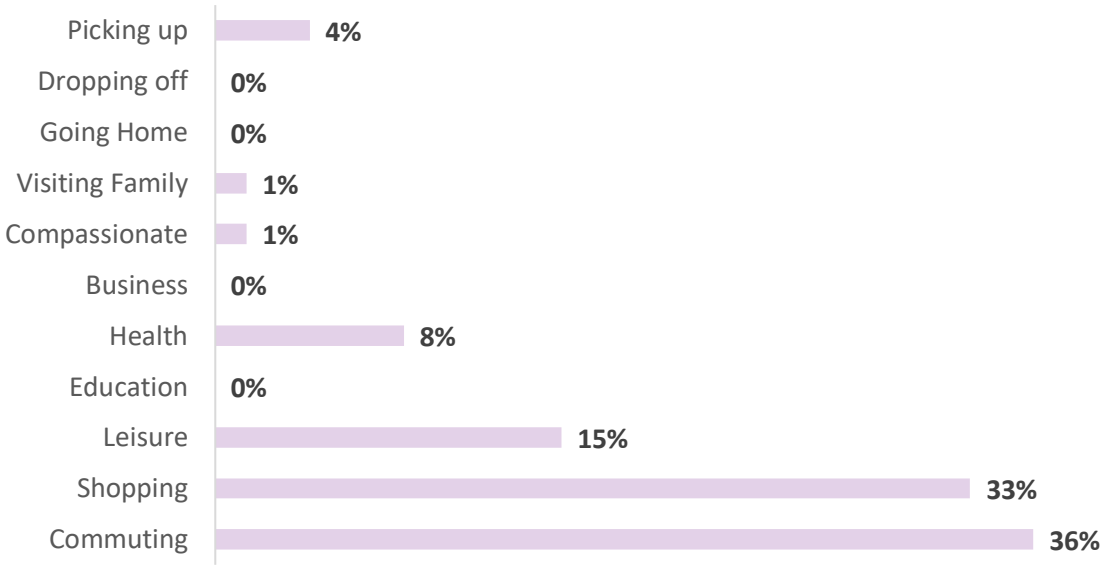
4.6.17 Similarly, to Stroud railway station north car park, cost received the lowest response when asked what their main reason for parking at the station was. This is likely attributed to the parking charge of £4 for whole day parking. The results of this can be seen in Figure 4.26 below.

Figure 4.26: Stroud Station South Car Park – Reason for parking – Thursday 18th



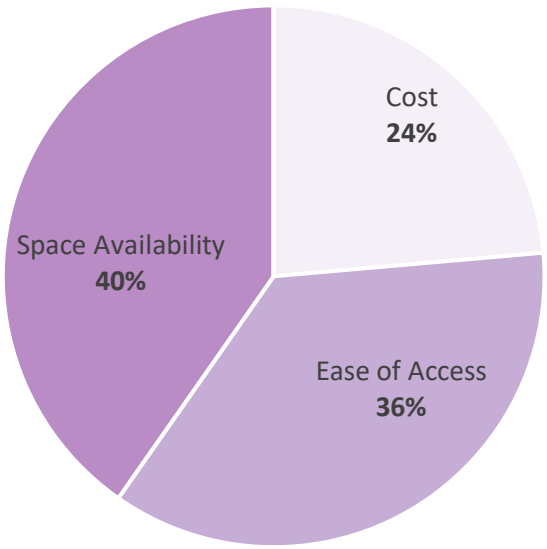
4.6.18 Figure 4.27 below shows that 4% of respondents park at Cheapside to pick up from the station. A total of 48% respondents said that their journey purpose was leisure or shopping, and 36% responded that they were commuting. This suggests that majority of those parking at Cheapside primarily used it for access to the town centre over access to the train station.

Figure 4.27: Cheapside Car Park - Journey Purpose – Thursday 18th



4.6.19 In addition to this, when respondents were asked what their main reason for parking in this car park was, 40% said space availability. The results of this can be seen in Figure 4.28 below.

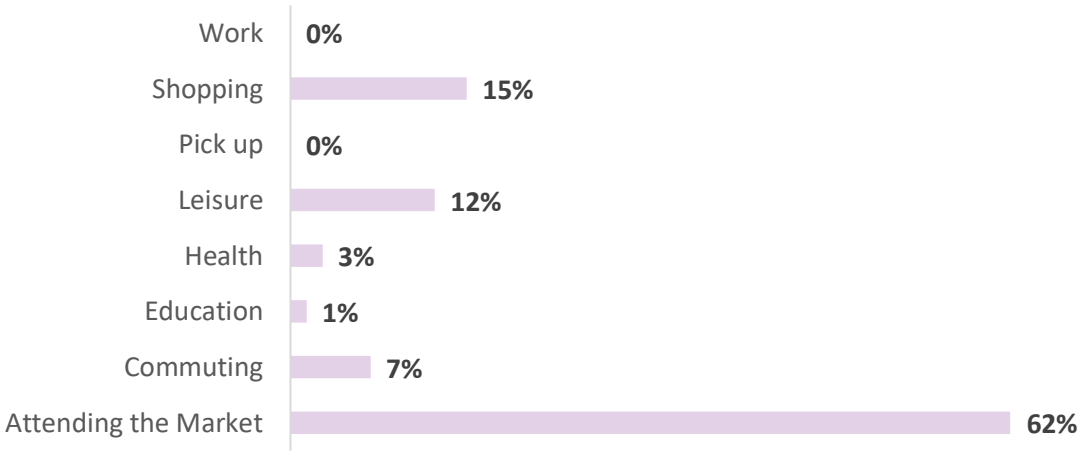
Figure 4.28: Cheapside Car Park – Reason for parking – Thursday 18th



Saturday 20th May 2023

4.6.20 Respondents who parked in Stroud Station car park north were asked what their journey purpose on Saturday the 20th of May was. Of those who responded, 62% stated that they were there to attend the market and food and drink festival. A further 15% responded shopping, with 12% responding leisure. This is a total of 89% who were parked to go into Stroud town centre. These responses can be seen in Figure 4.29 below.

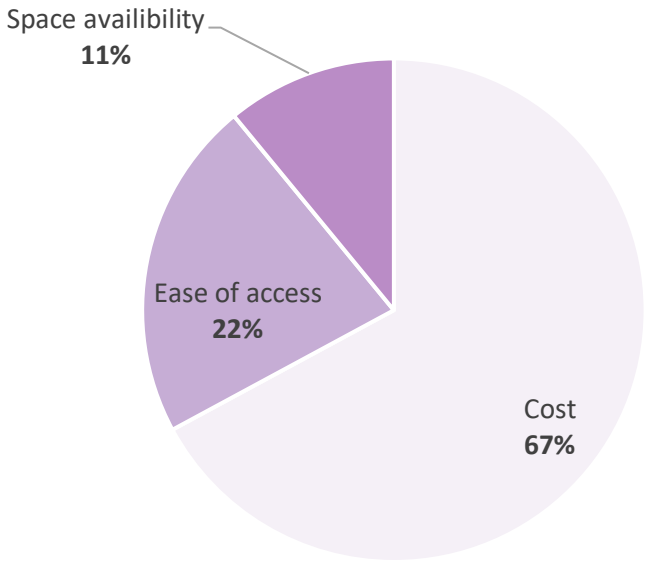
Figure 4.29: Stroud Station Car Park (N) Journey Purpose – Saturday 20th May



4.6.21 Figure 4.30 below shows how people who parked in Stroud railway station car park north responded when asked why they chose to park there. 67% of respondents said cost, with only 11% responding space availability. The Stroud Station car parks cost £2.80 to park all day on a weekend and so are the cheapest car parks within the town centre.

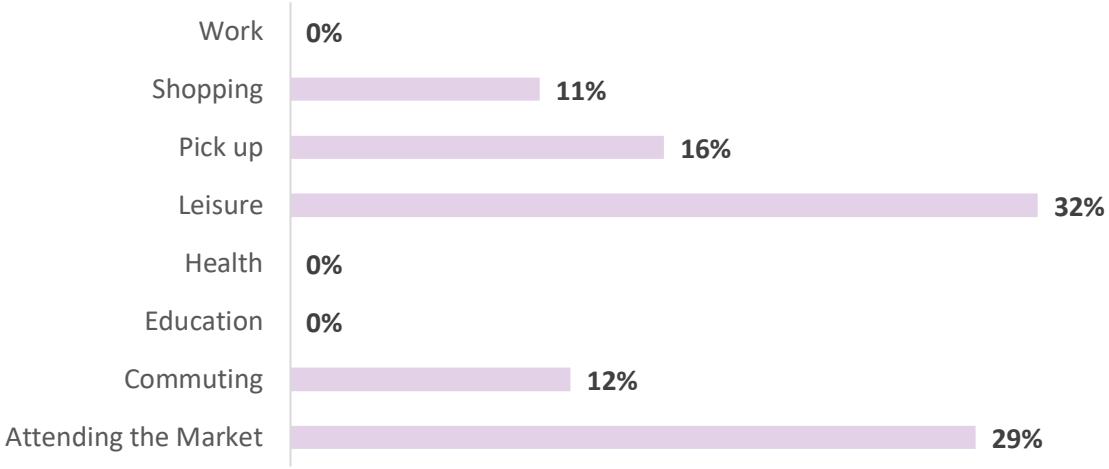
Figure 4.30: Stroud Station Car Park (N) Reason for Parking – Saturday 20th May

Figure 4.31



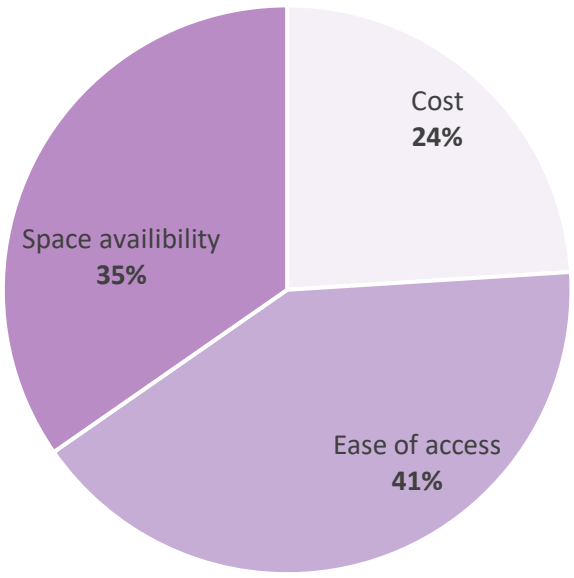
4.6.22 Respondents who parked in Stroud railway station car park south were asked what was their journey purpose on Saturday the 20th of May. Of those who responded, 12% said commuting and 16% said picking up, indicating that the railway station is still well used by people parking on the southside of the station. Despite this, 29% of respondents said they were attending the market, with a further 32% and 11% there for leisure or to shop respectively. This indicates that the car park is still a key location to access the town centre. The results are shown in Figure 4.31 below.

Figure 4.31: Stroud Station Car Park (S) Journey Purpose – Saturday 20th May



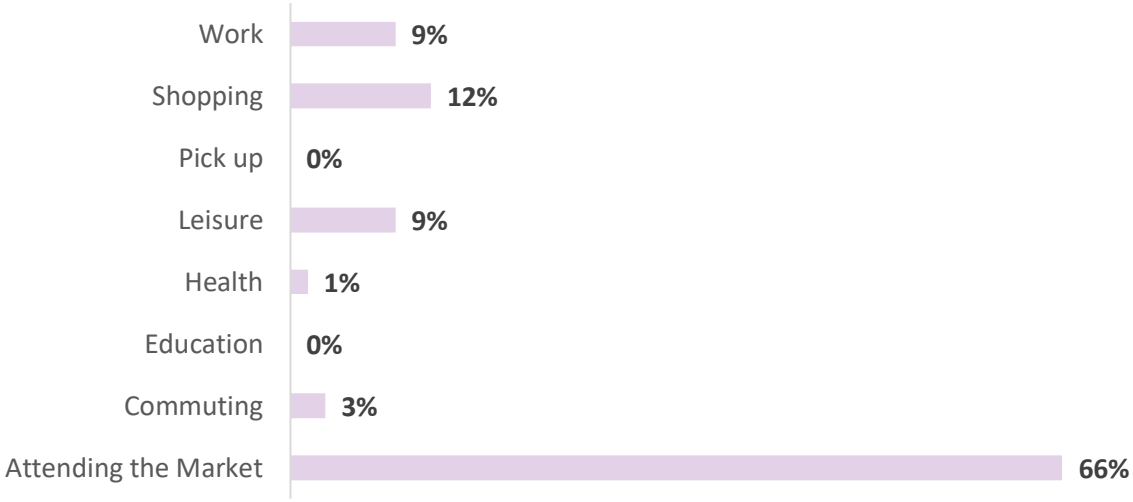
4.6.23 There was even split between responses when asked what their reason for parking at Stroud railway station car park south was. The results of this can be seen in Figure 4.32 below.

