GREATER CAMBRIDGE CITY DEAL

Securing future prosperity

6 January 2017

To: Members of the Greater Cambridge City Deal Joint Assembly:

Councillor Roger Hickford	Cambridgeshire County Council (Chairman)
Councillor Kevin Price	Cambridge City Council (Vice-Chairman)
Councillor David Baigent	Cambridge City Council
Councillor Tim Bick	Cambridge City Council
Councillor Maurice Leeke	Cambridgeshire County Council
Councillor Noel Kavanagh	Cambridgeshire County Council
Councillor Kevin Cuffley	South Cambridgeshire District Council
Councillor Bridget Smith	South Cambridgeshire District Council
Councillor Tim Wotherspoon	South Cambridgeshire District Council
Claire Ruskin	Cambridge Network
Sir Michael Marshall	Marshall Group
Andy Williams	AstraZeneca
Mark Robertson	Cambridge Regional College
Helen Valentine	Anglia Ruskin University
Dr John Wells	Cancer Research UK Cambridge Institute

Dear Sir / Madam

You are invited to attend the next meeting of **GREATER CAMBRIDGE CITY DEAL JOINT ASSEMBLY**, which will be held in **THE GUILDHALL, CAMBRIDGE, CB2 3QJ** at South Cambridgeshire Hall on **WEDNESDAY, 18 JANUARY 2017** at **2.00 p.m.**

Requests for a large print agenda must be received at least 48 hours before the meeting.

AGENDA

PAGES

1. Apologies for Absence

2. Declarations of Interest

3. Minutes of the Previous Meeting **1 - 12**
The Assembly are invited to agree the minutes of the last meeting held on 1 December 2016.

4. Questions from Members of the Public

5. Petitions
The following petition has been received:
Your proposal to close key roads to private vehicles in Cambridge at peak hours will have a seriously negative impact on residents, businesses and commuters in the city and surrounding area.
We oppose these proposals because they will:

- have an arbitrary and unfair impact on some people because of

where they live or work;

- displace traffic from some roads onto others, resulting in longer and more time-consuming journeys
- threaten the livelihood of businesses by limiting customer access and deliveries during normal business hours
- increase fuel use, resulting in higher cost to the motorist and more air pollution and carbon emissions
- seek to force travellers to use public transport without adequate steps to improve its affordability and accessibility.
- We believe that you should invite responses not only to your preferred solution to the congestion problem, but to the range of possible alternatives, equally and objectively presented.

4,057 signatures online http://www.stopcambridgeroadclosures.co.uk/ and 712 people have signed a paper copy agreeing with the following statement:
"I call for a halt to the City Deal's plan for road closures in Cambridge, and for the opening up of a wider, fairer consultation that includes all options to tackle congestion."

11. Date of Next Meeting

The next meeting will be held on 1 March 2016 at 2pm in the Kreis Viersen Room at Shire Hall.

GREATER CAMBRIDGE CITY DEAL

Securing future prosperity

GREATER CAMBRIDGE CITY DEAL JOINT ASSEMBLY

Minutes of the Greater Cambridge City Deal Joint Assembly held on
Thursday, 1 December 2016 at 2.00 p.m.

PRESENT:

Members of the Greater Cambridge City Deal Joint Assembly:

Councillor Roger Hickford	Cambridgeshire County Council (Chairman)
Councillor Kevin Price	Cambridge City Council (Vice-Chairman)
Councillor Dave Baigent	Cambridge City Council
Councillor Tim Bick	Cambridge City Council
Councillor Noel Kavanagh	Cambridgeshire County Council
Councillor Maurice Leeke	Cambridgeshire County Council
Councillor Kevin Cuffley	South Cambridgeshire District Council
Councillor Bridget Smith	South Cambridgeshire District Council
Sir Michael Marshall	Marshall Group
Claire Ruskin	Cambridge Network
Andy Williams	AstraZeneca
Helen Valentine	Anglia Ruskin University
Dr John Wells	Cancer Research UK Cambridge Institute

Members or substitutes of the Greater Cambridge City Deal Executive Board in attendance:

Councillor Ian Bates	Cambridgeshire County Council

Officers/advisors:

Ashley Heller	Cambridgeshire County Council
Bob Menzies	Cambridgeshire County Council
Aaron Blowers	City Deal Partnership
Beth Durham	City Deal Partnership
Tanya Sheridan	City Deal Partnership
Joanna Harrall	City Deal Partnership
Graham Watts	South Cambridgeshire District Council

1. APOLOGIES FOR ABSENCE

No apologies for absence had been received.

2. MINUTES OF THE PREVIOUS MEETING

The minutes of the previous meeting held on 3 November 2016 were confirmed and signed by the Chairman as a correct record.

3. DECLARATIONS OF INTEREST

No declarations of interest were made.

4. QUESTIONS BY MEMBERS OF THE PUBLIC

No questions from members of the public had been received.

5. PETITIONS

No petitions for consideration by the Joint Assembly at this meeting had been received.

6. CITY DEAL PROGRESS REPORT

The Joint Assembly considered the City Deal progress report.

Tanya Sheridan, City Deal Programme Director, in presenting the report confirmed that workshops in relation to the Histon Road and Milton Road schemes were nearly complete, with a report anticipated back to the Joint Assembly and Executive Board in March 2017.

Regarding the Strategic Risk Register, it had been agreed by the Executive Board to report those risks on an exceptions basis where they had significantly escalated. Tanya Sheridan reported that the City Deal Programme Board had considered risk 4 on the Risk Register, which comprised a failure to engage effectively across relevant stakeholder groups on the City Deal vision, and in reassessing those scores recommended revised scores of an inherent likelihood of 4 and impact of 4, together with a residual likelihood of 3 and impact of 4. Actions were being taken to manage that risk. Tanya Sheridan explained that this issue had been brought to the attention of Joint Assembly Members as this stage inline with the exception reporting approach agreed by the Board.

The Joint Assembly **NOTED** the City Deal progress report.

7. WESTERN ORBITAL - PUBLIC CONSULTATION OUTCOMES AND NEXT STEPS

The Joint Assembly considered a revised version of the report which had been published as a supplement, summarising the outcomes of the consultation on possible future options for bus and cycle infrastructure improvements along the Western Orbital corridor.

Ashley Heller, Team Leader of Public Transport Projects at Cambridgeshire County Council, presented the report and highlighted the following key messages received in response to the consultation exercise:

- over 64% of respondents supported the need for public transport improvements along the corridor;
- over 67% of respondents felt it was important or very important that cycling and pedestrian facilities were improved within this scheme;
- the greatest support was given for option A, consisting of a route on the existing M11, with 61.8% supporting or strongly supporting this option;
- 53.4% of respondents supported or strongly supported option B, east of the M11;
- the greatest opposition was shown for option C, west of M11, with 43.1% opposing or strongly opposing this option.
- the majority of respondents supported the concept of Park and Ride, with the greatest support expressed for a new Park and Ride site at the Junction 11 exit of the M11, with 70.9% of respondents supporting or strongly supporting this option;
- over 70% supported a Park and Ride and/or a Cycle and Ride at Junction 12 of the M11.

Mr Heller reported that the outcomes of the public consultation would form part of the ongoing strategic assessment of options. He acknowledged that the Western Orbital scheme had a close link with the Cambourne to Cambridge Better Bus Journeys scheme on the A428. This would be taken into account as part of ongoing assessment work which he expected to be complete by July 2017, at which time the Executive Board was programmed to make a final decision on options for detailed consultation on the Cambourne to Cambridge scheme.

Mr Heller highlighted the ongoing communication with Highways England in terms of its development proposals for the M11 motorway and anticipated that Highways England would provide further clarity on longer term measures to be taken on the M11 during 2017 when its next Route Investment Strategy was set out. He expected the City Deal to engage at the highest levels with Highways England to influence this process. In view of the timescales relating to Highways England's decision-making in this respect, Mr Heller made the point that any significant decisions by the City Deal Executive Board on this scheme at this stage were not essential, particularly given that currently the Western Orbital scheme was an unfunded tranche 2 scheme.

Helen Bradbury, Chairman of the Local Liaison Forum, reported that the Forum had decided not to meet in order to consider this report since it did not put forward any recommendations on preferred options. The Local Liaison Forum would instead meet on 17 January 2017 and give consideration to the report and, committing to circulate a full statement of discussions and any resolutions passed, asked that its recommendations be given due consideration in shaping the preferred options.

With regard to the Western Orbital scheme, Helen Bradbury raised the following points that had been discussed at previous meetings of the Local Liaison Forum:

- whilst the Local Liaison Forum could see the benefits of an on-road Western Orbital route with bus only slip lanes in linking the north-west and west Cambridge sites to the Biomedical Campus, it did not believe that sufficient evidence had been provided on projected usage and commercial viability to justify the expense and environmental impact of an off-road solution;
- the Local Liaison Forum supported the idea of extending the current Park and Ride site at Trumpington to capture more motorway traffic;
- the Local Liaison Forum did not support siting a new Park and Ride at Hauxton on the west side of the M11 and instead favoured bringing forward an extended Foxton level crossing interchange project into tranche 1, which could accommodate bus, rail and cycle users as part of the existing plans. This would be a better location for people to transfer onto sustainable modes of transport as it would capture traffic before the congestion began on the A10 and link with the mainline railway station;
- the idea that Park and Ride locations should be sited further from the city had been consistently made by the Local Liaison Forum;
- the question of how the Western Orbital would connect with the Cambourne to Cambridge busway remained unclear, whereas an on-road Cambourne to Cambridge busway would connect directly. The Local Liaison Forum therefore wanted to see a full assessment made of A428 Cambourne to Cambridge options that made better use of existing infrastructure.

In respect of the A428 Cambourne to Cambridge scheme, the Local Liaison Forum had agreed a recommendation to the City Deal Executive Board that the hybrid scheme it proposed to the Assembly and Board in September 2016 be fully assessed as an alternative to options 3 and 3a of that scheme on the basis that it made better use of

existing infrastructure. She raised a number of points in support of this recommendation, saying that no valid two-way comparison using existing infrastructure had ever made, with the only option that addressed using existing infrastructure not fitting the basic criteria of the scheme. She also claimed that comparative journey times used to assess the different options were misleading.

In addition, Helen Bradbury asked whether misinformation regarding the capacity of the Junction 13 bridge, and then the non-disclosure of contrary information, had influenced the options assessed and the decision taken. She referred to a report produced by Atkins in May this year, claiming it had not been made publicly available but which stated the opposite view to that given by officers. The Local Liaison Forum therefore believed that the bridge did have the capacity to take four lanes, could be widened to the north or to the south, or could be supplemented with a bus-only or cycle-only bridge directly alongside it and would be a tiny fraction of the cost of the new bridge advocated by officers.

Helen Bradbury asked the Joint Assembly to support the following:

- given the new information on the Junction 13 bridge, recommend a full appraisal of the hybrid solution proposed by the Local Liaison Forum, including transparent evaluation of strategic fit, benefit-cost ratio and wider economic benefits;
- note that key information was misrepresented or not disclosed that was relevant to the feasibility of solutions which made use of existing road infrastructure;
- pause all further work on preferred option 3a until this was completed;
- in light of the results, reconsider whether the preferred option 3a was the best strategic fit, or the most sensible solution.

Councillor Roger Hickford, Chairman of the Joint Assembly, asked officers to respond directly to Helen Bradbury regarding her points on the A428 Cambourne to Cambridge scheme since the item under consideration at this meeting was the Western Orbital scheme. He acknowledged, however, that the two schemes were closely linked. It was agreed that all Members of the Joint Assembly would be sent a copy of the response.

Tanya Sheridan, City Deal Programme Director, explained that the strategic case behind the Western Orbital scheme was to collect areas of significant housing growth in north-west and south-west Cambridge, together with significant employment growth sites in those areas.

Bob Menzies, Director of Strategy and Development at Cambridgeshire County Council, in respect of bus patronage made the general point that the number of bus rapid transit passengers was increasing whereas traditional bus services were seeing their passenger figures decrease. In relation to rail and bus passengers and cyclists, Mr Menzies acknowledged that a lot of different passenger flows needed to be catered for as part of this scheme. Referring to the east/west railway, which was a route from Bedford, he reported that officers were currently looking at what potential routes along that broad corridor could be delivered but made the point that the Assembly and Board would be some way off knowing what these proposals may consist of, thereby supporting the case that this should be a tranche 2 consideration. Foxton level crossing had originally been included in the tranche 1 programme on the basis of it being fully funded by Network Rail, who had since made a decision to remove this scheme from its funding programme. Discussions with Network Rail would continue in respect of delivering that scheme.

Mr Heller made the point that there would be operational issues with a Park and Ride site if it was located too far away from the city on the basis that the further away they were, the more expensive the operational costs would be. In order to make bus use effective, bus

priority would also need to be introduced in both directions. In the case of Foxton, therefore, he explained that this would mean creating a long stretch of bus priority on the A10 in both directions. He added that a Park and Ride on the M11 junction would pick up two-way traffic, whereas a site at Foxton would only pick up the traffic travelling in one direction.

Councillor Hickford referred to the ongoing liaison with Highways England in terms of its developing proposals for the M11 motorway, noting that 2017 was the point where their proposals were likely to be known and where the City Deal could have an influence, with a final decision anticipated in 2019/20. He said that the outcome of this liaison with Highways England was hugely influential as to what the Executive Board would ultimately decide to do with the Western Orbital scheme. He asked how robust negotiations had been so far.

Mr Menzies reiterated that Highways England had its own strategies and programmes and that in 2017 it would be consulting on its five year plan. The City Deal and other key stakeholders would be consulted upon with the intention of putting the plan before the Department of Transport for approval in 2019. The City Deal and other key stakeholders would therefore have an opportunity to influence that in 2017, with Highways England being very open to suggestions put forward, but he emphasised that the Department for Transport would make the ultimate decision. Mr Menzies made the point that Highways England and the Department for Transport had to consider the whole network, not just that of the network in the Greater Cambridge area, so other councils, partnerships and bodies would be seeking to influence the outcome too. The City Deal would therefore need to press Highways England during that period of consultation to ensure that those schemes on the network within the Greater Cambridge area were considered as priorities.

Councillor Bridget Smith reflected on what she called the Foxton interchange and requested that it no longer be referred to solely as Foxton level crossing. She felt that this was more than a level crossing project and was effectively an interchange and transport hub. She also emphasised that the Greater Cambridge City Deal included South Cambridgeshire and that there was more to this scheme than linking up with new developments in Cambridge. Councillor Smith stated that lots of people in South Cambridgeshire used their cars due to there being no public transport services available, so a facility such as an interchange at Foxton where they could park their cars and then proceed with journeys on public transport or bicycle would be an extremely useful facility for them. She also felt that there was the potential to extend the footprint of the site due to land adjacent, owned by the County Council, being available which could see additional car parking spaces added to support this opportunity to create an effective transport hub serving the city and South Cambridgeshire.

Sir Michael Marshall highlighted Girton interchange as another significant issue and felt that the City Deal also needed to coordinate with Highways England regarding that aspect of the infrastructure inline with City Deal schemes. He felt that representatives of Highways England should be invited to attend a meeting of the Joint Assembly. Mr Menzies agreed to extend such an invitation. He reminded the Assembly that the Girton interchange had been considered by Highways England as part of the A14 regrading Development Consent Order and reasons were given at that time as to why the proposal for Girton interchange did not go ahead as part of the regrade. Mr Menzies offered to share this with Joint Assembly Members.

Councillor Noel Kavanagh asked why, if the Local Liaison Forum had access to the document, why Joint Assembly Members had not been given access to the Atkins report referred to by Helen Bradbury. Mr Heller explained that the Atkins report had been presented to the Local Liaison Forum in June 2016 and was therefore been publicly

available from that point. It was agreed that a link to this document would be sent to all Members of the Joint Assembly.

Dr John Wells made the point that consideration should be given to the strategic overview of the scheme, to include the designing of transport solutions, before any decisions were made regarding the physical infrastructure. He emphasised that system integration was a key aspect of this scheme.

Dr Wells in respect of Park and Ride locations made the general point that if the current 38,000 journeys a day by private motor vehicle into Cambridge were converted to travelling by bus, each Park and Ride site would need to be able to accommodate approximately 5,000 parking spaces for each of the radial routes. He made the point, therefore, that considering in so much detail a single Park and Ride site did not grasp the magnitude of the problem. Dr Wells acknowledged that for the purpose of illustrating this point these purposely very high level calculations had assumed that all car traffic would transfer to public transport, which he accepted was not realistic.

Dr Wells reflected on the City Deal's strategy of modal shift from private motor vehicle to public transport or sustainable transport and creating segregated bus provision to remove the congestion. These were considered to be fundamental principles so he subsequently questioned why he himself, despite all of the things he had previously mentioned already being available to him via the guided busway, chose to drive to where he worked at Addenbrooke's. Dr Wells therefore called for further work to be undertaken to explain why he and many other people like him were not mode shifting when the infrastructure and services were currently there to enable people to do so.

Mr Menzies accepted the significance of the challenge the City Deal was facing regarding modal shift, but said that a key contributing factor to the example put forward by Dr Wells was that people commuting to work currently had places to park their cars. He also reiterated that people were using the guided busway and that people had already changed their travelling behaviour as a result of its introduction.

In terms of the points raised regarding Park and Ride, Mr Menzies saw the solution not just as Park and Ride provision but also in getting people on buses from other areas where they lived so that they were not having to drive along the corridor at all. This solution would rely upon people cycling and using trains as well as buses, emphasising that there had to be a mix of methods of transport available to people.

Councillor Kevin Cuffley felt that the report had concentrated on the Cambridge Biomedical Campus, whereas he saw Sawston as a key hub with its science park and residential development. He was disappointed that very little reference had been made in the report to Sawston station, when the infrastructure in the area was ready to be utilised, which he thought would take pressure off other links. Councillor Cuffley also felt that the report did not make enough reference to bus journeys to and from southern sites.

Councillor Tim Bick welcomed Dr Wells' analysis and agreed that the City Deal had an obligation to get people from where they lived to where they worked. He was disappointed with the composition of the consultation responses in that the majority of people responding were not really daily travellers along that route at peak times of the day, which was the main issue seeking to be addressed as part of the scheme. In terms of considering an on-road or off-road M11 option, taking into account the timescales associated with knowing the details of Highways England's programme, Councillor Bick said that it was likely that an off-road scheme would be looked at further particularly in view of the congestion along the motorway which currently existed. In terms of an on-road option he said that the real test in transport terms would be whether this could achieve the

City Deal's objectives. Reflecting on the consultation questions, he sought clarity as to what basis people were being asked the questions on as there appeared to be a lack of context to the questions in the document.

In terms of the question in the consultation document on Park and Ride, Councillor Bick highlighted that this was the same type of conceptual question that had been experienced with the A428 Cambourne to Cambridge scheme. He was therefore of the opinion that there was not enough information or evidence to form a view as to the exact location of a Park and Ride site at this stage of the scheme.

Under the options heading of the report, Councillor Bick highlighted that an option that had not been recommended to the Executive Board consisted of officers working up and recommending a preferred option for the Western Orbital in 2017, allowing for full integration into the Cambourne to Cambridge scheme. He asked why this had not been put forward as a recommendation as part of the report.

Mr Heller, in response to the point made about consultation responses, reported that extensive documentation had been circulated throughout the area and that there was very little control officers had in terms of the numbers and type of responses received to a consultation such as this.

Addressing the point regarding the option set out in the report which had not been put forward as a recommendation at this stage of the process, Mr Heller explained that the Western Orbital was a tranche 2 scheme and that its demand was more future orientated, which may explain why there was a relatively low response to the consultation. He added that the consultation was relatively high level and conceptual and sought to ascertain how people saw the future of transport provision along that corridor.

Mr Heller reported that officers had been asked to undertake a comparison of Park and Ride sites as part of the A428 scheme, which would assess the following:

- accessibility;
- relatively;
- operational ease;
- frequency of services;
- cost;
- opportunity for further development;
- environmental impact.

Claire Ruskin asked whether there was an evidence base for traffic flows, together with projections for future use along the corridor. In terms of modal shift, she made that point that people were unlikely to make the shift if it meant having to make a change at the later stages of their journeys and that hubs further away from the city should help address that aspect of modal shift.

Mr Heller confirmed that statistics were available, both in terms of existing data and projections, and had been used for strategic modelling.

Helen Valentine felt that the consultation document had not portrayed the scale of the challenge that the City Deal was confronted with and was keen to see this data be incorporated in the future as part of the consultation documentation.

Councillor Bridget Smith questioned why a Park and Ride site located further away from the city would cost more to operate as a site. Mr Menzies explained that a site too far away from the city would mean that it cost the operators more to run the service, meaning that passengers' ticket prices would be increased to make up for the additional cost which in turn could result in people choosing not to use the facility. He said that each Park and Ride site would need to be considered on its own merits and that the whole system, such as operational issues, had to be included as part of that consideration.

With 12 votes in favour and 1 abstention, the Joint Assembly **RECOMMENDED** that the Executive Board:

(a) Noted the responses to the consultation on the Western Orbital bus infrastructure improvement scheme.

(b) Agreed the next steps as set out in the report for the ongoing strategic assessment of the Western Orbital scheme as part of the City Deal programme to supported related potential Tranche 1 schemes.

(c) Agreed to take a key role in working with Highways England to establish clear priorities along the M11 corridor and for these discussions to form part of the next report on the Western Orbital.

8. M11 JUNCTION 11: BUS ONLY SLIP ROADS

The Joint Assembly considered a report which provided a summary of the further assessment of a southbound bus only off slip road at Junction 11 of the M11.

Ashley Heller, Team Leader of Public Transport Projects at Cambridgeshire County Council, presented the report and explained that the assessment undertaken did not support a standalone bus only south bound off slip road, but confirmed that some options may be deliverable albeit with associated risks. It was noted that there remained uncertainties as to the long term plans of Highways England for the M11 as well as potential land use planning issues associated with the junction which would require further clarification. Mr Heller outlined that the proposal reflected a very small stretch of bus priority along an extremely long and congested corridor but recognised that there were issues with this particular junction and that intervention would be necessary in view of employment growth in the area. In his professional option, Mr Heller felt that it was more sensible to consider the junction in the context of the Western Orbital scheme, with the junction featuring as part of a modular scheme potentially around Park and Ride intervention.