Figure 4.32: Stroud Station Car Park (S) Reason for Parking - Saturday 20th May



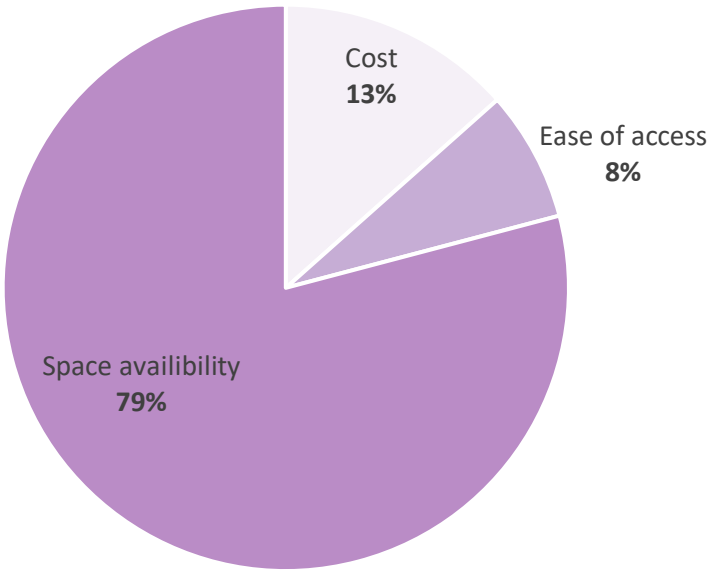
4.6.24 The majority of respondents (66%) who parked in Cheapside car park said that they were there to attend the market and food and drink festival. A further 21% said shopping or leisure, indicating that Cheapside was primarily used to access the town centre. This is supported by only 3% of respondents stating they were there for commuting. The results of this can be seen in Figure 4.33 below.

Figure 4.33: Cheapside Journey Purpose – Saturday 20th May



4.6.25 A total of 79% of respondents who parked in Cheapside said that they chose to park there due to space availability. Cheapside has a total capacity of 193 total spaces, and so indicates that users chose to park where spaces were perceived to be plentiful. The results of this can be seen in Figure 4.34 below.

Figure 4.34: Cheapside Reason for Parking - Saturday 20th May



5 DISCUSSION

5.1 Overview

5.1.1 The following section will provide an overview of the analysis undertaken and what this means at each site. Using the existing available data and information discussed in the report, we will outline some recommendations for improvement measures in Stroud town centre and for the railway station. The following areas will be discussed:

- Analysis of the findings at Cheapside car park;
- Analysis of the findings at all railway station car parks;
- Analysis of the findings at all the alternative car parks;
- Masterplan parking requirements; and
- Further work that needs to be undertaken.

5.2 Cheapside Car Park

5.2.1 Data analysis of Cheapside car park revealed that overall demand did not exceed parking provision on a typical weekday. The maximum occupancy recorded was 61%, reaching a maximum overall accumulation of 117 cars during the hours of 07:00 and 19:00. In addition, cars were recorded to park at Cheapside for an average duration of two to three hours. These results suggest that typically, users would not park at Cheapside to access the train station but were parking to access the town centre.

5.2.2 This assumption is supported by the interview survey results. Of those who parked in Cheapside, 48% said that the purpose of their journey was for shopping or leisure on the Thursday. On the Saturday, 87% of respondents who parked at Cheapside were in Stroud to attend the market or food festival or were there for leisure and to shop. These results demonstrate that the majority of users who park in Cheapside do so to access the town and not the railway station.

5.2.3 Based on these results, it is evident that demand is low enough on a typical weekday to potentially reallocate this car parks spaces to the alternative car parks. However, this is not observed on the Saturday, as between the peak hours of 10:30 to 12:30 the results show that the car park is over capacity with a maximum occupancy of 112%. This demand is too high to reallocate into the alternative car parks within the study area but as has been identified this data does not represent a 'typical' Saturday weekend day.

Recommendations

5.2.4 As the results of the Saturday analysis can be considered a worst-case scenario for the Cheapside car park, mitigation measures would need to be implemented to ensure that high demand on event days and market days is addressed. One of the key measures that would help to reduce overall demand at the busiest periods would be to implement active travel promotion and travel planning incentives. This would aid modal shift by reducing the reliance on private vehicles at the railway station.

5.2.5 One measure for consideration is the implementation of a mobility hub at the railway station itself, with the overall purpose of the design to reduce the need for car parking and as a result free up capacity in the alternative car parks. The guidance outlined in section 2 of this report defines a mobility hub as a recognisable place with an offer of different and connected transport modes supplemented with enhanced facilities and information features to both attract and benefit the traveller. Key elements of the design could include linking to a main bus corridor to the more residential areas within Stroud, significant provision of cycle parking and mobility related infrastructure such as car club parking and e-bikes or scooters.

5.3 Railway Station Car Parks

Stroud Railway Station – Northside

5.3.1 Data analysis of Stroud railway Station northside demonstrated that parking occupancy is reaching capacity on both the Thursday and the Saturday, recorded at 89% and 100% respectively. The average parking duration observed between 10:00 and 23:00 on each day was between 30 minutes to an hour. These results indicate that the car park is already very well utilised between 07:00 and 19:00, but the majority of users do not park for long periods of time. Additionally, based on the interview survey results it is clear that a large percentage of people parking in the railway station northside do so to access the town centre. This is observed in the average duration of stay results between 07:00 and 09:00, where people park for an average of 3 hours and so are likely using the car park to access the town centre.

5.3.2 The car park reached capacity on the Saturday. When users were asked why they chose this car park, 67% of the response was due to cost. Table 4.1 highlighted that the weekend charge to park in this car park all day is only £2.80 and so could explain why the car park was so busy on this day.

Recommendations

5.3.3 As discussed from the results of the interview surveys, parking is made available and desired due to the reasonable all-day charge of £2.80. This is the cheapest option of all car parks on the Saturday, and so is likely to be chosen first over the other car parks within the area. It is suggested that reviewing the car parking charges and lengths of stay across all car parks could make other car parks more attractive to users. This would encourage users to park in other locations, thus balancing demand, or choose a different mode of transport to access the railway station. The overall goal of this intervention is to aid modal shift.

Stroud Railway Station – Southside

5.3.4 The results of the parking accumulation analysis demonstrated that Stroud railway station southside is well utilised, reaching a maximum occupancy of 88% on the Thursday and exceeding total capacity by 10% on the Saturday. It is likely that visitors would only park outside of marked bays during the peak periods, remaining for short periods of time. The results of the interview surveys demonstrated that 50% of respondents who parked here were doing so to pick up or drop off. There is space directly in front of the pedestrian entrance and exit points to the railway station platforms where vehicles were observed to stop to facilitate this.

Recommendations

5.3.5 Stroud railway station southside has a £2.80 all day charge, the same as railway station north. By reviewing the car parking charges and lengths of stay across the car parks, this could aid in making alternative car parks more attractive to users.

5.3.6 In addition to this, an increase in the number of secure cycle parking spaces and allocating spaces for car clubs would encourage users to park their bicycles for free at the station. This could be implemented as part of the mobility hubs concept, designed to reduce the number of private vehicles parking as research suggests that the use of car clubs reduces private vehicle parking by 16 spaces.

5.4 Alternative Car Parks

5.4.1 The alternative car parks addressed in this study were Brunel Mall MSCP, London Road surface car park, Five Valleys MSCP, Church Street and Parliament Street. Data analysis of these car parks demonstrated that when total demand for all five was accumulated, reserve capacity was available on both Thursday and Saturday. On Thursday, the maximum combined accumulation totalled 523 spaces out of a total capacity of 988 spaces. This provides a reserve capacity of 465 spaces, which would allow for the potential reallocation of all existing spaces in the Cheapside car park.

Lond Road Surface Car Park and Brunel Mall MSCP

Recommendations

5.4.2 Based on the results of the parking accumulation analysis, London Road surface car park and Brunel Mall MSCP offer some reserve capacity to reallocate spaces from Cheapside. Despite this, walking routes to the station aren't very direct, and issues highlighted in existing reports state that the footway running adjacent to the car park on London Road is too narrow for most users.

5.4.3 An additional pedestrian exit and entrance point is proposed to be introduced at the western edge of the Multi-Storey car park. If this was introduced, it is anticipated that most users would not walk to the station via London Road as this deviates from the pedestrian desire line. The exit point at Brunel Mall MSCP would offer a safe and more direct link to the railway station entrance through the northside railway station car park that is within as easy access as Cheapside car park.

5.4.4 This improvement should be introduced in conjunction with pedestrian improvements to the railway station northside's eastern edge. At present there are no pedestrian facilities between this car park and the station entrance, creating an intimidating environment for anyone using it. The existing pedestrian infrastructure at Stroud railway north could be extended into the eastern edge, providing footpaths between the station and the car park and dropped kerbs at each entrance.

Parliament Street Car Park

Recommendations

5.4.5 Parliament Street car park is close to reaching maximum occupancy based on the existing available data. Despite this, its close proximity to the station offers a desirable location to reallocate a small proportion of parking. Road users would benefit from the introduction of VMS signage at key links into the town centre to declare the number of available spaces. This could be implemented on London Road (A419) and Bath Road (A46), to redirect road users towards the car park.

Church Street Car Park

Recommendations

5.4.6 Church Street car park offers a direct link and quickest route into the town centre. It offers cheap short stay parking for users who wish to access the town centre. Based on the results of the survey data, it is evident that users of the station car parks and particularly Cheapside, are staying for up to 3 hours on a weekday and weekend to access the town.

5.4.7 Provision of VMS Signage on main routes into the town could help to redirect road users to wards this car park by highlighting the direct access to the town centre.

Five Valleys MSCP

Recommendations

5.4.8 Five Valleys MSCP offers direct and efficient access to the railway station with a higher available capacity than the station car parks. Despite this, pedestrian routes are unclear, due to the lack of signage linking the two points. Users would benefit from the introduction of wayfinding signs to the exit of the Five Valleys Shopping Centre directing pedestrians to the train station. There are three possible exit points, so signage should ensure that all are covered to efficiently direct users.

5.5 Additional Survey Analysis

Saturday 18th November 2023

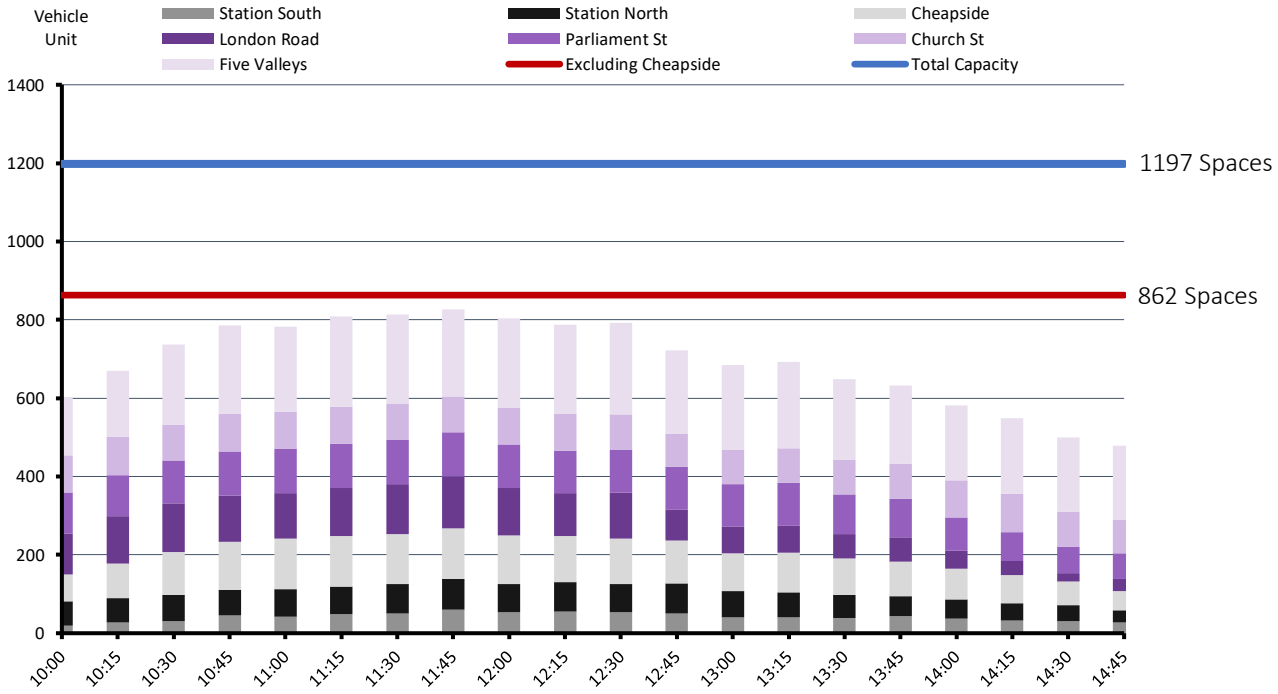
5.5.1 As briefly discussed in the methodology section of this report, an additional survey was undertaken on Saturday 18th November 2023 to represent a 'typical Saturday' in addition to the worst-case scenario set out on Saturday 20th May. This survey took counts at all the car parks but does not include the Brunel Mall MSCP as it was closed at the time, reducing the total capacity of all car parks in this study to 1056 spaces. The full findings of this survey can be seen in Appendix B, but a brief summary is set out below.

5.5.2 This additional parking study was undertaken during the peak period of the weekly farmers market between 10:00 and 15:00. Data analysis demonstrated that all car parks were operating below capacity, with Cheapside only reaching a maximum occupancy of 67%, leaving a 33% reserve capacity. All alternative car parks had a combined occupancy of 86%, offering a 14% reserve capacity.

5.5.3 The maximum combined occupancy of all car parks was 827 spaces out of a total capacity of 1055 spaces, which provided a 22% reserve capacity. Removing the capacity of Cheapside reduces the total available capacity to 862 spaces, so when the maximum occupancy is accumulated there is a reserve capacity of 35 spaces (4%). This demonstrates that the observed maximum occupancy of Cheapside could be reallocated to all other car parks to result in a 96% occupancy.

5.5.4 It is important to note that this study also excluded the Brunel Mall MSCP as a result of it's closure, so although parking reallocation pushes each car park to capacity, this is a worst case scenario. With Brunel Mall MSCP open, there would be an additional 335 spaces of reserve capacity to redistribute parking, which would actually provide 31% reserve capacity. This can be seen on Figure 5.1 below.