Councillor Bridget Smith supported the recommendations contained within the report and made the point that no buses currently travelled along the route, calling for the project to be dropped at this stage.

Andy Williams corrected some the of statistics quoted in the report at paragraphs 5 and 6 of the report in relation to Astra Zeneca, Papworth Hospital and the Cambridge Biomedical Campus, which he felt underestimated the size of the problem. He also made it clear that AstraZeneca had in fact relocated from London, not Chester as stated in the report. Mr Williams reiterated the significant demand that would be placed on this junction as early as 2018 when Papworth Hospital moved to the site, reminding Members that AstraZeneca already had 2,000 additional employees located on the site and that there would be a further 6,000 employees as a result of growth around Sawston. He added that 50% of Papworth Hospital employees had indicated that they would use a bus service if there was one in operation. Mr Williams said that something needed to be in place before 2018 and

was therefore keen for something to come back for consideration in the future, particularly around what could be done in respect of Park and Ride.

Councillor Roger Hickford, Chairman of the Joint Assembly, highlighted that a report on this issue was scheduled for reporting back to the Joint Assembly and Executive Board at their meetings in July 2017.

Claire Ruskin was interested in the traffic modelling information and felt that this should be made available. She also made the general point that the City Deal was seeking to make businesses more accessible and practical for people, which should be taken into account as part of considering this specific project.

Councillor Tim Bick was of the opinion that any improvement gained as a result of implementing these measures would be minimal and supported the recommendations contained within the report, saying that it was necessary to think more strategically.

Councillor Noel Kavanagh referred to the subsidy that had been offered, equating to 3 buses an hour, and asked where that would come from in the longer term.

Councillor Dave Baigent felt that this project presented a very important opportunity to test the City Deal and deliver something that could prevent a huge problem on the M11. He therefore felt this was something that should be followed through.

Councillor Hickford made the point that the recommendation in the report was not seeking to reject anything, but instead ensure that this aspect of the scheme was right.

The Joint Assembly **RECOMMENDED** that the Executive Board agreed that the M11 Junction 11 south bound bus only off slip road concept should be integrated into the Western Orbital project ensuring that any strategic transport and economic benefits may be realised and that a sustainable phased proposal could be developed.

9. TRANCHE 2 PRIORITISATION

Consideration was given to a report which updated the Joint Assembly on the work necessary to prioritise transport infrastructure schemes for delivery in the second tranche of the City Deal programme.

Tanya Sheridan, City Deal Programme Director, presented the report which set out the proposed approach and timetable for developing and agreeing tranche 2 transport priorities for the City Deal. It was noted that a number of changes, most notably the agreement of the Cambridgeshire and Peterborough Combined Authority, presented opportunities that should be explored early in the next phase of this work. Tanya Sheridan reported that the Executive Board was therefore being recommended to add that aspect to the previously agreed scope and approach for the project, together with the undertaking of further work to develop the prioritisation criteria and methodology and a number of other aspects including:

- to explore the merit of potentially creating a rolling investment fund and/or a small schemes fund;
- to develop a proposed long list of schemes;
- to assess those and hence derive a recommended set of investment priorities for the City Deal post-2020.

Councillor Roger Hickford, Chairman of the Joint Assembly, reflected on references made in the report to the Local Plans of Cambridge and South Cambridgeshire and highlighted that they had still not gone through the examination process. He also acknowledged the moving landscape in respect of the recent commitment by the constituent authorities to sign up to a devolution deal for Cambridgeshire and Peterborough. He questioned whether this item should be deferred until the Cambridgeshire and Peterborough Combined Authority investment criteria and strategic economic plan refresh were available in February 2017.

Councillor Bridget Smith was unconvinced that it should be the City Deal's role to set up a fund for transport infrastructure or other measures, citing the highway infrastructure grant as an example of a similar facility already in place. She questioned how this fund would be managed.

Claire Ruskin was keen to see the City Deal develop its tranche 2 programme through discussion in order that a clear view of people's priorities could be established. Andy Williams supported this approach and said that the partnership needed to think about how it could leverage outcomes with other schemes being delivered outside of the City Deal. He added that a common message would help communicate the City Deal's objectives to the general public.

Dr John Wells said that the holistic transport plan for the Greater Cambridge area needed to be considered as part of the tranche 2 discussions, with outputs being a priority.

Councillor Tim Bick felt that it was important to start discussing the tranche 2 programme and any potential joined up approaches. He was broadly supportive of the recommendations but sceptical with the grant based approach that was being proposed.

Councillor Hickford agreed to convey the Assembly's concerns regarding the grant funding proposals to the Executive Board.

The Joint Assembly **RECOMMENDED** that the Executive Board:

(a) Agreed that the headline objectives for the tranche 2 prioritisation exercise are:

- to prioritise transport infrastructure investments to prepare those which best meet the City Deal's strategic objectives for delivery when funding becomes available;
- to ensure that those investments support the growth strategy set out in the Local Plans and the supporting Transport Strategy for Cambridge and South Cambridgeshire;
- to ensure the prioritisation is aligned to wider work by the Local Enterprise Partnership on the Strategic Economic Plan and of the Cambridgeshire and Peterborough Combined Authority.

(b) Recognised dependencies between ongoing tranche 1 work, the Local Plan examinations, the work of the Combined Authority, the Economic Assessment Panel, the tranche 2 prioritisation exercise and tranche 3 and agrees that potential alignment and synergies with the Cambridgeshire and Peterborough Combined Authority be explored;

(c) Agreed that the previously used criteria and methodology should be reviewed and built on and that the Executive Board, Joint Assembly and other stakeholder input be sought on assessment criteria and methodology and the 'long list' through workshops in early 2017.

(d) Noted existing commitments to consider particular schemes through the tranche 2 prioritisation process and confirms these.

(e) Agreed to receive a further report in June recommending the prioritisation methodology and criteria and long list process, as well as the potential for synergies with the Combined Authority and other bodies.

(f) Agreed officers should explore potential use of a proportion of future City Deal funding to:

- create a potential 'rolling fund' for investment in transport infrastructure/ measures to unlock early growth from which a future repayment revenue stream would follow;
- create a fund for smaller scale measures (likely to be those costing less than £500 000) that could be bid into to allow delivery of measures that unblock localised barriers to growth and provide strong economic benefits in line with City Deal objectives.

and noted that these options will be brought back to the Executive Board with the proposed long list in September 2017.

(g) Endorsed the outline timetable for recommending transport investment priorities for tranche 2 and notes the key dependencies.

10. DEPARTMENT FOR TRANSPORT CONSULTATION ON WEBTAG

The Joint Assembly considered a report which set out the principles to be incorporated into a combined City Deal response to the Department for Transport's consultation on proposed changes to the estimation of wider economic impacts in transport appraisal guidance.

It was unanimously agreed that the word 'combined' should be removed from the recommendation contained within the report, to remove any potential confusion relating to Combined Authorities.

The Joint Assembly **RECOMMENDED** that the Executive Board:

(a) Agrees to submit a City Deal response to this consultation, in addition to the responses that the partner organisations may wish to make individually.

(b) Agrees that the City Deal response should be framed around the principles set out in paragraph 13 of the report.

(c) Delegates to the City Deal Programme Director, in consultation with the Chairman and Vice-Chairman of the Executive Board and Cambridgeshire County Council's Executive Director of Economy, Transport and Environment, responsibility for submitting a full response to this consultation in accordance with these agreed principles.

11. CITY DEAL FINANCIAL MONITORING

Consideration was given to a report on the City Deal's financial monitoring position for the period ending 31 October 2016.

The Joint Assembly **NOTED** the financial position as at 31 October 2016.

12. CITY DEAL FORWARD PLAN

Consideration was given to the City Deal Forward Plan.

Tanya Sheridan, City Deal Programme Director, highlighted that briefing meetings in respect of the Histon Road and Milton Road schemes were in progress, with update reports scheduled to be presented to the March 2017 cycle of meetings of the Joint Assembly and Executive Board. It was also noted that consideration would be given to the determination of Traffic Regulation Orders in respect of cross city cycle improvements at that cycle of meetings.

Councillor Maurice Leeke pointed out that there was no mention in the Forward Plan of the implications of the Cambridgeshire and Peterborough Combined Authority in terms of its potential impact on the City Deal.

Tanya Sheridan agreed that this was something that could be brought back to the Joint Assembly, particularly regarding the establishment of the Combined Authority and timings of key events, such as the election of the Mayor for example.

Councillor Roger Hickford, Chairman of the Joint Assembly, agreed to discuss this further with the Programme Director in order to establish the best way of taking it issue forward.

The Joint Assembly **NOTED** the City Deal Forward Plan.

The Meeting ended at 4.00 p.m.

Greater Cambridge City Deal Executive Board Forward Plan of decisions

Publication date: 6 January 2017

Notice is hereby given of:

- Decisions that that will be taken by the Greater Cambridge City Deal Executive Board, including key decisions as identified in the table below
- Confidential or exempt executive decisions that will be taken in a meeting from which the public will be excluded (for whole or part)

A 'key decision' is one that is likely:

a) to result in the incurring of expenditure which is, or the making of savings which are, significant having regard to the budget for the service or function to which the decision relates; or
b) to be significant in terms of its effects on communities living or working in the Greater Cambridge area.

Item title	Summary of decision (including notice of confidential or exempt information, if appropriate)	Officer lead(s)	Key decision?
Joint Assembly: 1 March 2017 **Executive Board: 8 March 2017**	**Reports for each item to be published: ~~21~~ 17 February 2017**		
Financial monitoring report and 2017/18 budget setting	To note the latest financial information from and set the City Deal budget for 2017/18.	Chris Malyon	No
A1307 corridor to include bus priority – consultation results and selection of preferred option	To consider the outcomes of the public consultation on the initial options and to select a preferred option to develop in greater detail, to be subject to public consultation before being brought back to the Executive Board for approval to progress to detailed design.	Graham Hughes	Yes
Milton Road and Histon Road bus, cycling and walking	To consider the outcomes from design workshops and determine a response to Local Liaison Forum resolutions on project design principles for Milton Road and set delivery priorities for both	Graham Hughes	No

improvements	Milton Road and Histon Road projects.		
~~Histon Road bus, cycling and walking improvements~~	~~To consider the outcomes from design workshops and determine a response to Local Liaison Forum resolutions on project design principles.~~	~~Brian Stinton~~	~~No~~
Cross City Cycling Improvements	Determination of Traffic Regulation Orders and update on scheme progress.	Graham Hughes	No
Update on work with Combined Authority	To update on work undertaken regarding the relationship between the City Deal and the Cambridgeshire and Peterborough Combined Authority.	Tanya Sheridan	No
City Deal Environmental Design Guidance	To consider and adopt a revised Environmental Design Guidance document.	Graham Hughes	No
Six-monthly report on Strategic Risk Register	To consider the strategic risks to the Programme and mitigations.	Aaron Blowers	No
City Deal progress report	To monitor progress across the City Deal workstreams.	Tanya Sheridan	No
Joint Assembly: 7 June 2017 **Executive Board: 15 June 2017**	**Reports for each item to be published: ~~30~~ 25 May 2017**		
A10(N) study	To consider the outcomes of the study into the A10 corridor north of Cambridge and agree next steps.	Graham Hughes	No
Tranche 2 prioritisation	To consider the prioritisation methodology and criteria and long list process, as well as the potential for synergies with the Combined Authority and other bodies	Graham Hughes	No