Figure 5.1: Reserve Capacity at all Car Parks including Brunel Mall MSCP



November and December 2024

5.5.5 At the request of GCC and Stroud District Council (SDC), an additional set of surveys was undertaken in November and December in order to demonstrate if there is sufficient parking within Stroud to accommodate the reallocation of Cheapside on another 'typical' Saturday and on the build up to the Christmas period. The full findings of the survey can be seen in Appendix C, but a summary of these results can be seen below.

5.5.6 This additional parking study was undertaken between 07:00-19:00 during an average weekday, Thursday 21st November 2024 and the weekly farmers market, Saturday 23rd November 2024. These surveys replicate the initial November surveys done in 2023, but more accurately reflect what a 'typical' Saturday might look like.

5.5.7 Data analysis demonstrated that majority of car parks were operating below capacity, with Cheapside approaching capacity at a maximum occupancy of 98% on both days in November. All alternative car parks had a maximum combined occupancy of 60% on the Thursday and 77% on the Saturday indicating adequate reserve capacity for reallocation of space and although Cheapside was approaching capacity, it highlights that all these spaces can be accommodated elsewhere in Stroud.

5.5.8 The surveys undertaken in December demonstrated similar reserve capacity and highlight the utilisation of parking across the Town Centre during one if its busiest periods. The Stroud Goodwill festival took place on Friday evening and daytime Saturday, hosting several outdoor events and attractions and offering late night shopping on the Friday. The surveys took place between 07:00-22:00 on Friday and between 07:00-19:00 on Saturday in order to accurately analyse parking occupancy for this period.

5.5.9 Data analysis demonstrated that the combined accumulation of all alternative car parks was 86% on Friday and 77% on Saturday. The maximum occupancy at Cheapside was recorded to be 98% and 73% respectively on these dates, so if this parking was to be reallocated to all the alternative car parks, there would be sufficient space to accommodate this.

5.5.10 These results highlight that there is sufficient capacity to accommodate parking from Cheapside elsewhere during Stroud's busiest periods, offering a relative comparison with the other busy and 'worst case' scenario demonstrated on Saturday 20th May 2023.

Summary

5.5.11 The potential reserve capacity of all car parks, excluding Cheapside, in the entire study is set out in Table 5.1.

Table 5.1: Combined Potential Reserve Capacity without Cheapside – Entire Study

	Thurs 18th May 2023	Sat 20th May 2023	Sat 18th Nov 2023	Thurs 21st Nov 2024	Sat 23rd Nov 2024	Fri 6th Dec 2024	Sat 7th Dec 2024
Capacity (all car parks excluding Cheapside)	1197 spaces	1197 spaces	862 spaces	1197 spaces	1197 spaces	1197 spaces	1197 spaces
Maximum Occupancy	814 spaces	1287 spaces	827 spaces	925 spaces	1177 spaces	1193 spaces	1073 spaces
Potential reserve capacity	383 spaces	-90 spaces	35 spaces (370 including Brunel Mall MSCP)	272 spaces	20 spaces	4 spaces	124 spaces

5.5.12 The results demonstrate that when Cheapside parking is removed and occupancy is reallocated to other car parks, there is generally sufficient space to accommodate the demand. Only one day experienced high utilisation that resulted in reallocation pushing parking over capacity. Based on the December survey results, this scenario is still considered a worst-case. Therefore, it is recommended that options be discussed to manage demand during large events that could cause demand to exceed capacity.

5.6 Further Work

5.6.1 The data collected aimed to highlight the existing car park occupancy on a typical Thursday and Saturday. Due to the Food and Drink Festival that took place on Saturday 20th May, occupancy results are higher than anticipated and so could be considered a worst-case scenario.

5.6.2 Additional surveys were undertaken on Saturday 18th November, to determine the maximum occupancy on a typical Saturday. This involved a survey of all the car parks within the study area on a typical Saturday outside of the school holidays during the peak of 10am to 3pm. At the time of the survey, the Brunel Mall MSCP was closed and so could be considered a worst case for parking provision.

5.6.3 NRP undertook a final survey to represent an actual 'typical Saturday'. This involved a survey of all the car parks within the study area on an additional typical weekday and Saturday and a weekday and weekend on the build up to the Christmas period. The surveys concluded that there is sufficient space to accommodate the reallocation of Cheapside parking on a typical weekday and weekend. During a second 'worst case scenario' survey on the busy build up to Christmas, results indicate that parking could still be reallocated elsewhere in Stroud without pushing the car parks over capacity.

5.6.4 To support the proposed redevelopment, a technical review of the proposals would need to be undertaken. This would ensure that all active travel and sustainable transport opportunities are discussed within the development and the public realm, and that parking proposals are fully rationalised.

5.6.5 Finally, a parking or transport strategy would need to be expanded on to determine how demand would be provided for during events at Stroud. The option of a central mobility hub has been briefly discussed, but it would be beneficial to study the implications of a potential scheme in detail.

5.6.6 As discussed in limitations, this report does not discuss the wider design and strategy of the project. Further work and engagement with key stakeholder, Gloucestershire County Council Highways would need to be addressed. Technical work would need to be undertaken to ensure that the development does not have a negative impact on the local highway network, and any recommendations discussed should be technically analysed.

6 SUMMARY AND CONCLUSIONS

6.1.1 The Stroud Car Parking Study was undertaken to outline the existing demand and utilisation of several car parks within the town centre, to determine if there is scope for parking spaces within the Cheapside car park to be reallocated elsewhere.

6.1.2 Surveys have been carried out at 8 car parks within Stroud. These were undertaken on what was considered to be a typical weekday and a worst-case scenario weekend, due to the food and drink festival, in order to quantify the number of arrivals and departures at each site, the typical duration of stay and the main reasons for parking.

6.1.3 Data analysis demonstrates that on a typical weekday, parking provision exceeds the overall demand at all sites surveyed. Cheapside car park did not reach capacity, providing spare occupancy of 39%. Overall, the station car parks were well utilised between 07:00 and 19:00, reaching a maximum combined capacity of 75% and significant space was observed in the alternative car parks at the same period.

6.1.4 Parking provision was lower than demand on the Saturday at Cheapside. Between 10:30 and 12:30, the car park was pushed over capacity by 12%. These conditions were witnessed on site, with illegitimate parking observed for brief periods of the day when the car park was busiest. This limited breach of capacity is supported by the average occupancy of 68%, suggesting that demand is typically lower outside of peak periods.

6.1.5 The alternative car parks were found to be reaching capacity on the Saturday, offering a reserve capacity of only 129 spaces. This could not support the maximum occupancy observed at Cheapside and does not provide enough space for the total capacity. These observations were as result of the surveys taking place on a busy event day, and so does not represent the typical accumulation expected.

6.1.6 An additional survey on Saturday 18th November 2023 found that there is scope to reallocate Cheapside Car Park elsewhere in Stroud on a more 'typical Saturday'. Data analysis demonstrated that all car parks were observed to be below capacity throughout the peak period, and even without parking provision at both Cheapside Car Park and Brunel Mall MSCP, all the other car parks could support the reallocation of spaces with a reserve capacity of 4%. With the provision of Brunel Mall MSCP, the reserve capacity is 31%.

6.1.7 Results of the interview surveys demonstrated that majority of Cheapside car park and station car park users were choosing to park there in order to go into Stroud town centre. This demonstrates that there is scope to reallocate parking spaces to car parks elsewhere in Stroud that are within a similar walking distance of the station.

6.1.8 In order to develop a better understanding of the site and its issues, further technical work was undertaken in November and December 2024, following engagement with Gloucestershire County Council The results of this study demonstrate that existing demand within Cheapside car park can be relocated to alternative car parks within Stroud town centre on a typical weekday, and weekend in November 2024, with sufficient space to reallocate this parking during busy periods such as the Goodwill Festival on the build up to Christmas.

6.1.9 Whilst there is scope to reallocate parking within Cheapside to the alternative car parks discussed in this report, additional measures need to be taken to ensure that this does not have a negative impact on the town or local network. Recommendations to utilise the spare capacity found in Five Valleys MSCP and London Road surface car park and Brunel Mall MSCP involve the introduction of wayfinding signs at each car park to efficiently direct users to the station. In addition, supporting VMS signs on key routes into the town centre would ensure that visitors are aware of the available spaces in each car park and can navigate towards these.

6.1.10 It is vital to encourage sustainable travel and ensure that active travel and sustainable transport measures are supported throughout the process. Introduction of a mobility hub, car clubs and EV parking at the station would aid in the shift to active modes and help reduce reliance on private vehicles.

APPENDIX A: INTERVIEW SURVEYS

Please be assured that all your answers will remain CONFIDENTIAL

PARKING INTERVIEW SURVEY

Please specify the time that this interview took place: _____

ABOUT YOU:

1. What is your age?

18 - 24 years old	☐	25 - 34 years old	☐	35 - 44 years old	☐	45 - 54 years old	☐		
55 - 64 years old	☐	65 - 74 years old	☐	75 years or older	☐				

2. What is your gender?

Male	☐	Other	☐
Female	☐	Prefer not to say	☐

JOURNEY PURPOSE:

3. Where did your journey begin?

Please specify a location/postcode: _____

4. Where is your final destination?

Please specify a location/postcode: _____

5. Where did you park your car?

North Side - GWR Car Park	☐	South Side - GWR Car Park	☐
North Side - Central	☐	South Side - Cheapside	☐
North Side - Eastern Edge	☐		

6. What is the purpose of your journey?

Commuting	☐	Shopping	☐
Leisure	☐	Education	☐
Health	☐	Other	☐

If other please specify: _____

7. Why did you choose to park here?

Ease of access	☐	Cost	☐
Space availability	☐	Other	☐

If other please specify: _____

8. How often do you park here?

Daily	☐	Weekly	☐
Monthly	☐	Other	☐

If other please specify: _____

Please be assured that all your answers will remain CONFIDENTIAL

PARKING INTERVIEW SURVEY

Please specify the time that this interview took place: _____

ABOUT YOU:

1. What is your age?

18 - 24 years old	☐	25 - 34 years old	☐	35 - 44 years old	☐	45 - 54 years old	☐		
55 - 64 years old	☐	65 - 74 years old	☐	75 years or older	☐				

2. What is your gender?

Male	☐	Other	☐
Female	☐	Prefer not to say	☐

JOURNEY PURPOSE:

3. Where did your journey begin?

Please specify a location/postcode: _____

4. Where is your final destination?

Please specify a location/postcode: _____

5. Where did you park your car?

North Side - GWR Car Park	☐	South Side - GWR Car Park	☐
North Side - Central	☐	South Side - Cheapside	☐
North Side - Eastern Edge	☐		

6. What is the purpose of your journey?

Commuting	☐	Shopping	☐
Leisure	☐	Education	☐
Health	☐	Other	☐
Attending the market	☐		

If other please specify: _____

7. Why did you choose to park here?

Ease of access	☐	Cost	☐
Space availability	☐	Other	☐

If other please specify: _____

8. How often do you park here?

Daily	☐	Weekly	☐
Monthly	☐	Other	☐

If other please specify: _____

APPENDIX B: TN01 ADDITIONAL PARKING STUDY

NORMAN ROURKE PRYME

CONSTRUCTION CONSULTANTS
HIGHWAYS AND INFRASTRUCTURE
TRAFFIC AND TRANSPORTATION

ADDITIONAL CAR PARKING STUDY

STROUD

London and Continental Railways and
Stroud District Council

QA RECORD:

DOCUMENT REF	7970TR02	Rev	1.0
DRAFTED BY	MC	Date	18 December 2023
CHECKED BY	HDL	Date	18 December 2023
APPROVED BY	DK	Date	18 December 2023

18 DECEMBER 2023

1 INTRODUCTION

1.1 Overview

1.1.1 The purpose of this report is to provide an update to the 'Stroud Car Parking Study' issued on July 21st 2023. The study concluded that on a typical weekday there is reserve capacity to reallocate existing car parking in Cheapside to elsewhere across Stroud, but on the Saturday survey, the demand was higher than overall capacity . These observations were as result of the surveys taking place on the day of a busy food and drink festival, and so does not represent the typical accumulation expected.

1.1.2 Additional surveys have therefore been undertaken to determine the maximum occupancy on a typical Saturday. These surveys took place on the 18th November 2023 between 10:00am and 15:00pm to represent a typical Saturday peak period with the presence of the weekly market.

1.1.3 The following car parks have been surveyed:

- Stroud Station – Southside (84 spaces)
- Stroud Station – Northside (125 Spaces)
- Cheapside (193 Spaces)
- London Road Surface Car Park (144 spaces)
- Church Street (106 spaces)
- Parliament Street (122 spaces)
- MSCP Five Valleys (281 spaces)

1.1.4 The combined capacity of Chepaside and the two station car parks is 402 spaces, with the combined capacity of all alternative car parks adding to 653 spaces.

1.2 Limitations

1.2.1 The focus of this study is to determine the scope to redistribute the parking spaces from Cheapside Car Park into the other spaces in Stroud on a typical weekend. At the time of the survey, the Brunel Mall MSCP was closed and therefore only the London Road surface car park, Church Street, Parliament Street and Five Valleys could be used as alternative car parks.

1.2.2 It was important to understand how this Brunel Mall closure may have impacted the survey, as the results may have differed depending on if the public knew of the closure prior to November 18th. It has been noted by Stroud District Council that the public were not aware of the closure prior to the survey. The entrance shutter door had jammed on the Friday resulting in a full closure of the car park across the weekend. It is therefore reasonable to assume that the public would not have been influenced against visiting Stroud on this Saturday.

1.2.3 The closure of Brunel Mall offers an additional test to determine the overall capacity on another worst-case Saturday. The loss of 335 spaces as a result of this closure will help to determine if the proposed Cheapside parking redistribution is viable with even fewer spaces available.

2 CAR PARK OCCUPANCY RESULTS

2.1 Saturday 18th November

2.1.1 The maximum occupancy at all car parks between 10:00am and 15:00pm was below capacity on Saturday 18th November. The percentage occupancy of each car park can be seen in Table 2.1.

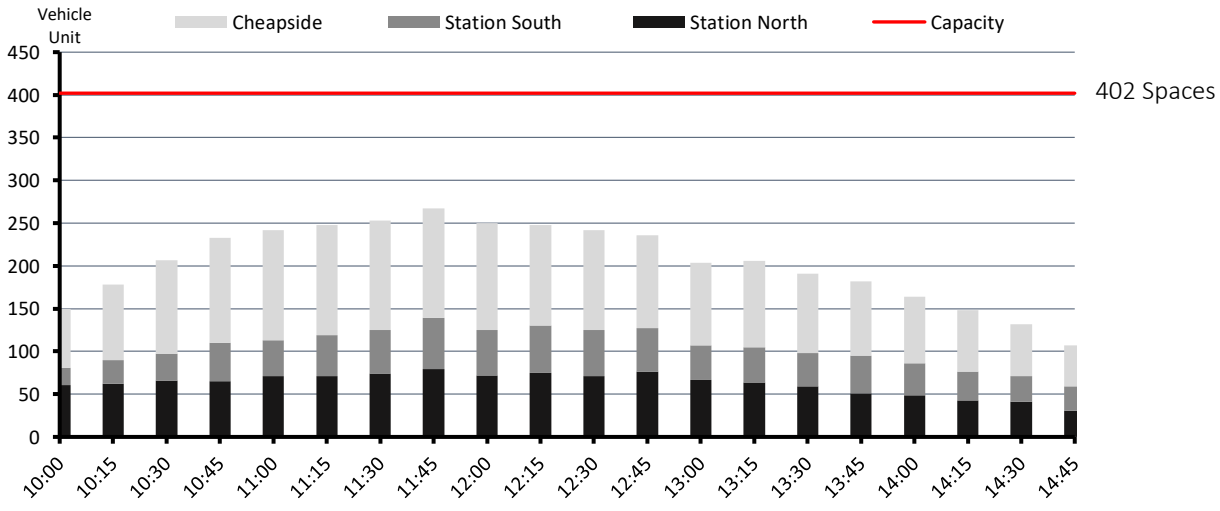
Table 2.1: Maximum Occupancy across all Car Parks – Saturday 18th November

Car Park	Maximum Occupancy	Average Occupancy
Stroud Station – Southside	71%	49%
Stroud Station – Northside	63%	50%
Cheapside	67%	52%
MSCP Five Valleys	83%	74%
Parliament Street	93%	83%
Church Street	92%	87%
London Road (surface)	92%	62%

2.1.2 All car parks are operating under capacity at present. MSCP Five Valleys, London Road surface car park and Parliament Street experience the highest occupancy during the peak period but have a lower average occupancy percentage of 74%, 62% and 83% respectively. Whilst this doesn't indicate typical occupancy is lower, it does suggest that each car park is not pushed to capacity throughout the day.

2.1.3 The existing accumulation of Cheapside and the two station car parks is below capacity. Figure 2.1 shows how all three car parks combined are occupied during the day.

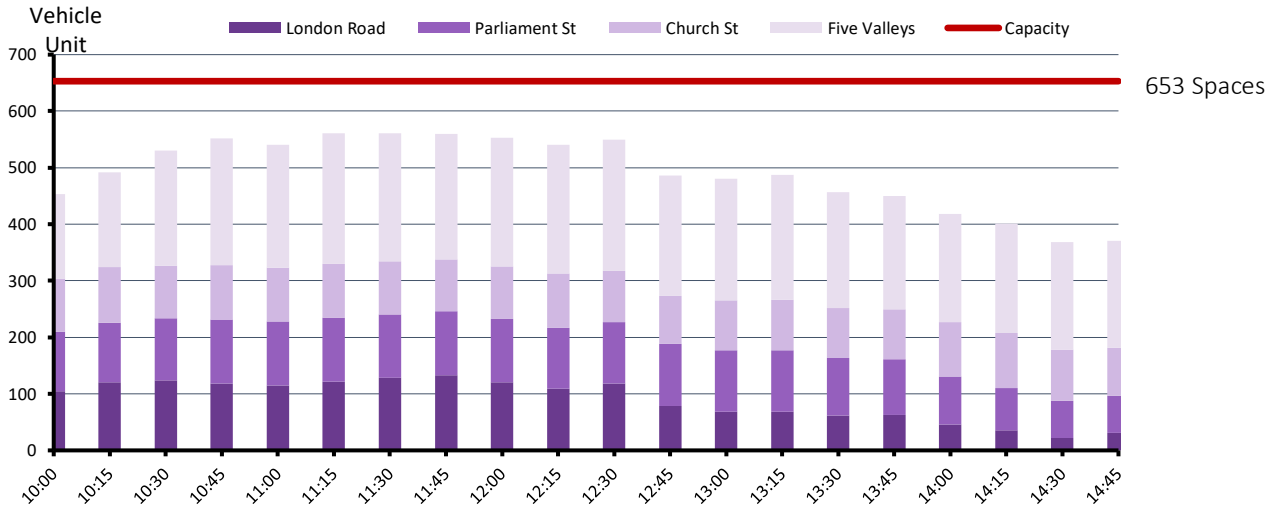
Figure 2.1: Existing Capacity at Cheapside and the Station Car Parks



2.1.4 The maximum accumulation of northside, southside and Cheapside at any one time between 10:00-15:00 is 267. These car parks have a combined capacity of 402 suggesting that they have a combined maximum occupancy of 66% on a Saturday during peak market hours.

2.1.5 Figure 2.2 below shows the maximum occupancy recorded across a 5-hour period at the alternative car parks. Brunel Mall MSCP was closed at the time of the survey, so only the surface car park has been included in the occupancy analysis.

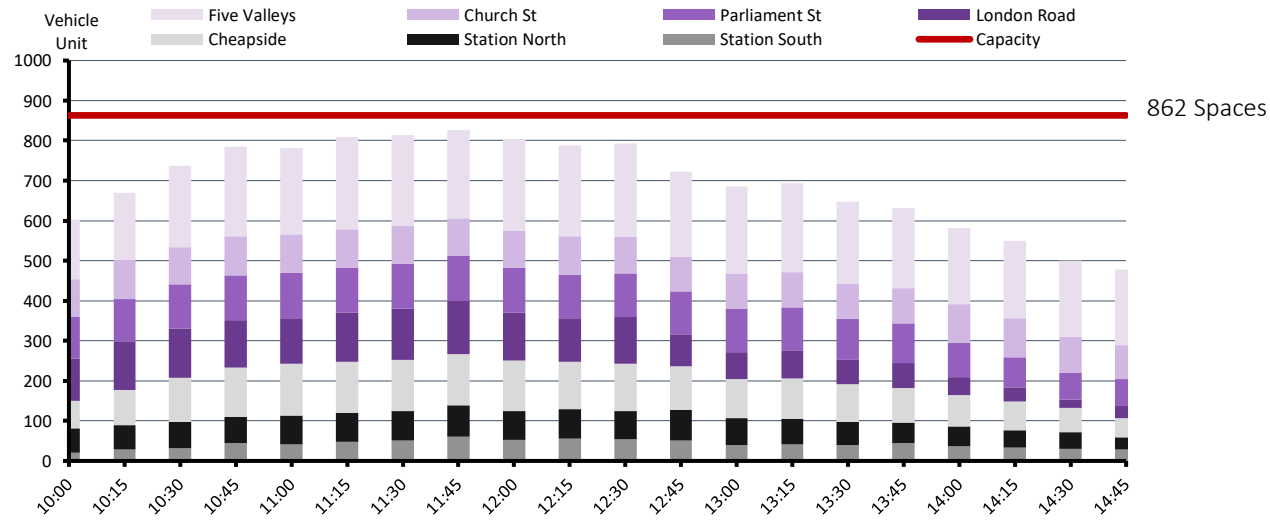
Figure 2.2: Existing Capacity at the Alternative Car Parks



2.1.6 All alternative car parks operated below capacity on the Saturday with a maximum combined accumulation of 560 spaces out of a total capacity of 653 spaces. This provides a reserve capacity of 93 spaces and a maximum occupancy of 86%, with the highest recorded accumulation being reached between 11:15am and 11:30am.

2.1.7 Cheapside car park had a maximum occupancy of 67% on Saturday 18th November. If these occupied spaces were to be considered for reallocation within the reserve capacity provided at the remaining car parks, then Figure 2.3 below gives an indication of this.

Figure 2.3: Reserve Capacity at all Car Parks



2.1.8 The red capacity line in Figure 2.3 represents the total accumulated provision of parking space at all surveyed car parks excluding Cheapside. The maximum occupancy of all car parks combined totalled to 827 spaces, out of a potential 862 spaces. This represents a 96% occupancy and indicates that if Cheapside parking was reallocated to these spaces, it would be close to approaching capacity.

2.2 Summary

2.2.1 The survey was undertaken on a 'typical Saturday' during the peak hours of the weekly market between 10:00am to 15:00pm. There were no additional events taking place on this day, but the previously surveyed Brunel Mall MSCP was closed throughout the study and so reduces the overall level of parking provision available to use.

2.2.2 Table 2.2 below outlines the maximum and average capacity for each car park in comparison to the previous dates surveyed.

Table 2.2: Occupancy across all Car Parks – Entire Study

Car Park	Maximum (Sat 18th Nov)	Average (Sat 18h Nov)	Maximum (Sat 20th May)	Average (Sat 20th May)	Maximum (Thurs 18th May)	Average (Thurs 18th May)
Station – Southside	71%	49%	110%	79%	88%	74%
Station – Northside	63%	50%	100%	74%	89%	70%
Cheapside	67%	52%	112%	68%	61%	49%
MSCP Five Valleys	83%	74%	77%	41%	62%	32%
Parliament Street	93%	83%	91%	60%	89%	59%
Church Street	92%	87%	107%	64%	74%	45%
London Road (surface)	92%	62%	96%	48%	41%	26%

Cheapside car park and the Station Car Parks

2.2.3 Two car parks were surveyed at Stroud Station, including southside and northside. Data analysis demonstrates that the peak of both Station Car Parks was at 11:45.

2.2.4 Stroud Station Southside operated at a 71% maximum capacity, significantly lower than demonstrated during the worst-case Saturday in May. Stroud Station Northside operated at a maximum capacity of 63% compared to 100% on Saturday 20th May and Cheapside Car Park operated at 67% compared to 112% on Saturday 20th May. The occupancy of these car parks indicates a more typical Saturday, but these dates and accumulations cannot be directly compared, as there may be external factors influencing their level of usage.

Alternative Car Parks

2.2.5 The alternative car parks addressed in this study were London Road surface car park, Five Valleys MSCP, Church Street and Parliament Street. Data analysis of these car parks demonstrated that at a peak between 11:15am and 11:30am, the maximum occupancy was 86%.

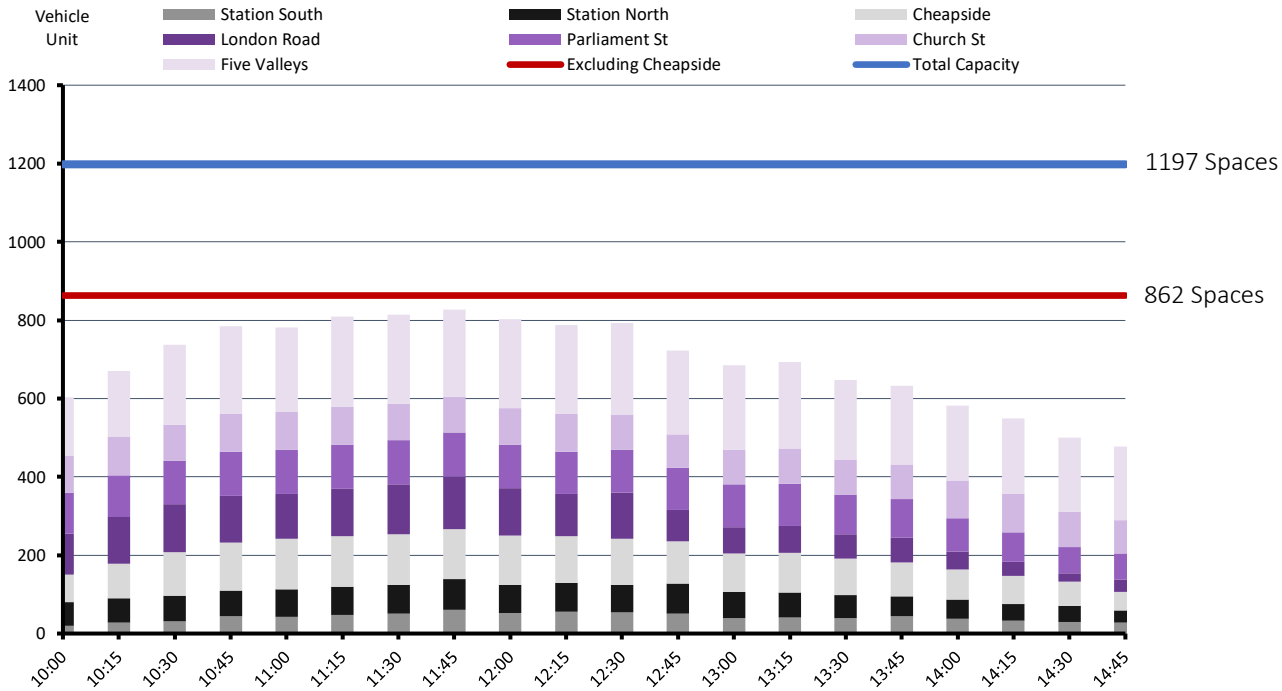
2.2.6 In comparison to the previous Saturday surveyed, the maximum occupancy of these car parks is broadly similar. This indicates that there is reserve capacity on both a typical and worst-case scenario weekend.