2016/17 end of year financial monitoring report	To note financial information from the 2016/17 financial year.	Chris Malyon	No
Six-monthly report on Smart Cambridge	To note prores made on delivering the Smart Cambridge workstream and consider any issues arising.	Noelle Godfrey	No
Six-monthly report on skills	To note progress made on delivering the skills workstream and consider any issues arising.	Graham Hughes	No
Six-monthly report on housing	To note progress made on delivering the housing workstream and consider any issues arising	Alex Colyer	No
City Deal progress report, including extended update on payment-by-results mechanism	To monitor progress across the City Deal workstreams, and to provide an extended update on the payment-by-results mechanism and independent economic assessment panel.	Tanya Sheridan	No
Joint Assembly: 19 July 2017 **Executive Board: 26 July 2017**	**Reports for each item to be published: ~~11~~ 6 July 2017**		
Cambourne to Cambridge schemes: • Madingley Road • A428-M11 • Bourn Airfield / Cambourne busway	To consider detailed work undertaken since the Board decision in October and approve public consultation on a preferred option.	Graham Hughes	Yes
Western Orbital	To consider detailed work undertaken since the Board decision in November.	Graham Hughes	No

Milton Road bus, cycling and walking	To approve detailed design for statutory consultation.	Graham Hughes	Yes
Histon Road bus, cycling and walking improvements	To consider the outcomes from design workshops and determine a response to Local Liaison Forum resolutions on project design principles.	Graham Hughes	No
Financial monitoring report	To note the latest financial monitoring information.	Chris Malyon	No
City Deal progress report	To monitor progress across the City Deal workstreams.	Tanya Sheridan	No
Joint Assembly: 13 September 2017 **Executive Board: 20 September 2017**	**Reports for each item to be published: ~~5~~ 1 September 2017**		
Tranche 2 prioritisation	To consider the proposed long list of potential schemes, along with the potential use of a proportion of future City Deal funding for a rolling fund and a fund for smaller scale measures.	Graham Hughes	No
Six-monthly report on Strategic Risk Register	To consider the strategic risks to the Programme and mitigations.	Aaron Blowers	No
Financial monitoring report	To note the latest financial monitoring information.	Chris Malyon	No
City Deal progress report	To monitor progress across the City Deal workstreams.	Tanya Sheridan	No
Joint Assembly: 15 November 2017 **Executive Board: 22 November 2017**	**Reports for each item to be published: ~~7~~ 3 November 2017**		
Six-monthly report on Smart Cambridge	To note progress made on delivering the Smart Cambridge workstream and consider any issues arising.	Noelle Godfrey	No

Six-monthly report on skills	To note progress made on delivering the skills workstream and consider any issues arising.	Graham Hughes	No
Six-monthly report on housing	To note progress made on delivering the housing workstream and consider any issues arising.	Graham Hughes	No
Financial monitoring report	To note the latest financial monitoring information.	Chris Malyon	No
City Deal progress report	To monitor progress across the City Deal workstreams.	Tanya Sheridan	No

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GREATER CAMBRIDGE CITY DEAL

Securing future prosperity

Report To:	Greater Cambridge City Deal Executive Board	25 January 2017
Lead Officer:	Hilary Holden, City Access Programme	

City Access congestion reduction proposals: Consultation Responses and Next Steps

Purpose

1. To report the results from the consultation on 'Tackling Peak-Time Congestion in Cambridge' that are informing the work of the City Access project team and influencing the emerging work programme.
2. To agree next steps on the City Access work following the consultation, in line with the project objectives and scope agreed in January and June 2016.

Recommendations

3. It is recommended that the Executive Board:

(a) Agrees that:

(i) Officers should work up and assess options for a package of physical demand management measures.

(ii) These measures should make the best use of the limited road space and capacity in Cambridge, in order to improve bus reliability, cycling and walking, particularly within the designated Air Quality Management Area (see map in Appendix C).

(iii) No further work is undertaken on the package of six peak-time congestion control points consulted upon.

(b) Agrees that officers should continue to work up and assess options for the other seven elements of the eight-point plan consulted on, including:

(i) A Workplace Parking Levy: Co-design a workplace parking levy (WPL) scheme with employers with more detail available for Board and public review later in 2017:

1. To work with individual employers and groups of employers during 2017 on the details of the scheme.
2. To determine the local transport priorities that will receive the revenue raised, building on employer evidence of transport needs and coordinated with Council infrastructure planners.
3. To be coordinated with and if feasible form a part of the City Deal and the Local Enterprise Partnership's broader engagement with the business community.
4. The roll-out to include practical support for employers looking to manage their parking demand in advance of the levy coming into effect.

5. It is recommended that as far as possible, the Cambridge WPL should resemble the Nottingham template. However, there will need to be agreement on how to charge, the price, its geographical extent, exemptions and how it will be administered and enforced.

(ii) On-Street Parking Controls: Note that the Cambridge City Joint Area Committee (CJAC) is considering whether to recommend changes to parking policy in Cambridge and subject to business case, the City Deal would fund consultation on new residents' parking zones and the costs of implementation.

(iii) Improved Public Space and Air Quality: Agrees that officers should:

1. Assess the possibility of establishing a Clean Air Zone and the potential for the introduction of a pollution charge in central Cambridge within the existing Air Quality Management Area. Key criteria for assessing this should be its impacts on: health; the local environment, including air quality and public realm; bus reliability and cycling; business and the economy; deliverability and value for money.

2. Ensure that initiatives to improve city centre access should continue to consider opportunities for improving the city centre experience and economy and that this should be coordinated with other work across the Partnership that has similar objectives, including planning policy.

(iv) Better Bus Services and Expanded Park & Ride: Agrees that officers should continue work to identify how to reduce bus delays on key bus routes by engaging bus operators and finalising the Bus Network Review.

(v) Better Pedestrian and Cycling Infrastructure: Agrees that officers should continue to work with other partners to improve cycling and pedestrian infrastructure.

(vi) Travel Planning: Agrees that officers should continue to work with Travel for Cambridgeshire to support employers to adopt sustainable policies and practices with regard to travel to work and travel during work.

(vii) Smart Technology: Agrees that officers should continue to work with Connecting Cambridgeshire to develop smart technology solutions.

(c) Agrees that officers, with partner assistance, should deliver a City Access communication and engagement plan to support these recommendations if agreed. It is recommended that the plan focuses on communicating:

(i) Factual information about the vision for the future;

(ii) Statistics and research results;

(iii) The need for a package of complementary measures to ensure productivity growth without commensurate growth in congestion;

(iv) How we are developing workable solutions by designing them in partnership with those who will be impacted.

(v) The plan will also set out how the City Access programme fits into the broader plan for city centre revitalisation, and the wider City Deal transport vision and housing plan.

(d) To take these recommendations forward, it is proposed that work on the individual elements of the City Centre access work be developed through a series of delivery plans. Proposed plans are:

(i) Bus improvement delivery plan

(ii) Communications and engagement delivery plan

(iii) Cycling provision delivery plan

(iv) Demand management delivery plan

(v) Parking management delivery plan including a workplace parking levy and on-street parking controls

(vi) Public space & air quality delivery plan including pedestrian infrastructure

(vii) Smart technology delivery plan

(viii) Travel planning delivery plan

Reasons for Recommendations

4. The public and stakeholder consultation undertaken July-October 2016 found there to be a range of views on the best options to reduce peak time congestion in the city, and specific views on what would and would not be acceptable. The Consultation Report is being published to accompany this Board Report. A summary of the results are included in Appendix B. The key findings are:

- Recognition that doing nothing is a not an acceptable option.
- Widespread support for action to:
  - Improve air quality
  - Make buses a more viable option.
- Differing views on the best demand management measures:
  - Public opinion is (and will likely remain) divided, as no one measure will benefit everyone equally.
  - The concept of six peak-time congestion control points to restrict all vehicles except buses and cycles raised significant and valid concerns, although there was some support for it.
  - There is support for but also some opposition to both a workplace parking levy, and to further on-street parking controls.
  - Congestion charging was not consulted on directly but a small minority of respondents called for it to be a part of the options considered.

Background

5. The City Deal is seeking to secure the future of Greater Cambridge as a leading UK and global hub for research and technology, support economic growth and improve quality of life for residents of Cambridge and South Cambridgeshire. The role of the City Access programme of measures is to direct City Deal investment to:

- Achieve economic growth without commensurate growth in congestion.
- Expand the people-carrying capacity of the transport system in central Cambridge.
- Enhance the quality of the experience of accessing central Cambridge.

- Enhance the quality of place in the city centre as impacted by transport.
- Deliver the objectives agreed in June 2016 (reproduced in Appendix A) prepared following the 'Call for Evidence'.
- Assess options for delivery using the sifting criteria prepared for the 'Call for Evidence' (see Appendix A).

Considerations

6. Congestion and the unreliability of bus services has been worsening steadily in Cambridge and forecasts show that with no action, this will continue with significant extra travel delays expected. There are no easy solutions to this problem and whilst the consultation has demonstrated that the majority of respondents believe something has to be done, Board members should be aware that this will require changes to the travel patterns (such as route, time and/or mode of travel) of a significant number of residents of Cambridge and those travelling into the City. The scale of benefits that can be achieved will be closely related to the extent of the changes introduced.

Options

7. The recommendations presented here have been chosen because it is considered they can deliver the City Deal objectives.

8. Fiscal demand management measures are an alternative option but at this stage, without ruling out future fiscal measures completely, the recommendation asks for priority to be given to the progression of physical measures given their relative speed and ease of implementation.

9. A significant amount of work would be needed to develop a fiscal demand management scheme, with costs in the hundreds of thousands of pounds, possibly more to develop a scheme for consultation[1]. Designing and implementing a congestion charging scheme would need significant input from specialist consultants, with a cost and a delivery timeframe that is difficult to estimate given the need to satisfy the requirements of the Secretary of State. Congestion charging was also only raised by a minority of respondents to the consultation.

10. For these reasons, and at this stage, fiscal demand management, other than an assessment of the potential for a Clean Air Zone, is not recommended for further development.

Legal Implications

11. The introduction of a road user charging scheme in Cambridge is not within the control of local partners. Under the Transport Act 2000[2], an order from the UK Secretary of State for Transport is required to implement any form of road user charging and a public inquiry could be mandated. An order of this kind would be required if the Board opted to take forward:

    - Any fiscal demand management measures to reduce congestion, such as a cordon charge or a charge for movement within a congested zone. Excess

[1] The expenditure on the Transport Innovation Fund congestion charging scheme and model refresh was several million pounds, although subsequent developments would reduce costs this time around, they would remain significant.
[2] http://www.legislation.gov.uk/ukpga/2000/38/part/III

revenue above that required to operate the scheme is required to be ring fenced for spending on local transport priorities. And/or

- Any fiscal air pollution reduction measures, such as a charge to enter or drive within a Clean Air Zone. Current draft legislation relating to the introduction of Clean Air Zones indicates that charges will be set locally but at a level recommended by central government who will seek to ensure that they are at "an appropriate level to address air quality issues without the potential for excessive revenue raising"[3].