Reserve Capacity

2.2.7 The maximum occupancy of the northside and southside station car parks combined with the alternative car parks is 78%. When adding the observed accumulation of Cheapside (129 spaces), this pushes the occupancy to 96%, indicating there would be some available reserve capacity without the provision of Cheapside and Brunel Mall MSCP.

2.2.8 This study however did not include the Brunel Mall MSCP in the total capacity, as it was closed during the survey period. If the 335 spaces that make up this car park were added to the total, there would be a significant change in the available reserve capacity. The occupancy and level of reserve capacity with Brunel Mall included can be seen in Figure 2.4.

Figure 2.4: Reserve Capacity at all Car Parks including Brunel Mall MSCP



2.2.9 The red capacity line represents the total accumulated provision of parking space at all surveyed car parks excluding Cheapside. The blue line represents the same capacity, with the addition of the missing Brunel MSCP spaces (335). It is clear that without the MSCP, there is limited reserve capacity to reallocate parking from Cheapside elsewhere, as it reaches 96% maximum occupancy. If Brunel Mall was open, additional reserve capacity would be available, taking the maximum occupancy down to 69% and providing a further 31% capacity.

3 CONCLUSIONS

3.1.1 This additional parking study was undertaken to outline the existing demand and utilisation of several car parks within Stroud town centre and to determine if there is scope for spaces within the Cheapside car park to be reallocated elsewhere on a typical Saturday.

3.1.2 This survey was undertaken on Saturday 18th November during the peak period of the weekly farmer's market. Data analysis demonstrated that all car parks were below capacity, with Cheapside only reaching a maximum occupancy of 67%, leaving a 33% reserve capacity. All alternative car parks had a combined occupancy of 86%, offering a 14% reserve capacity.

3.1.3 The maximum combined accumulation of every car park at a peak of 11:45 was 827 spaces out of a total capacity of 1055 spaces. When Cheapside is removed from the total capacity, this leaves 862 spaces, which still offers some reserve capacity for all observed parking. This indicates that there is scope to reallocate the Cheapside parking to alternative car parks in Stroud, with a reserve capacity of 35 spaces (4%).

3.1.4 It is important to note that this study also excluded the Brunel Mall MSCP as a result of it's closure, so although parking reallocation pushes each car park to capacity, this is a worst case scenario. With Brunel Mall MSCP open, there would be an additional 335 spaces of reserve capacity to redistribute parking.

3.1.5 When the 335 available spaces of the Brunel Mall MSCP is added to the 862 spaces provided, this gives a total capacity of 1197. This provision could support the maximum accumulation observed at all other car parks (827 spaces) to give a total occupancy of 69%. This leaves a 31% reserve capacity on a typical Saturday and indicates that there is scope to redistribute all Cheapside parking.

APPENDIX C: TN02 ADDITIONAL PARKING STUDY 2024

NORMAN ROURKE PRYME

CONSTRUCTION CONSULTANTS
HIGHWAYS AND INFRASTRUCTURE
TRAFFIC AND TRANSPORTATION

Car Parking Study Survey Results

Redevelopment at Land South of Stroud

London and Continental Railways and
Stroud District Council

QA RECORD:

DOCUMENT REF	10821TN02	Rev	1.0
DRAFTED BY	MC	Date	05 March 2025
CHECKED BY	HDL	Date	05 March 2025
APPROVED BY	DK	Date	05 March 2025

05 MARCH 2025

1 INTRODUCTION

1.1 Context

1.1.1 NRP has been commissioned to provide a car parking study for redevelopment at Land south of Stroud Station on behalf of London and Continental Railways (LCR), providing the findings of a review of existing parking provision at Cheapside car park and the surrounding car parks within Stroud town centre. This data has been used to determine the extent at which the parking at Cheapside car park could be accommodated in existing car parks located elsewhere in Stroud town centre.

1.1.2 Following pre-application advice provided by Stroud District Council (SDC) and Gloucestershire County Council Highways (GCC), NRP on behalf of LCR, were requested to undertake an additional extended period of analysis to account for further trends in parking demand at Cheapside and other car parks within the town centre, particularly during the build up to the Christmas period.

1.2 Overview

1.2.1 The purpose of this report is to provide an update to the 'Stroud Car Parking Study' issued on July 21st 2023 and additional surveys undertaken in November 2023. The initial study concluded that on a typical weekday there is reserve capacity to reallocate existing car parking in Cheapside to elsewhere across Stroud, but on the Saturday survey, the demand was higher than overall capacity.

1.2.2 These observations were as result of the surveys taking place on the day of a busy food and drink festival and so does not represent the typical accumulation expected. Additional surveys took place on the 18th November 2023 between 10:00am and 15:00pm to represent a typical Saturday peak period with the presence of the weekly market, but at the time of the survey the Brunel Mall MSCP was closed.

1.2.3 At the request of SDC and GCC and for completeness, NRP have undertaken two additional months of surveys to demonstrate that there is a sufficient level of public parking within the town centre and provide a direct comparison between busy periods of the year. This has been undertaken at the following car parks:

- Stroud Station – Southside (84 spaces)
- Stroud Station – Northside (125 Spaces)
- Cheapside (193 Spaces)
- London Road Surface Car Park (144 spaces)
- Brunel Mall MSCP (335 spaces)
- Church Street (106 spaces)
- Parliament Street (122 spaces)
- MSCP Five Valleys (281 spaces)

1.2.4 Cheapside has a capacity of 193 spaces, both station car parks have a combined capacity of 209, with the combined capacity of all alternative car parks adding to 988 spaces.

1.3 Limitations

1.3.1 At the time of the survey, works were being undertaken at Stroud Station southside footbridge. This resulted in the overall loss of 34 spaces for a temporary period. In addition to this on Thursday 21st November, the data collected for Brunel Mall Car Park and London Surface corrupted due to a technical fault. These sites were resurveyed on Thursday 28th November to account for the missing data.

2 CAR PARK OCCUPANCY RESULTS

2.1 Thursday 21st November 2024

2.1.1 The maximum occupancy at all car parks between 07:00am and 19:00pm was below capacity on Thursday 21st November. The percentage occupancy of each car park can be seen in Table 2.1.

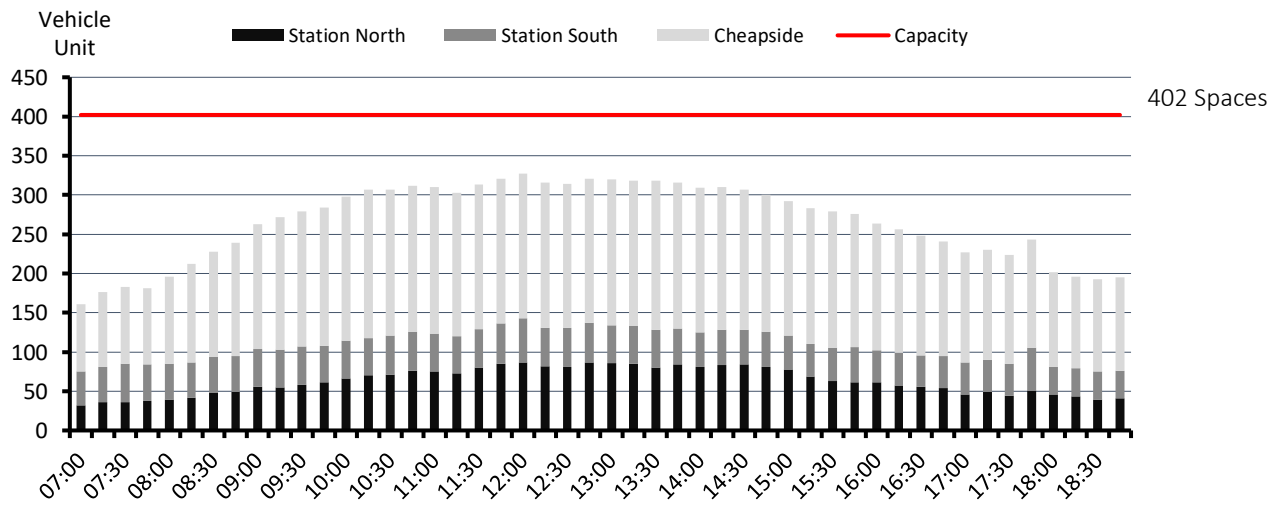
Table 2.1: Maximum Occupancy across all Car Parks – Thursday 21st November

Car Park	Maximum Occupancy	Average Occupancy
Stroud Station – Southside	67%	54%
Stroud Station – Northside	70%	50%
Cheapside	98%	82%
MSCP Five Valleys	91%	60%
Parliament Street	80%	57%
Church Street	57%	35%
London Road (surface and MSCP)	56%	35%

2.1.2 All car parks are operating under capacity at present. Cheapside, MSCP Five Valleys, and Parliament Street experience the highest occupancy during the peak period but have a lower average occupancy percentage of 82%, 60% and 57% respectively. Whilst this doesn't indicate typical occupancy is lower, it does suggest that each car park is not pushed to capacity throughout the day.

2.1.3 The existing accumulation of Cheapside and the two station car parks is below capacity. Figure 2.1 shows how all three car parks combined are occupied during the day.

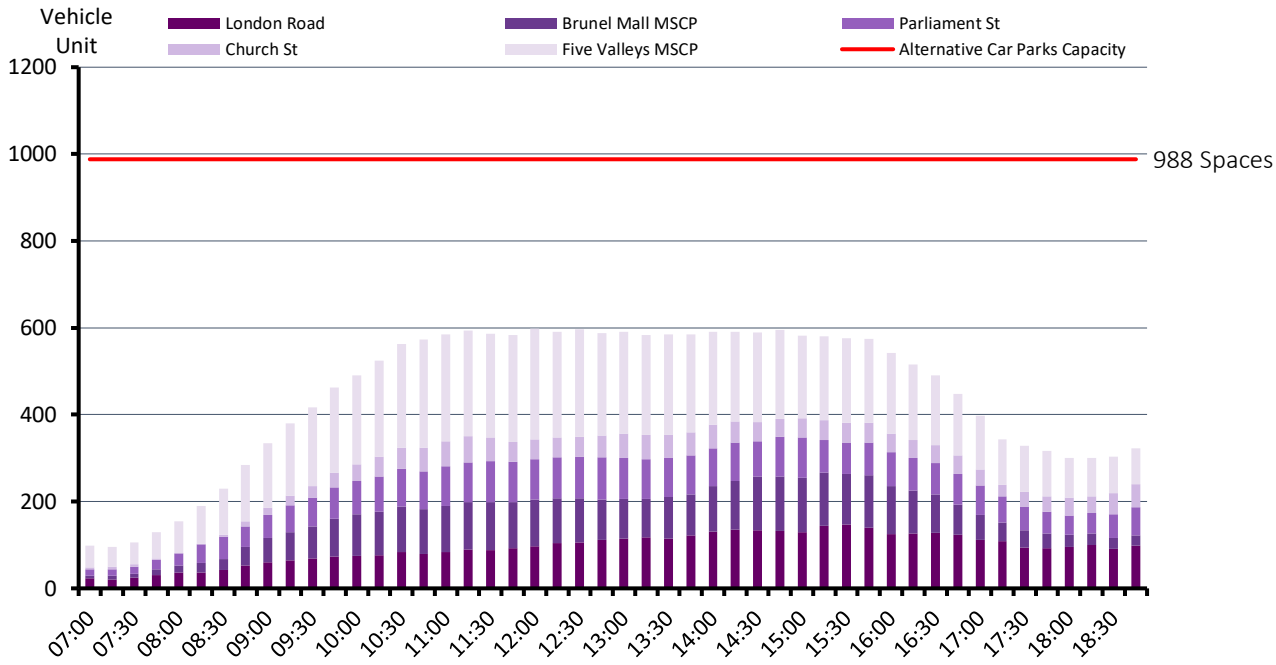
Figure 2.1: Existing Capacity at Cheapside and the Station Car Parks



2.1.4 The maximum accumulation of northside, southside and Cheapside at any one time between 07:00 and 19:00 is 327. These car parks have a combined capacity of 402 suggesting that they have a combined maximum occupancy of 81% on an average weekday at its peak period.

2.1.5 Figure 2.2 below shows the maximum occupancy recorded across a 12-hour period at the alternative car parks.

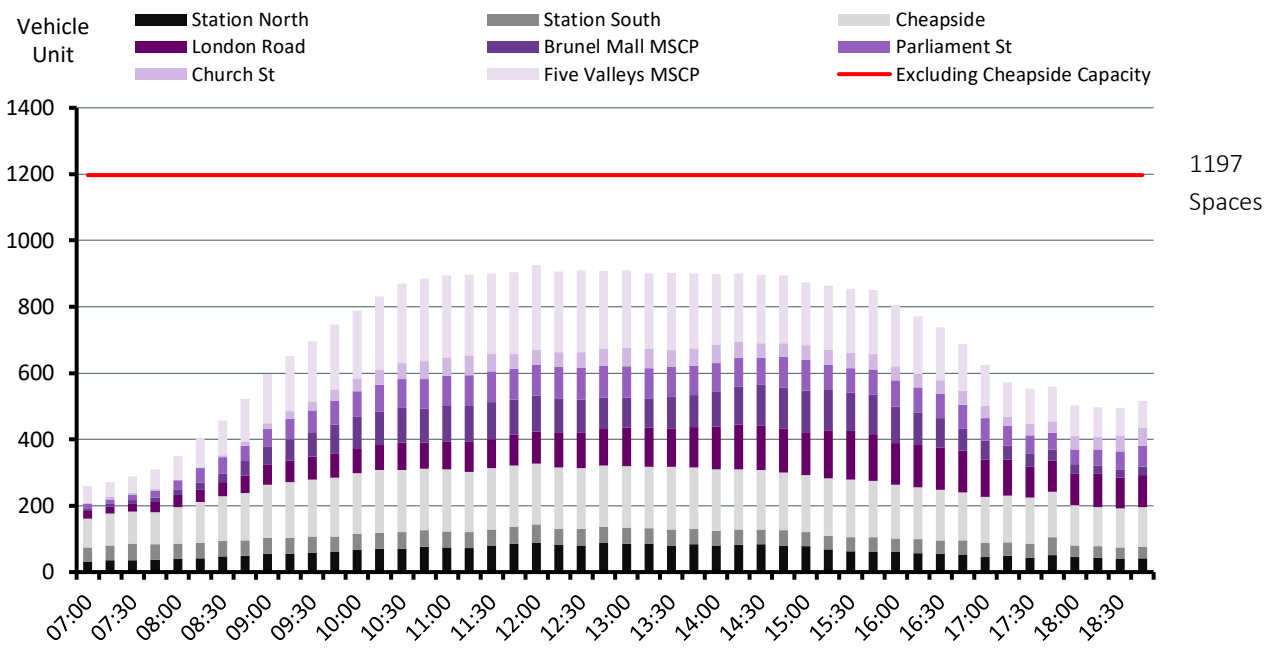
Figure 2.2: Existing Capacity at the Alternative Car Parks



2.1.6 All alternative car parks operated below capacity on the Thursday with a maximum combined accumulation of 598 spaces out of a total capacity of 988 spaces. This provides a reserve capacity of 390 spaces and a maximum occupancy of 60%, with the highest recorded accumulation being reached between 12:00pm and 12:15pm.

2.1.7 Cheapside car park had a maximum occupancy of 98% on Thursday 21st November. If these occupied spaces were to be considered for reallocation within the reserve capacity provided at the remaining car parks, then Figure 2.3 below gives an indication of this.

Figure 2.3: Reserve Capacity at all Car Parks



2.1.8 The red capacity line in Figure 2.3 represents the total accumulated provision of parking space at all surveyed car parks excluding Cheapside. The maximum occupancy of all car parks combined totalled to 925 spaces, out of a potential 1197 spaces. This represents a 77% occupancy and indicates that if Cheapside parking was reallocated to these spaces, there would still be adequate reserve occupancy.

2.2 Saturday 23rd November 2024

2.2.1 The maximum occupancy at all car parks excluding MSCP Five Valleys between 07:00am and 19:00pm was below capacity on Saturday 23rd November. The percentage occupancy of each car park can be seen in Table 2.2.

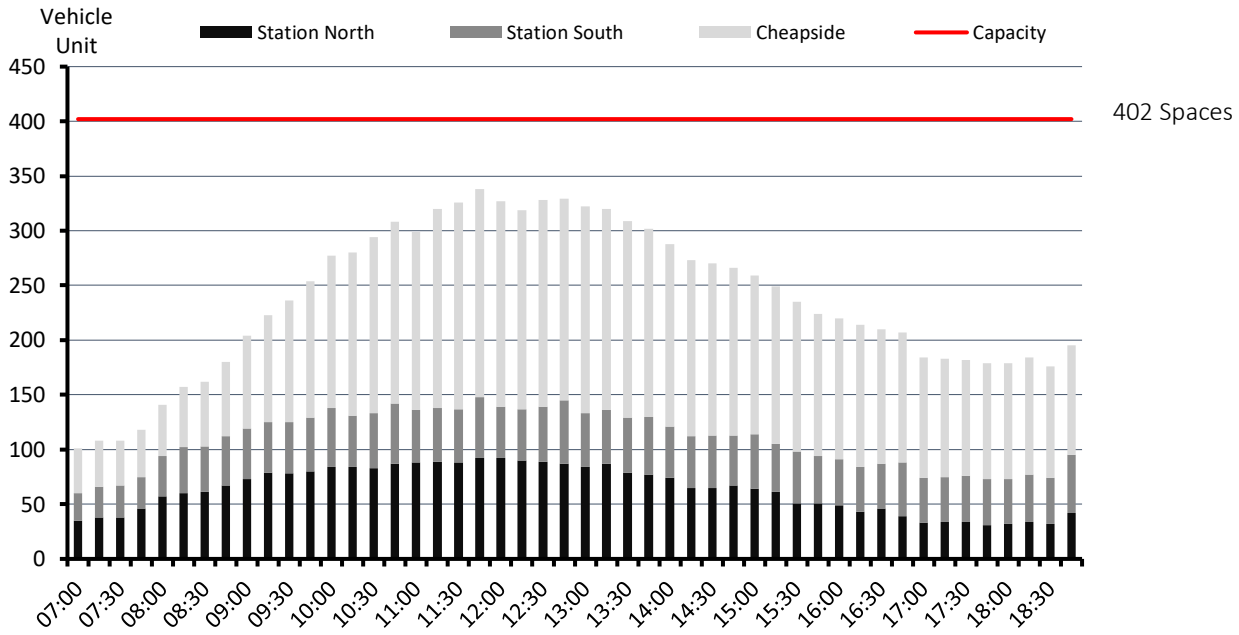
Table 2.2: Maximum Occupancy across all Car Parks – Saturday 23rd November

Car Park	Maximum Occupancy	Average Occupancy
Stroud Station – Southside	69%	54%
Stroud Station – Northside	74%	51%
Cheapside	98%	67%
MSCP Five Valleys	100%	69%
Parliament Street	93%	59%
Church Street	97%	56%
London Road (surface and MSCP)	75%	44%

2.2.2 All car parks, excluding MSCP Five Valleys, are operating under capacity at present. Cheapside, MSCP Five Valleys, and Church Street experience the highest occupancy during the peak period but have a lower average occupancy percentage of 67%, 69% and 56% respectively. Whilst this doesn't indicate typical occupancy is lower, it does suggest that each car park is not pushed to capacity throughout the day.

2.2.3 The existing accumulation of Cheapside car park and the two station car parks is below capacity. Figure 2.4 shows how all three car parks combined are occupied during the day.

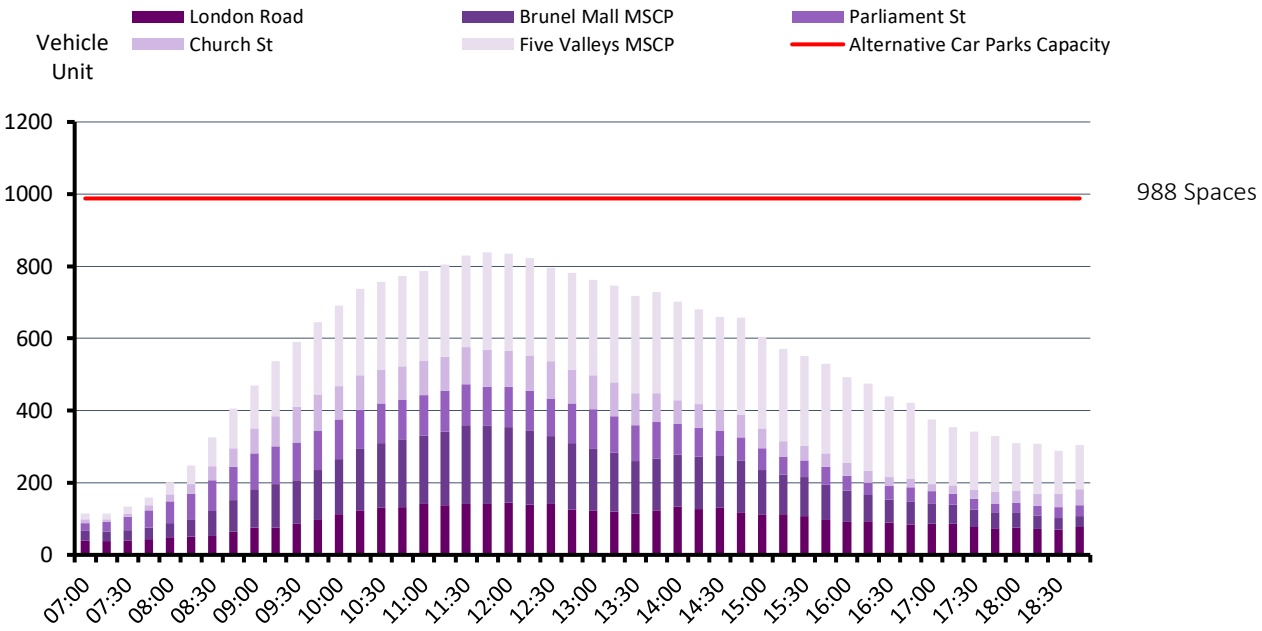
Figure 2.4: Existing Capacity at Cheapside and the Station Car Parks



2.2.4 The maximum accumulation of northside, southside and Cheapside at any one time between 07:00 to 19:00 is 338. These car parks have a combined capacity of 402 suggesting that they have a combined maximum occupancy of 84% on an average weekday at its peak period.

2.2.5 Figure 2.5 below shows the maximum occupancy recorded across a 12-hour period at the alternative car parks.

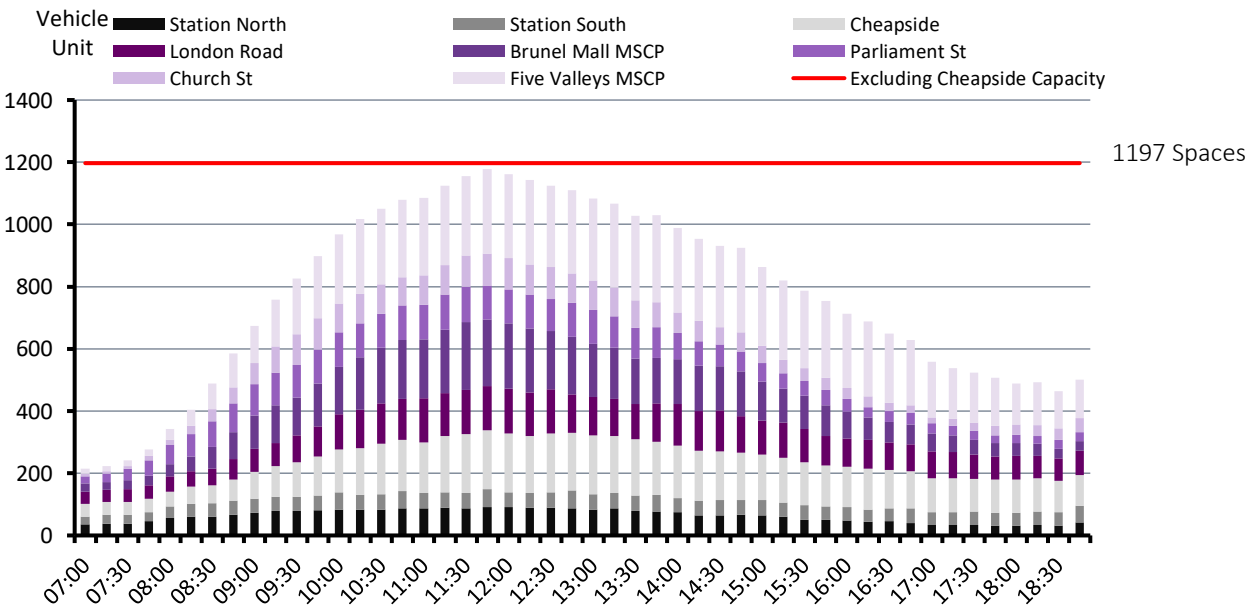
Figure 2.5: Existing Capacity at the Alternative Car Parks



2.2.6 All alternative car parks operated below capacity on the Saturday with a maximum combined accumulation of 839 spaces out of a total capacity of 988 spaces. This provides a reserve capacity of 390 spaces and a maximum occupancy of 84%, with the highest recorded accumulation being reached between 11:45am and 12:00pm.

2.2.7 Cheapside car park had a 98% maximum occupancy on Saturday 23rd November. If these occupied spaces were to be considered for reallocation within the reserve capacity provided at the remaining car parks, then Figure 2.6 below gives an indication of this.

Figure 2.6: Reserve Capacity at all Car Parks



2.2.8 The red capacity line in Figure 2.6 represents the total accumulated provision of parking space at all surveyed car parks, excluding Cheapside. The maximum occupancy of all car parks combined totalled 1197 spaces, out of a potential 1177 spaces. This represents a 98% occupancy and indicates that if Cheapside parking was reallocated to these spaces, there would be limited reserve occupancy at peak periods but car parks would not be pushed over capacity.

2.2.9 Occupancy is at its highest between 10:00 and 14:00. If parking from Cheapside was reallocated to other car parks within Stroud, there would be adequate space for most of the day. The average occupancy was recorded at 65%.

2.3 Friday 6th December 2024

2.3.1 Surveys undertaken in December were required to observe the impact of the build-up to Christmas on parking within Stroud. Friday 6th of December was chosen to understand the impact of Stroud Goodwill Festival, in which there was street entertainment and late-night opening of shops starting from 6pm.