12. In contrast to road user charging schemes, there is more local control over the introduction of a workplace parking levy. The Transport Act 2000 does not specify procedures for publishing workplace parking levy scheme orders nor for the making and consideration of objections to such proposals. There are also no specific requirements in the Transport Act 2000 for public consultation on these schemes. In the case of Nottingham, the Secretary of State was satisfied with the local public consultation exercise, the consideration of alternatives (including road user charging and supplementary business rates) presented at the Examination in Public and as a result believed that a Public Inquiry was not justified.

Financial Implications

13. The creation of teams to work up the eight delivery plans listed in paragraph 4 will require additional resources to those currently secured which will have an impact on the spending profile. The City Access team is planning to take the lead on three of the eight delivery plans:

(a) Communications and Engagement Delivery Plan. Two out of the six people in the City Access team are dedicated full time to leading this Plan. No additional spending planned.

(b) Demand Management Delivery Plan. The City Access team is leading on this plan with consultant support. No additional spending on additional staff currently planned.

(c) Parking Management Delivery Plan (encompassing the workplace parking levy and expanding existing on-street parking controls). A dedicated team of two additional FTEs would allow us to proactively push the design, consultation and delivery of a scheme. This will have an impact on the City Access programme spend profile.

Four City Access team members have a support role on the remaining five delivery plans covering: Bus Improvements; Cycling Provision; Public Space & Air Quality; Smart Technology and Travel Planning. We are advising our lead delivery partners that they add dedicated City Access resources into their teams to deliver the City Deal programme. This will have an impact on their team spend profiles with spend being attributed to City Access and other City Deal projects.

[3] https://consult.defra.gov.uk/airquality/implementation-of-cazs/supporting_documents/161012%20%20Consultation%20Document%20%20FINAL.pdf

Consultation Responses and Communication

14. Board members should consider the following piece of evidence:

- Tackling Peak-Time Congestion in Cambridge Consultation Report, November 2016

Background Papers

15. Board members should consider the following piece of evidence:

- Tackling Peak-Time Congestion in Cambridge Consultation Report, November 2016

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Appendix A – Objectives and Option Sifting Criteria

City Deal Transport Strategy Objectives

The City Deal transport vision is that it should be easy to get into, out of, and around Cambridge by public transport, by bike and on foot.

The objectives, agreed in June 2016, are:

- To ensure transport in Greater Cambridge supports economic growth and the continuation of the Cambridge Phenomenon.
- To bring about a step change in the quality and reliability of public transport in Greater Cambridge by tackling congestion, investing in the infrastructure needed for quicker, more reliable public transport journeys and working in partnership with public transport providers.
- To reallocate road capacity to public transport, cycling and walking to encourage journeys using these modes and reduce traffic volumes.
- To encourage continued growth in the numbers of people cycling in and into Greater Cambridge.
- To use the opportunities that road space reallocation, congestion reduction, and infrastructure projects offer to improve air quality, the public realm and the historic and natural environment.

To achieve this vision, and with a 'do-nothing' forecast growth in journeys of about 30% by 2031, there needs to be a reduction in peak hour vehicular traffic of 10-15% from 2011 levels. To lock in the benefits, the released road network capacity will need to be captured (saving it from inducing new vehicular trips) and reallocated for the benefit of bus users, cyclists and pedestrians.

City Access Options Assessment – Sifting Criteria

The following sifting criteria have been agreed for the assessment of options for City Access, as established in the 2016 Cambridge Access Study:

- Fairness – what is the impact on people in different income brackets and those in Cambridge, South Cambridgeshire and outside Greater Cambridge, including commuters?
- Effectiveness – how much will it improve City Centre Access and reduce congestion? Will the effects be short-or long-term, will they be effective in both the morning and evening peak?
- Value for money – affordability, costs and benefits from implementation, to include ongoing costs as well as one-offs and whether it is affordable with City Deal (capital) funding.
- Economic impact – on City Centre vibrancy and on business and other economic activity.
- Dependencies and broader benefits – would other measures be needed to maximise effectiveness? Does this impact on whether it can be introduced in the short term or long term? Could it complement, or detract from, other objectives?
- Implementation – can it be implemented and if so would positive impacts be expected in a City deal tranche 1 timescale? What is the extent of the practical challenges to delivery, and in what timescale is delivery feasible?

All of the above criteria will also need to be considered in the context of:

- Whether proposals would be acceptable to the public over the Greater Cambridge area and beyond?
- What other measures might be required to achieve acceptability? and
- What is the consequential impact on the implementation timeframe?

Appendix B – Summary of Survey Findings

Scale of response

- The engagement for Tackling Peak-time Congestion ran from 11th July to 10th October 2016. This used an awareness-raising engagement model and was led by the Greater Cambridge City Deal partnership.
- Respondents were asked to submit their opinions on eight proposals.

Who responded?

- In total, 10,970 officially logged responses were received. Of these, there were 803 paper survey responses, 8,770 online survey responses, 862 emails, and 8 letters, as well as 377 social media comments (through Facebook and Twitter) and 150 verbal communications (phone calls, briefing events etc.).
- There were three petitions submitted in reference to this consultation, with a total of 10,590 signatures.
- The respondents were situated across the whole of the East of England, as well as from areas further afield, such as Kent, Worcestershire and Surrey
- The majority (27.3%) of respondents identified themselves as being between the ages of 35-44, followed closely by those aged 45-54 (26.3%). The age groups with the fewest respondents are the Under-17 (0.4%) and 75 and above (1.9%) groups.
- Of the respondents, 7,664 were categorised as Economically Active, 1,418 were categorised as Economically inactive, and 140 were categorised as Other.
- 7.3% of all respondents identified themselves as having a disability that influenced the way they travel.
- The majority of respondents identified themselves, and were thusly categorised, as Personal transport users (71.1%), closely followed by Active users (70.7%). Smaller numbers were Passengers (16.4%) and users of Other modes of travel (1.4%). Some respondents said they used multiple modes of transport.

What was said?

- The most preferred proposal was the introduction of better pedestrian and cycling facilities with 43.8% of respondents saying it would improve their journey.
- The least preferred options were the introduction of Peak-time Congestion Control Points and a Workplace Levy, with 64.5% and 40.6% of respondents respectively claiming it would worsen their journey.
- 68.3% of respondents said they would not change the way they travel in response to the proposals. 45.2% said they would change their behaviour in some way.[4]
- About one third of all respondents (32.5%) said that, if the proposals were introduced, they would change to public transport. 23.2% said they would switch to active modes of travel.
- 59.4% of respondents said the proposals would have an impact on their journey compared to 17.6% who thought the proposals would not impact their journey.
- Many respondents used the free-text questions to comment that they were not clear on some of the options given within the survey, including what the nature of Travel Planning and Smart Technology would be (Q2) and some suggested that a congestion charge should be introduced as a preferable alternative to the proposed

[4] Percentages are calculated from the total 9,573 respondents. The percentages equal to over 100% due to the question design. Respondents could use the free text box for “other choices” as well as tick one previous option, and some respondents used just the free text option.

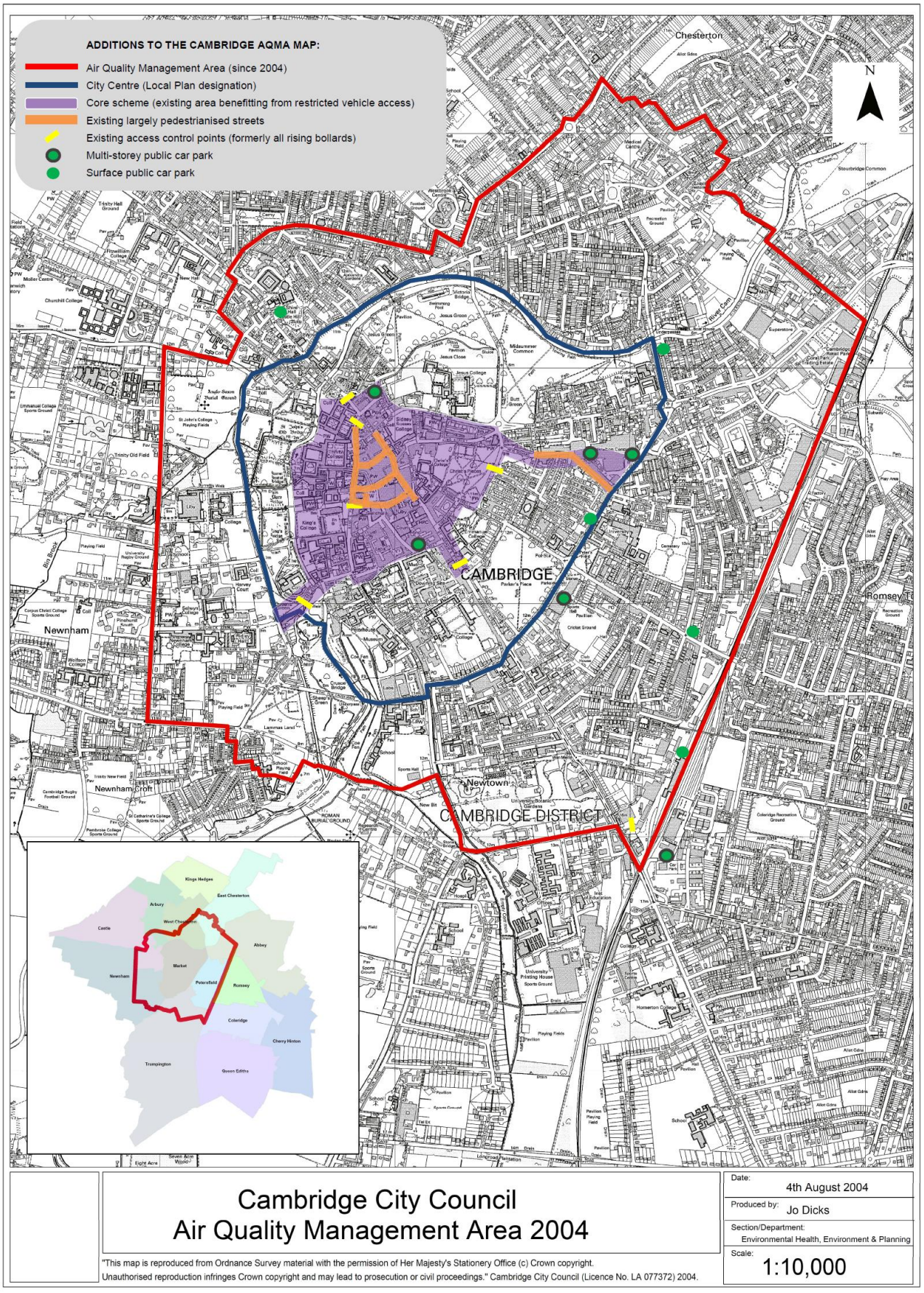
options, or that it should be considered. Some of these though a congestion charge should only apply to non-residents.

- Other forms of communication were analysed, including comments made verbally, via social media and through petitions. A range of topics arose, including concerns around pollution becoming more concentrated in residential areas, concerns that business critical deliveries had not been taken into account, worries that people will be prevented from accessing/leaving their homes during peak times, and concern that the needs of disabled citizens have not been taken into account, to name a few.

What conclusions can be drawn?