2.3.2 Due to this extended opening of shops, the survey on Friday 6th December was undertaken between 7:00 and 22:00.

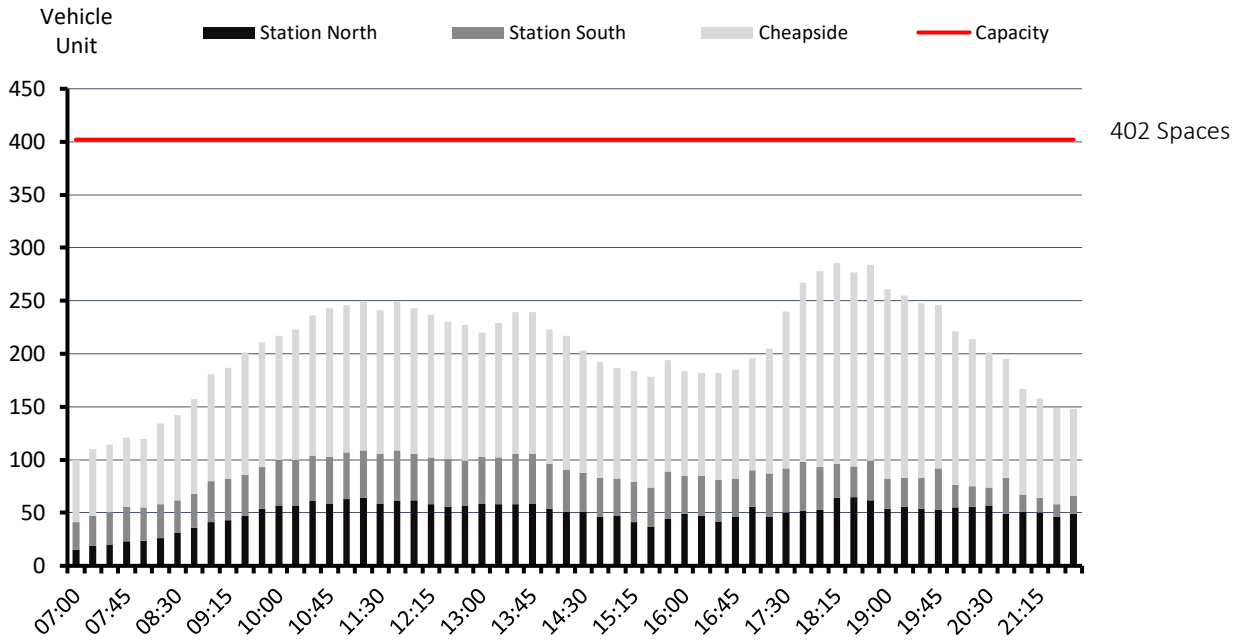
Table 2.3: Maximum Occupancy across all Car Parks – Friday 6th December

Car Park	Maximum Occupancy	Average Occupancy
Stroud Station – Southside	57%	47%
Stroud Station – Northside	52%	39%
Cheapside	98%	61%
MSCP Five Valleys	98%	77%
Parliament Street	93%	68%
Church Street	100%	59%
London Road (surface and MSCP)	91%	52%

2.3.3 The maximum occupancy at all car parks excluding Church Street between 07:00am and 22:00pm was below capacity on Friday 6th December. The percentage occupancy of each car park can be seen in Table 2.3 above. Cheapside, MSCP Five Valleys, London Road and Parliament Street were all approaching capacity, while each Station car park recorded low parking numbers at the busiest period, recorded at 18:15.

2.3.4 The existing accumulation of Cheapside car park and the two station car parks is below capacity. Figure 2.7 shows how all three car parks combined are occupied during the day and into the evening during an event.

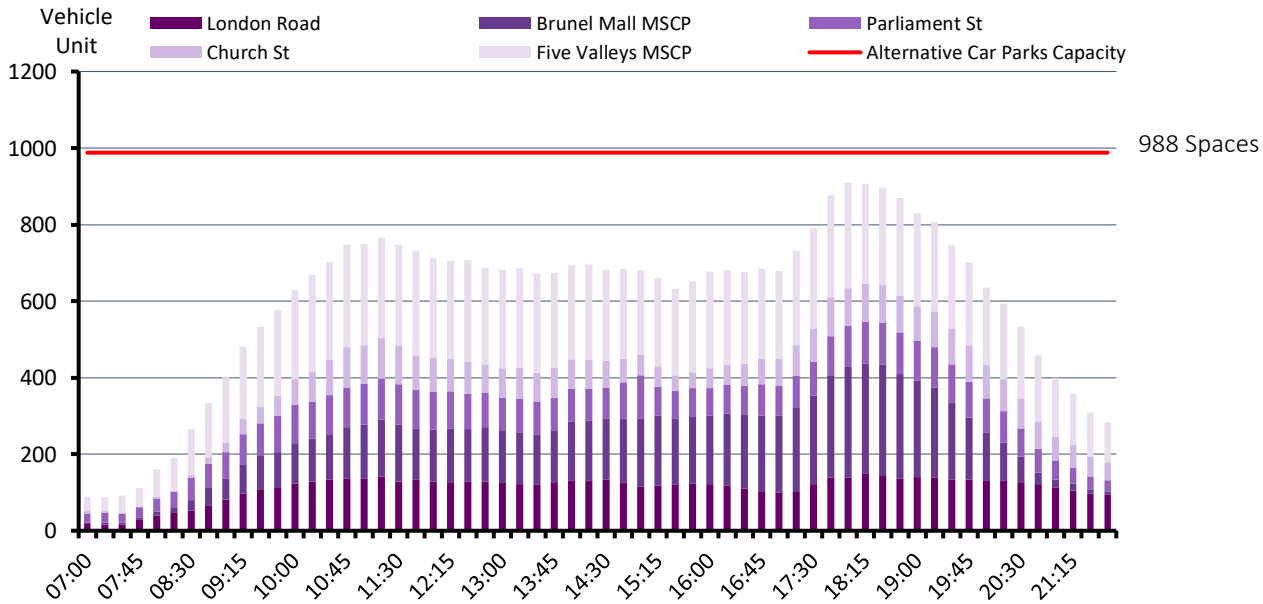
Figure 2.7: Existing Capacity at Cheapside and the Station Car Parks



2.3.5 The maximum accumulation of northside, southside and Cheapside at any one time between 07:00 to 22:00 is 286. These car parks have a combined capacity of 402 suggesting that they have a combined maximum occupancy of 71% on Friday 6th December. This is a particularly busy period for Stroud, with Cheapside hitting a 98% maximum occupancy at 18:15. Despite this, each station car park recorded relatively low usage.

2.3.6 Figure 2.8 below shows the maximum occupancy recorded across a 15-hour period at the alternative car parks.

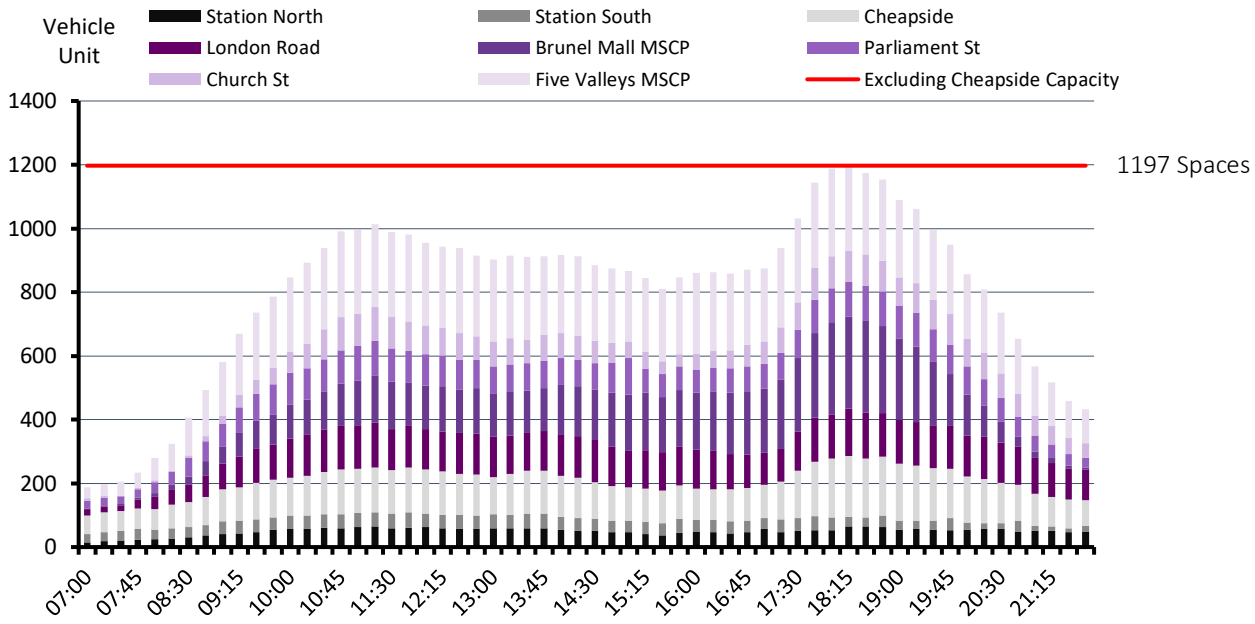
Figure 2.8: Existing Capacity at the Alternative Car Parks



2.3.7 At the busiest period, 18:15, all car parks are shown to be well utilised with a combined maximum accumulation of 907. This demonstrates a maximum occupancy of 92%, however this starts to fall rapidly from 19:30 to 22:00 demonstrated by low average occupancies of between 50% and 77%.

2.3.8 Cheapside car park had a 98% total occupancy on Friday 6th December. If these occupied spaces were to be considered for reallocation within the reserve capacity provided at the remaining car parks, then Figure 2.9 below gives an indication of this.

Figure 2.9: Reserve Capacity at all Car Parks



2.3.9 If all parking spaces were to be reallocated to the alternative car parks around Stroud Town centre, there would be a potential reserve capacity of 4 spaces. This reallocation pushes car parking in Stroud up to capacity but demonstrates that it would not exceed this even during the busiest of periods and events. The average occupancy of each car park ranges from between 40% to 77% and highlights that the periods where maximum accumulation reaches capacity are short.

Saturday 7th December 2024

2.3.10 Stroud Goodwill Festival took place between Friday 6th December to Saturday 7th December, with many indoor markets and events taking place across Stroud throughout the day. Due to heavy rain, some outdoor activities such as the scheduled funfair were cancelled which may have had a small impact on the number of visitors.

Table 2.4: Maximum Occupancy across all Car Parks – Saturday 7th December

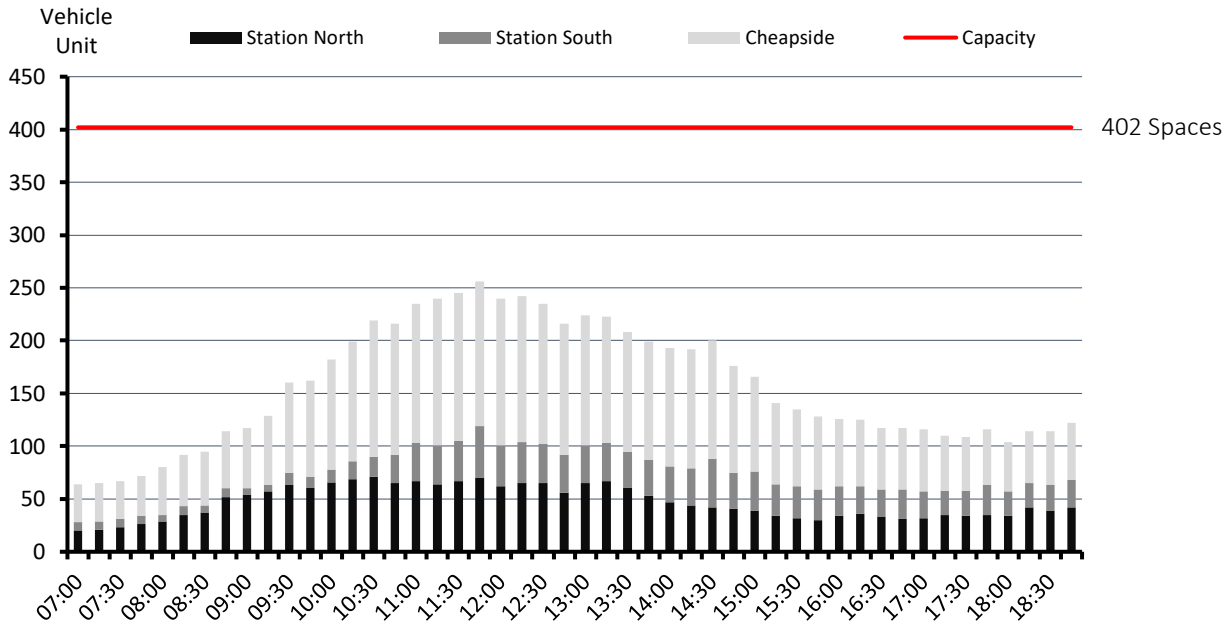
Car Park	Maximum Occupancy	Average Occupancy
Stroud Station – Southside	58%	30%
Stroud Station – Northside	57%	37%
Cheapside	73%	44%

MSCP Five Valleys	100%	67%
Parliament Street	93%	55%
Church Street	100%	56%
London Road (surface and MSCP)	72%	39%

2.3.11 The maximum occupancy at all car parks excluding Church Street and MSCP Five Valleys between 07:00am and 19:00pm was below capacity on Friday 6th December. The percentage occupancy of each car park can be seen in Table 2.4 above. Cheapside only recorded a maximum occupancy of 73%, with both London Road car parks achieving a maximum occupancy of 72%. This demonstrates a much higher reserve capacity at these car parks compared to previous surveyed days.

2.3.12 The existing accumulation at Cheapside and the two station car parks is below capacity. Figure 2.10 shows how all three car parks combined are occupied during a Christmas event day on a Saturday.

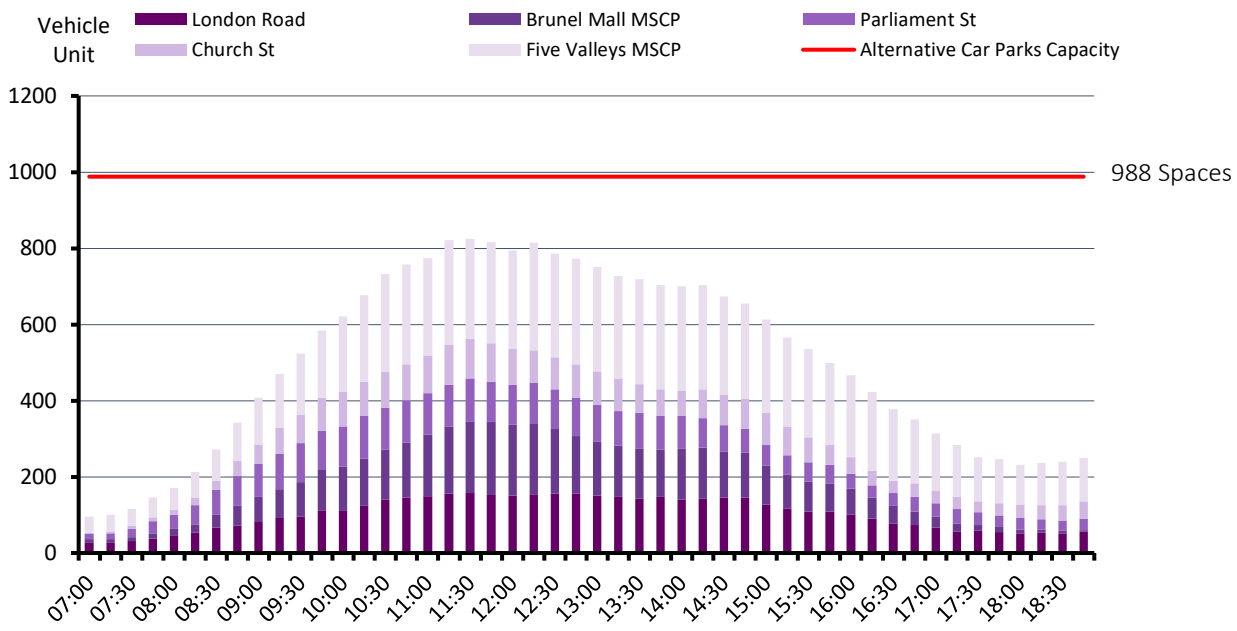
Figure 2.10: Existing Capacity at Cheapside and the Station Car Parks



2.3.13 The maximum accumulation of northside, southside and Cheapside at any one time between 07:00 to 19:00 is 256. These car parks have a combined capacity of 402 suggesting that they have a combined maximum occupancy of 64% on Saturday 7th December. The recorded maximum occupancy at Cheapside was only 73% at this time, demonstrating low utilisation at each of the car parks and a significant amount of overall reserve capacity throughout the day.

2.3.14 Figure 2.11 below shows the maximum occupancy recorded across a 12-hour period at the alternative car parks.

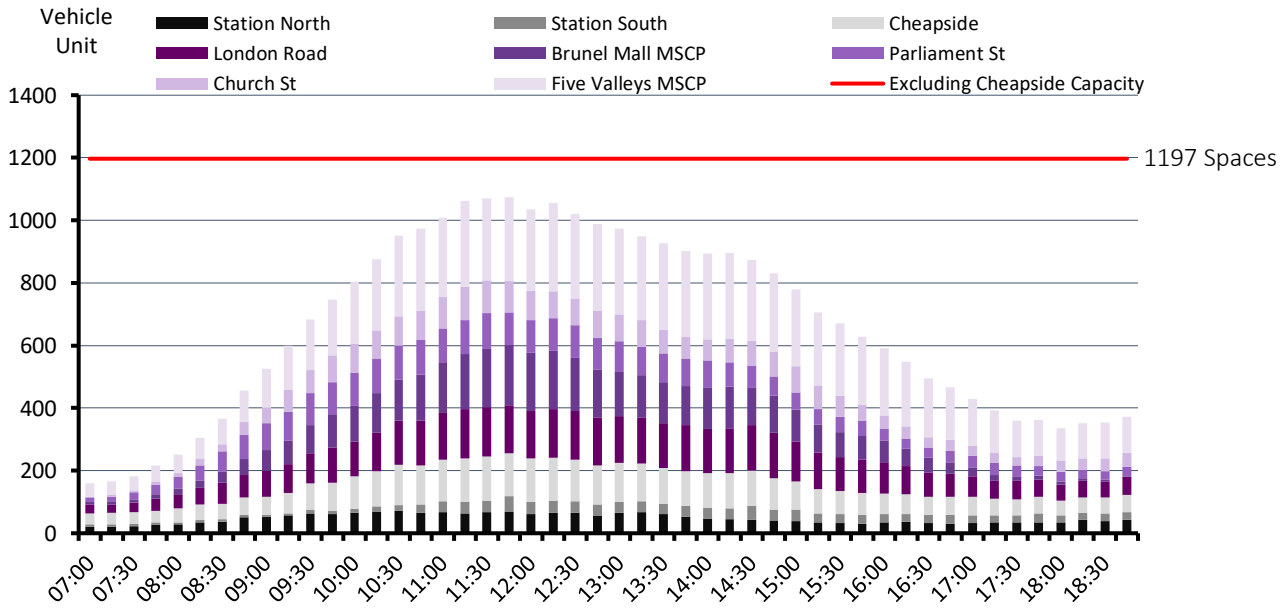
Figure 2.11: Existing Capacity at the Alternative Car Parks



2.3.15 The combined maximum accumulation of all alternative car parks at 11:45, the busiest recorded period, is 817. This demonstrates a maximum occupancy of 83%, with a potential reserve capacity of 171 spaces. The average occupancy of each of these car parks remains low, with the highest percentage recorded at MSCP Five Valleys at 67%. Whilst this doesn't indicate typical occupancy is lower, it does suggest that each car park is not pushed to capacity throughout the day.

2.3.16 Cheapside car park had a 73% maximum occupancy on Saturday 7th December. If these occupied spaces were to be considered for reallocation within the reserve capacity provided at the remaining car parks, then Figure 2.12 demonstrates this.

Figure 2.12: Reserve Capacity at all car parks



2.3.17 The red capacity line on Figure 2.12 represents the total accumulated provision of parking space at all surveyed car parks excluding Cheapside. The maximum occupancy of all car parks combined totalled to 1073 spaces, out of a potential 1197 spaces. This represents a 90% occupancy and indicates that if Cheapside parking was reallocated to these spaces on a Saturday event day on the build up to the Christmas Period, there would still be adequate reserve occupancy.

2.4 Summary

2.4.1 A total of four additional surveys were undertaken within November and December 2024 in order to demonstrate the 'typical' weekday and weekend occupancy of each car park and highlight how well utilised they are during Stroud's busiest Christmas build up periods.

2.4.2 Table 2.5 below outlines the maximum recorded occupancy for each car park in comparison to the previous dates surveyed.

Table 2.5: Maximum Occupancy across all Car Parks – Entire Study

Car Park	Thurs 18th May 2023	Sat 20th May 2023[1]	Sat 18th Nov 2023	Thurs 21st Nov 2024	Sat 23rd Nov 2024	Fri 6th Dec 2024	Sat 7th Dec 2024
Station – Southside	88%	110%	71%	69%	67%	57%	58%
Station – Northside	89%	100%	63%	74%	70%	52%	57%
Cheapside	61%	112%	67%	98%	98%	98%	73%
MSCP Five Valleys	62%	77%	83%	100%	91%	98%	100%
Parliament Street	89%	91%	93%	93%	80%	93%	93%
Church Street	74%	107%	92%	97%	57%	100%	100%
London Road (surface and MSCP)[2]	41%	96%	92%	69%	56%	91%	72%

[1]Date of the Stroud Food Festival

[2]London Road MSCP not open Sat 18th Nov 2023

2.4.3 A total of 7 separate surveys have been undertaken to understand if there is sufficient level of parking with Stroud Town Centre to accommodate the reallocation of parking from Cheapside car park. Only one survey, on Saturday 20th May 2023, demonstrated that the car parks within Stroud could not accommodate the reallocation of parking and this took place during a worst-case event, the Stroud Food Festival

Reserve Capacity

2.4.4 The potential reserve capacity of all car parks, excluding Cheapside, in the entire study is set out in Table 2.6 below.

Table 2.6: Combined Potential Reserve Capacity without Cheapside – Entire Study

	Thurs 18th May 2023	Sat 20th May 2023	Sat 18th Nov 2023	Thurs 21st Nov 2024	Sat 23rd Nov 2024	Fri 6th Dec 2024	Sat 7th Dec 2024
Capacity (all car parks excluding Cheapside)	1197 spaces	1197 spaces	862 spaces	1197 spaces	1197 spaces	1197 spaces	1197 spaces
Maximum Occupancy	814 spaces	1287 spaces	827 spaces	925 spaces	1177 spaces	1193 spaces	1073 spaces
Potential reserve capacity	383 spaces	-90 spaces	35 spaces (370 including London Road MSCP)	272 spaces	20 spaces	4 spaces	124 spaces

2.4.5 On an average weekday, there is ample parking capacity to reallocate the existing occupancy at Cheapside to parking within the rest of Stroud. With reallocation, on Thursday 18th May 2023 and Thursday 21st November 2024, there is still approximately 300-400 spaces available.

2.4.6 On an average Saturday, the existing occupancy within Cheapside can be effectively reallocated to the additional car parks within Stroud demonstrated on Saturday 18th November, and Saturday 23rd November with 20 and 35 spaces remaining respectively. This aligns with the advice received by GCC and SDC requesting a demonstration that there would be sufficient parking within Stroud Town Centre.

2.4.7 On the original survey, Saturday 20th May 2023, reallocating all parking within Cheapside to alternative car parks within Stroud pushed the car parks over capacity by 90 spaces. These observations were as result of the surveys taking place on a busy event day, and so does not represent the typical accumulation expected.

2.4.8 To better understand if this is a common occurrence during busy periods, surveys were undertaken on the build up to Christmas on both Friday 6th December and Saturday 7th December during the Stroud Goodwill Festival. Whilst parking was pushed to capacity on Friday 7th with 4 spaces reserve, there is scope for reallocation of spaces from Cheapside to elsewhere, demonstrated by a potential reserve capacity of 124 spaces on the Saturday.

2.4.9 These results highlight that there is sufficient capacity to accommodate parking from Cheapside elsewhere during Stroud's busiest periods, offering a relative comparison with the other busy and 'worst case' scenario demonstrated on Saturday 20th May 2023. It is recommended that options be discussed to manage demand during large events that could cause demand to exceed capacity however most days, the displacement of parking at Cheapside could be effectively reallocated to the alternative car parks within Stroud. One key approach to alleviate the strain on town centre parking during peak event times would be to promote the use of sustainable travel modes such as buses and trains that give an alternative to car use.

2.4.10 It is therefore considered there should be no reason as to why parking at Cheapside could not be displaced to other available parking locations within Stroud town centre.

APPENDIX D: ORIGIN AND DESTINATION SURVEYS

THURSDAY 18TH MAY

Journey Origins	Journey Destinations
Bagpath (Gloucestershire)	Cirencester (Gloucestershire)
Dursley (Gloucestershire)	Chippenham (Wiltshire
Littleworth (Oxfordhsire)	Dursley (Gloucestershire)
Nailsworth (Gloucestershire)	Worcester (West Midlands)
Badbrook	Bath
Bristol	Luton
Cashes Green (Gloucestershire)	Painswick (Stroud)
Cirencester (Gloucestershire)	Reading
Gloucester (Gloucestershire)	Brookthorpe (stroud)
Painswick (Gloucestershire)	Cardiff
Pitchcombe (Gloucestershire)	Cashes Green (Stroud)
Whiteshill (Gloucestershire)	Chalford (Stroud)
Amberley (West Sussex)	Churchdown (Gloucestershire)
Bisley (Woking/surrey)	Cotswolds
Butterrow (Gloucestershire)	Guilford
Cheltenham (Gloucestershire)	Hereford
Cheltenham Spa (Gloucestershire)	Lancaster
Dudbridge (Gloucestershire)	London Heathrow
Martin	Manchester
Minchinghampton (Stroud)	Nailsworth
Radborough (Stroud)	New Park
Ryeford (Stonehouse)	Newport
Tetbury (Gloucestershire)	Oxford

Bath (North Somerset)	Pembroke (Wales)
Berkshire	Southampton
Birmingham (West Midlands)	Stonehouse
Cainscross (Gloucestershire)	Tewkesbury (Gloucestershire)
Caslic	Cirencester (Gloucestershire)
Caul's Marine	Chippenham (Wiltshire)
Countryside	Dursley (Gloucestershire)
Cumbria	Worcester
Eastcombe (Stroud)	Bath
Forest of Dean	Luton
Lancaster	Painswick (Stroud)
London	Reading
Merlin	Brookthorpe (Gloucestershire)
Mount Pleasant (London)	
Newcastle	
Newmarket (Suffolk)	
Oxford	
Paddington	
Sapperton (Gloucestershire)	
Slad (Gloucestershire)	
Stanfields (Stoke on Trent)	
Stroud Green (stroud)	
Stroud Uplands (stroud)	

SATURDAY 20TH MAY

Journey Origins	Journey Destinations
Chase Green	Culham
Cirencester	Gatwick
Rodborough	Pilning
Cheltenham Spa	Reading
Radley	Stonehouse
Swindon	Tilchurst
Bristol	
Cashes Green	
Culham	
Dursley	
London	
Tetbury	
Alderley	
Ashchurch	
Birmingham	
Bristol Parkway	
Cardiff	
Ebley	
Forest of Dean	
Frampton	
Hampshire	
Patchway	
Pilning	
Port Stanley	

Stow on the Wold	
Tewkesbury	
Thrupp	
Uley	
Whitham	
Whitminster	
Wiscombe	
Witton	
Chase Green	
Cirencester	
Rodborough	
Cheltenham Spa	
Radley	
Swindon	
Bristol	
Cashes Green	
Culham	
Dursley	
London	
Tetbury	
Alderley	
Ashchurch	
Birmingham	

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