- Respondents concerns converged on the proposed peak-time congestion control points (PCCPs). It is clear that there are some valid concerns relating to air pollution on busier streets, worries that people would be prevented from accessing/leaving their homes and businesses during peak times, and concern that the needs of disabled citizens have not been taken into account.
- A majority of respondents (65%) felt that the package of six PCCPs proposed would worsen their journeys. A third of these respondents walked and/or cycled (36%) and thought PCCPs would worsen their journeys, and only 19% thought PCCPs would improve their journeys.
- What is clear is that people want alternative concepts to PCCPs developed that boost bus reliability and the quality of the environment and air in the city centre. This could be achieved by prioritising buses, bikes and pedestrians, in effect an extension of the core traffic management scheme in the historic centre.
- Also controversial were the proposals for a workplace parking levy and a roll-out of further on-street parking controls.
- The consultation did not present alternatives to the public and as a result, some respondents (6%) mentioned a congestion charge in their free text responses on the survey form. Most of these respondents asked for congestion charging to be considered as well as or instead of elements of the proposed eight-point plan, although the details of who would be charged were not clear.

Appendix C – Map of Areas within the Air Quality Management Area



MOTT MACDONALD

Cambridge Private Non-Residential Parking Study

Study Report

November 2016

Report: Cambridge Private Non-Residential Parking Study 06 January 2017

Explanatory Note

This report captures a snapshot of the volume and use of workplace parking spaces (i.e. private, non-residential) in Cambridge during October 2016.

The survey was commissioned by the Greater Cambridge City Deal in partnership with Cambridgeshire County Council and managed by transport planning consultancy Mott MacDonald.

The survey involved the analysis of aerial photographs of the Cambridge area to identify sites used for parking, both surface and multi-storey. Survey staff subsequently visited these sites to assess the number of spaces, whether they had any specific designation (e.g. disabled or visitor), and how many were in use.

The results of the survey will help inform a strategy for charging for these spaces, with the primary goal of securing an income stream to fund elements of the plan that require financial support, for example, more frequent bus services and/or removing the charge for parking at Park and Ride sites.

Related Publications

Two parking survey reports are being published today. These surveys capture the volume and pattern of use of on-street and workplace parking in Cambridge.

The Board Paper on City Access is also being published today. It contains the next steps for the package of measures to tackle congestion and improve access to central Cambridge. It will be considered by the City Deal Joint Assembly on 18 January and the City Deal Executive Board on 25 January.

In the Board Paper, there is an officer recommendation that the Board continues to support the co-design of a workplace parking levy scheme with employers, with more detail available for Board and public review later in 2017.

There is also a recommendation that City Deal involvement in the design of a workplace parking levy scheme and the expansion of on-street parking controls be combined within the Parking Management Delivery Plan to be led and managed from within the City Access team.

Background

The cost and availability of parking has a pivotal influence on people's choice of travel mode. Continuing to manage parking use is an important part of a holistic package of measures required to sustainably deliver growth in and around Cambridge.

A workplace parking levy was part of the package of 8 measures to tackle peak-time congestion shared with the public in summer/autumn 2016 when feedback was requested through the "Tackling Peak-time Congestion" survey. The package includes a range of measures which, taken together, would reduce congestion, encourage more people to travel by public transport, bike or on foot and improve the environment generally in central Cambridge. Work defining the package is being led by the new City Access team which forms part of the City Deal officer team.

It should be easy to get into, out of, and around Cambridge by public transport, by bike and on foot. This is the transport vision set out by the Greater Cambridge City Deal, which is developing a

number of projects to help achieve this, including the Chisholm Trail cycleway and improved bus facilities from Cambourne to Cambridge, as well as along the A1307 from Haverhill to Cambridge. The City Access project is central to this and aims to help more people get into and out of Cambridge by sustainable means and to boost economic growth without increasing congestion.

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Cambridge Private Non-Residential Parking Study

Study Report

November 2016

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
1	November 2016	Paul Parkhouse	Carl Beet	Paresh Shingadia	Draft
2	November 2016	Paul Parkhouse	Carl Beet	Paresh Shingadia	First issue following client comments

Information class: Standard

Contents

1 Introduction

1.1 Background

As an extension to the wider Cambridge Access Study, Cambridgeshire County Council commissioned Mott MacDonald in July 2016 to undertake a study of Private Non-Residential (PNR) parking in Cambridge. The overall aim of the study is to identify the capacity and weekday occupancy levels of all PNR parking in the city.

The last such study was conducted in 1989/90 by Colin Buchanan and Partners. This study therefore serves to update and expand on that earlier work.

1.2 Report Structure

The report is structured as follows:

- Section 2 outlines the methodology for the parking study
- Section 3 presents the findings of the parking study
- Section 4 summarises the study

2 Study Methodology

2.1 Introduction

The purpose of this section is to describe the scope of the study and the methodology employed to deliver it.

2.2 Study Purpose

The main purpose of the study is to identify current levels of PNR parking supply and weekday usage in Cambridge.

For the purposes of this study, PNR parking is defined as any off-street parking which specifically exists to serve a non-residential land use. It therefore includes all off-street parking except public general use car parks and private residential parking. For the sake of clarity, all public car parks advertised on the Council's website[1] were not included in the survey.

2.3 Study Area

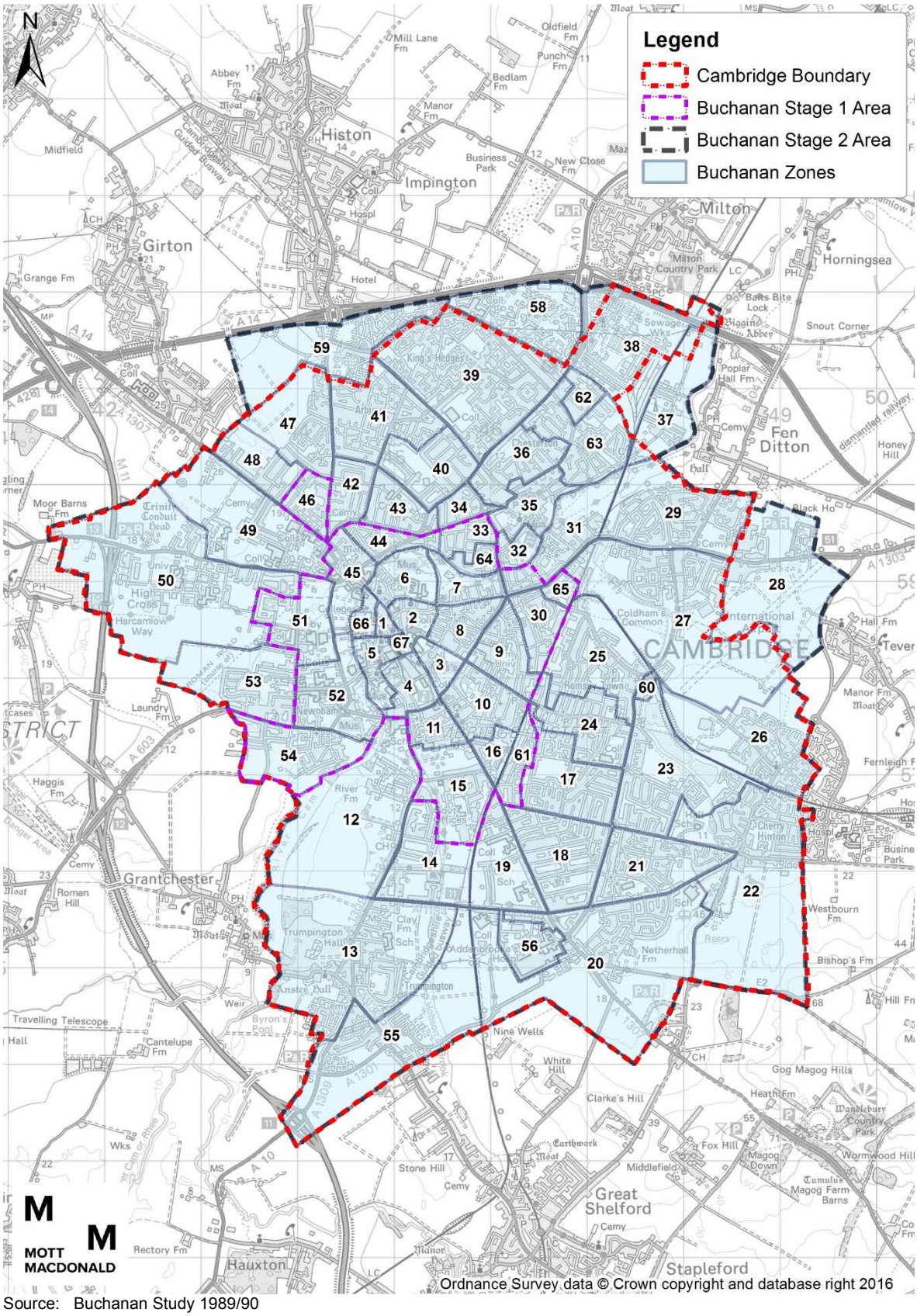
The Buchanan study was undertaken in two stages. The following image shows:

- The City of Cambridge boundary
- The Stages 1 and 2 Buchanan survey boundary and zones, covering the outer areas of the city as well as parts of South Cambs

As agreed with the client, this study is based on the Stage 2 Buchanan boundary. This boundary still includes all PNR parking within the City of Cambridge, plus the main areas of development just outside the boundary, like the Science Park. Using the same boundary also allows for direct comparison with the previous survey. To further allow comparison, we have also reported against the same survey zones.

[1] https://www.cambridge.gov.uk/parking

Figure 1: Study area and zoning



Source: Buchanan Study 1989/90

2.4 Study Methodology

The first requirement of the study was to identify the location of all PNR sites within the study area. A comprehensive desktop survey was therefore undertaken first, using web-based satellite imagery to identify as many sites as possible. These were then mapped and referenced in GIS, while an initial estimate of site capacity and associated land use was made wherever feasible.

The list of sites was then sent to a survey subcontractor who:

- Visited each site to seek access permissions
- Where access was granted or unobstructed, the site capacity and land use details were confirmed or amended as appropriate
- Where access was denied, contact details were obtained for securing access
- Where sites did not qualify as PNR, eg residential only or closed for construction etc, these were removed from the list
- Where new PNR sites were identified, these were added to the list

Of the original list of 706 sites identified, this initial on-site investigation resulted in 0 sites being added and 66 sites being removed, leaving a population total of 640 valid sites. Of these, 96 sites needed access permissions.

Permissions were sought for these sites by Mott MacDonald until and during the main survey period, which took place during both school and university term-time from Tuesday 4th October 2016 to Thursday 20th October 2016 inclusive. Surveys were undertaken on Mondays to Thursdays and between 10:00 and 12:00 and between 14:00 and 16:00 only in order to coincide with times of likely peak PNR parking demand.

By the end of the survey period:

- 595 sites were surveyed and access was denied at 45 sites
- Of the 45 sites where access was denied, capacity estimates were only unavailable for just 2 underground car parks
- The 45 non-accessed sites constitute 7% of the full population of sites, both in terms of the total number of sites and the total capacity of all sites. This means that the surveyed sites represent 93% of the full population

For each site not accessed, the average car park utilisation result for its land use category has been applied to the final results. For example, for a non-accessed university car park, this land use's average utilisation result of 63% has been applied. This method allows for a full set of final results, except for the 2 non-accessed underground car parks, but it should be remembered when viewing the results that the utilisation levels are estimated for 7% of the sample. It is noted in the full list of results presented in the next section which sites are based on estimated values.

3 Survey Results Summary

3.1 Introduction

The purpose of this section is to present a summary of the results from the PNR survey process. The full survey results per car park site are attached in Appendix A.

3.2 PNR Capacity Results

3.2.1 Total Capacity

The following table presents the total PNR capacity level measured by the surveys and compares with the previous result from the 1989/90 Buchanan survey. This shows that total PNR parking capacity has increased between the two survey periods by about 3.8%.

Table 1: Total measured 2016 PNR capacity and comparison with previous survey result

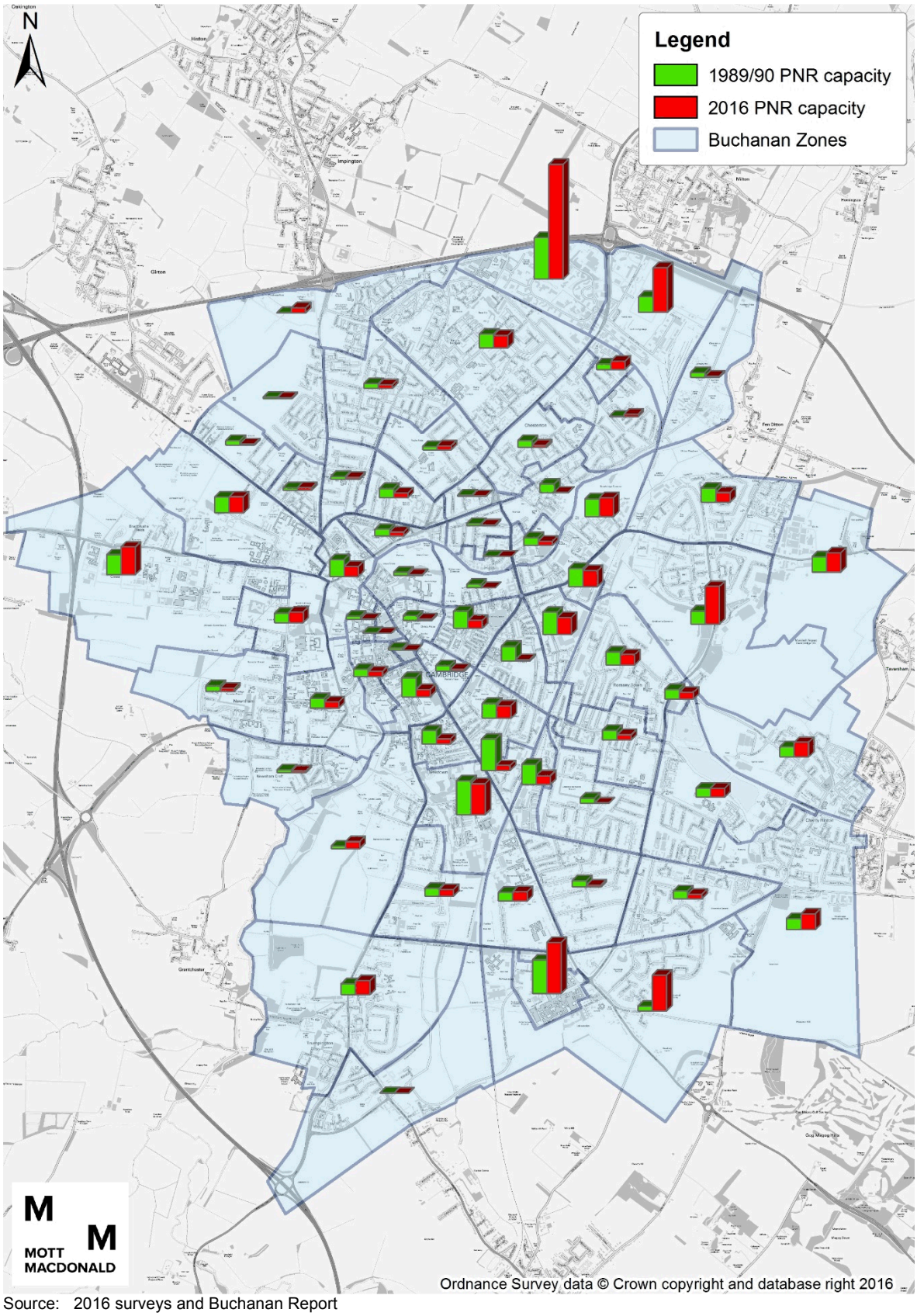
Total Capacity (spaces)		Change	
2016 Survey Result	1989/90 Survey	Absolute Change	% Change
41,962	40,423	+1,539 spaces	+3.8%

Source: 2016 surveys and Buchanan Report

The following figure shows total capacity results from both surveys by zone. The equivalent tabulated results are in Appendix B.1. The figure shows that:

- The overall increase in capacity is not experienced uniformly across zones but that some show a strong increase while others show a decrease
- The highest number of PNR spaces are found in the Science Park (zone 58), followed by the Cambridge North East Fringe site (zone 38) and Addenbrooke's (zone 56)
- These three zones also show some of the strongest increases in PNR capacity between surveys, as well as the development area adjacent to Addenbrooke's (zone 20) and the area between Newmarket Road and Coldhams Lane (zone 27)
- Zones in or near the city centre are most likely to have seen a drop in capacity between the two surveys

Figure 2: Total measured 2016 PNR capacity by zone and comparison with previous survey result

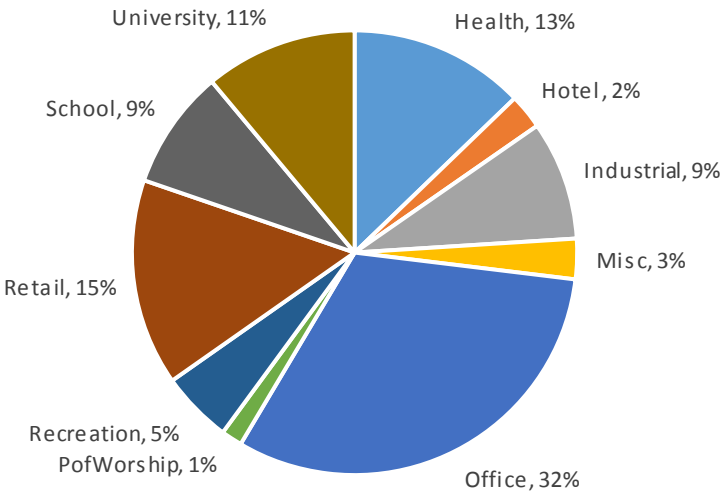


Source: 2016 surveys and Buchanan Report

3.2.2 2016 PNR Capacity by Land Use Type

The following chart shows the distribution of PNR parking capacity by associated land use.

Figure 3: Distribution of PNR capacity by land use



Source: 2016 survey data

This chart shows that:

- Office parking comprises the highest proportion at nearly a third of all PNR capacity. This land use is also one of the most likely to generate trips during weekday peak hours
- The education sector comprises 20% of all capacity. These land uses generate most trips during term times
- The retail sector accounts for about 15% of all capacity, though it is noted that this stock does not include the city's Council owned public car parks which are also used for this purpose. This land use generates trips by both staff and visitors throughout the week
- The health sector accounts for about 13% of total capacity. This land use generates trips by both staff and visitors throughout the day, as well as evenings and weekends

3.2.3 2016 PNR Car Park Size Distribution

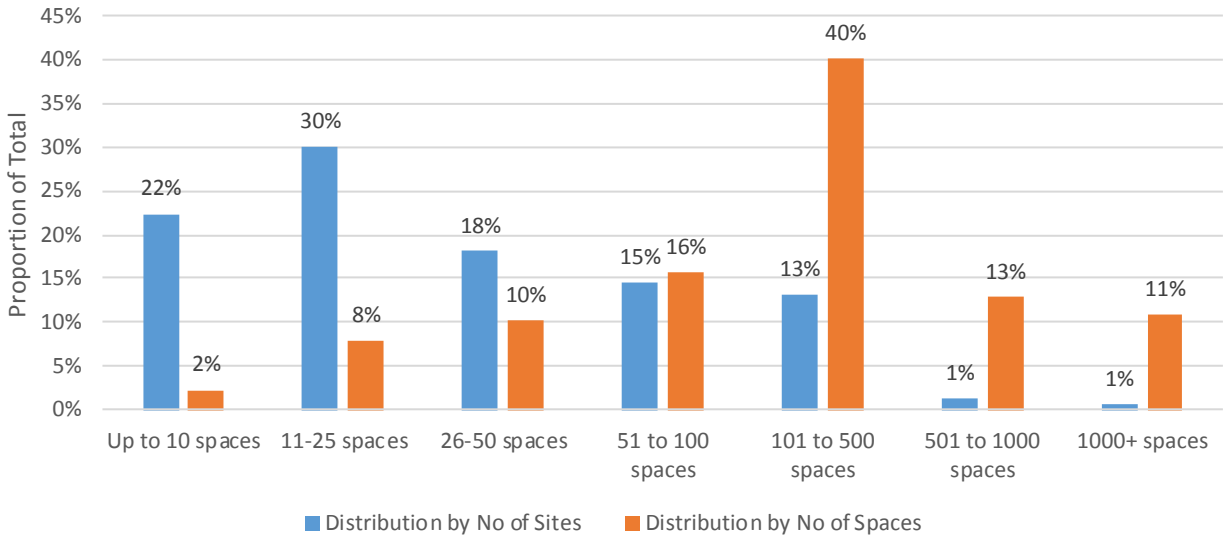
The following chart shows the distribution of PNR car park sizes within the survey area, shown in terms of the number of car parks and the total capacity of parking within each category.

This chart shows that:

- 22% of all surveyed car parks are 10 spaces or less, but this comprises just 2% of total capacity
- 70% of car parks are 50 spaces or less, but this comprises only 20% of total capacity
- By contrast, car parks of over 100 spaces comprise just 15% of all car parks but provide 64% of total capacity

It is noted that this survey only records the physical size of individual car parks and not the number of spaces in each car park which are attributable to individual employers.

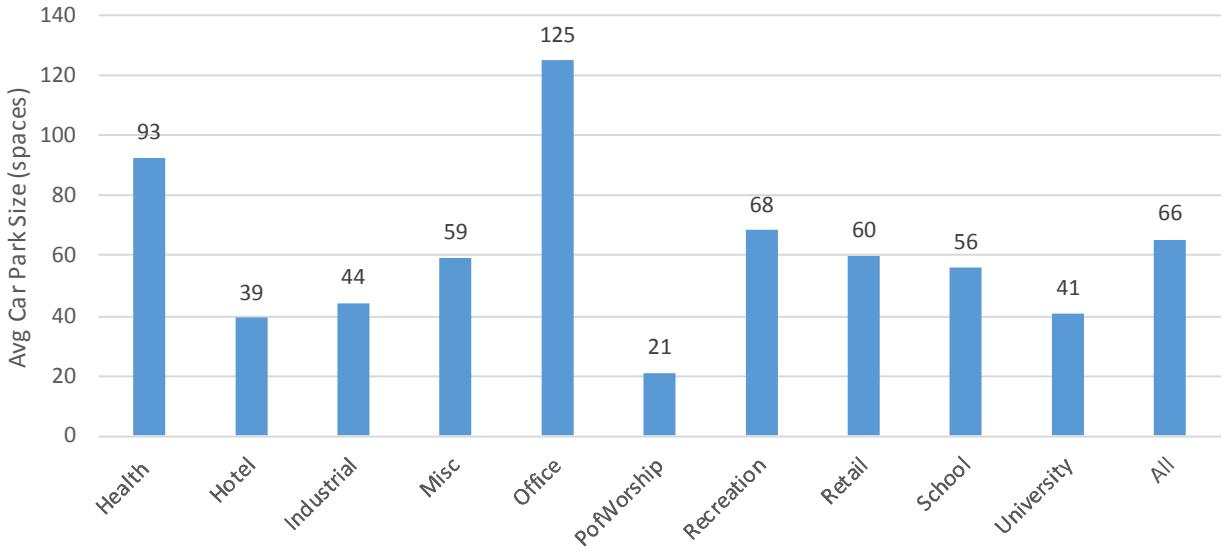
Figure 4: Distribution of PNR car park sizes by number of sites and number of spaces



Source: 2016 survey data

The following chart shows the average car park size by associated land use.

Figure 5: Average car park size by land use type



Source: 2016 survey data

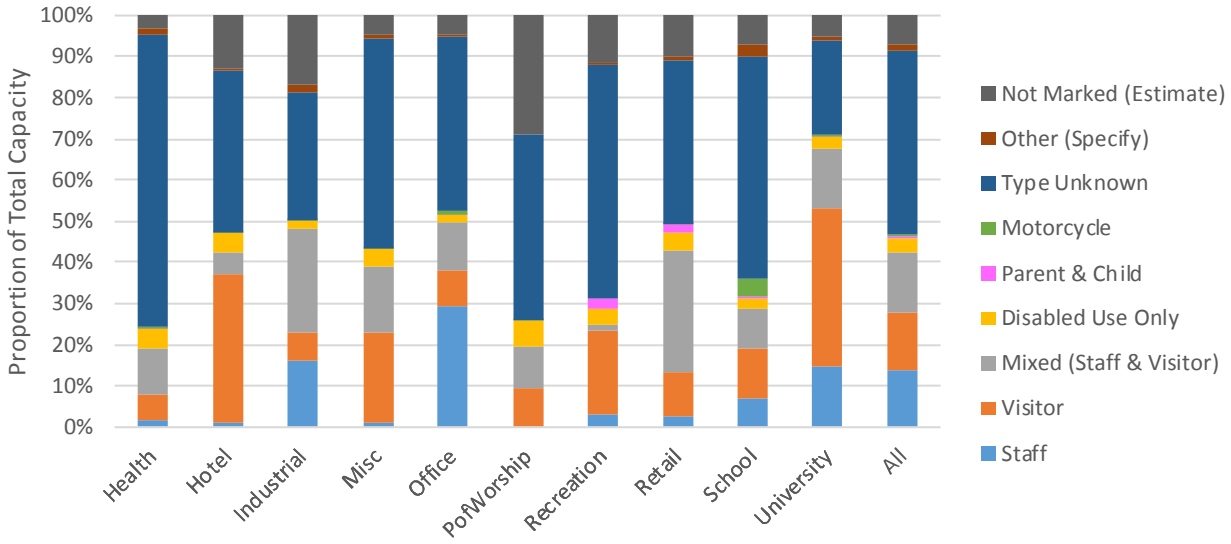
This chart shows that

- Office and health land uses have the biggest car parks on average
- Places of worship, hotels, industrial and university land uses have the smallest.
- The average PNR car park size is 66 spaces

3.2.4 2016 PNR Capacity by Space Type

The following chart shows the distribution of parking space types for each land use.

Figure 6: Distribution of parking space types by land use



Source: 2016 survey data

This chart shows that:

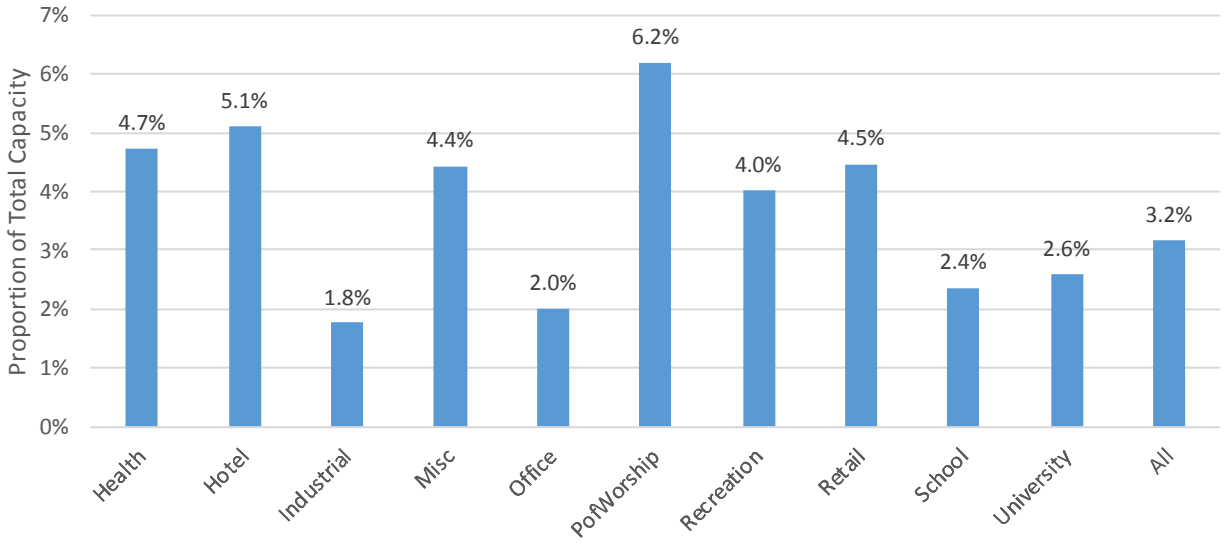
- The most common parking space type is in the 'type unknown' category. This reflects the fact that, on site, it is often difficult to determine the intended usage of parking spaces
- Designated staff parking is most prevalent for office car parks
- Disabled spaces are present across all car parks
- Parent and child parking is most prevalent in recreation and retail car parks
- Motorcycle parking is most prevalent in school and office car parks
- Unmarked parking is most likely to be found in place of worship and industrial car parks

The following chart further unpacks the above disabled parking provision result and shows the average level of this type of parking for each land use.

This chart shows that:

- Disabled parking provision levels are highest in place of worship car parks, reflecting the often older user of this type of facility
- Provision levels are also noticeably higher for land uses with a strong public-facing element, such as the health, hotel, recreation and retail car parks
- For mainly worker-related land uses, such as industrial, office, school and university car parks, provision levels are lower, but still 1.8% or above
- Overall, the average level of disabled parking across all PNR car parks is 3.2%

Figure 7: Average level of disabled space provision by land use

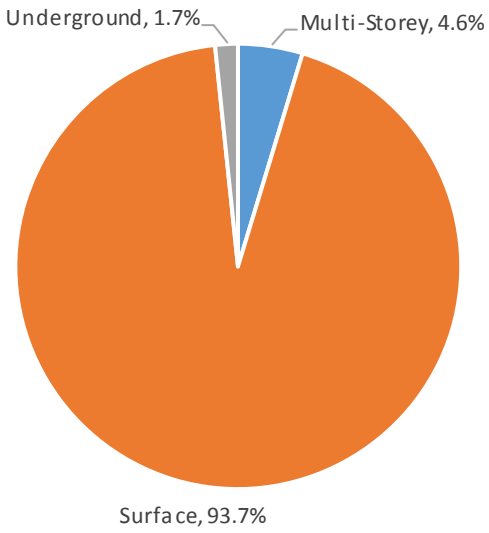


Source: 2016 survey data

3.2.5 2016 PNR Capacity by Construction Type

The following chart shows the distribution of PNR parking capacity by car park construction type.

Figure 8: Distribution of parking capacity by car park construction type

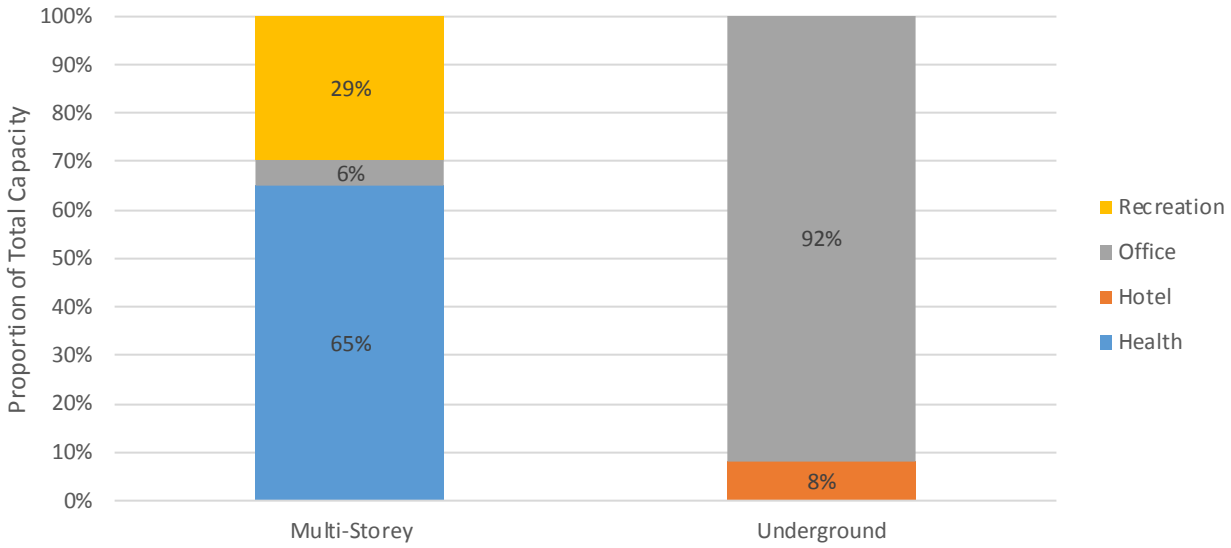


Source: 2016 survey data

This chart shows that nearly 95% of PNR parking capacity is provided at-grade. It should be noted that the underground parking proportion would be a little higher had the survey team been able to access two underground car parks (sites 238 and 242).

For the multi-storey and underground car parks, the following chart shows the land uses these serve.

Figure 9: Distribution of non-surface car park capacity by land use



Source: 2016 survey data

This chart shows that:

- Nearly two-thirds of multi-storey car park capacity is for health land uses, with most of the remainder being for recreation land uses
- Underground car parking is almost exclusively office related, being found mostly in the basements of office buildings

3.3 PNR Demand and Utilisation Results

3.3.1 Total Demand Results

The following table presents the total PNR demand level measured by the surveys and compares with the previous result from the 1989/90 Buchanan survey. This shows that, despite Table 1 above confirming a 3.8% increase in overall PNR capacity between surveys, actual demand has dropped over 13%. This reflects the drop in car mode share observed in Cambridge during this period.

Table 2: Total measured 2016 PNR demand and comparison with previous survey result

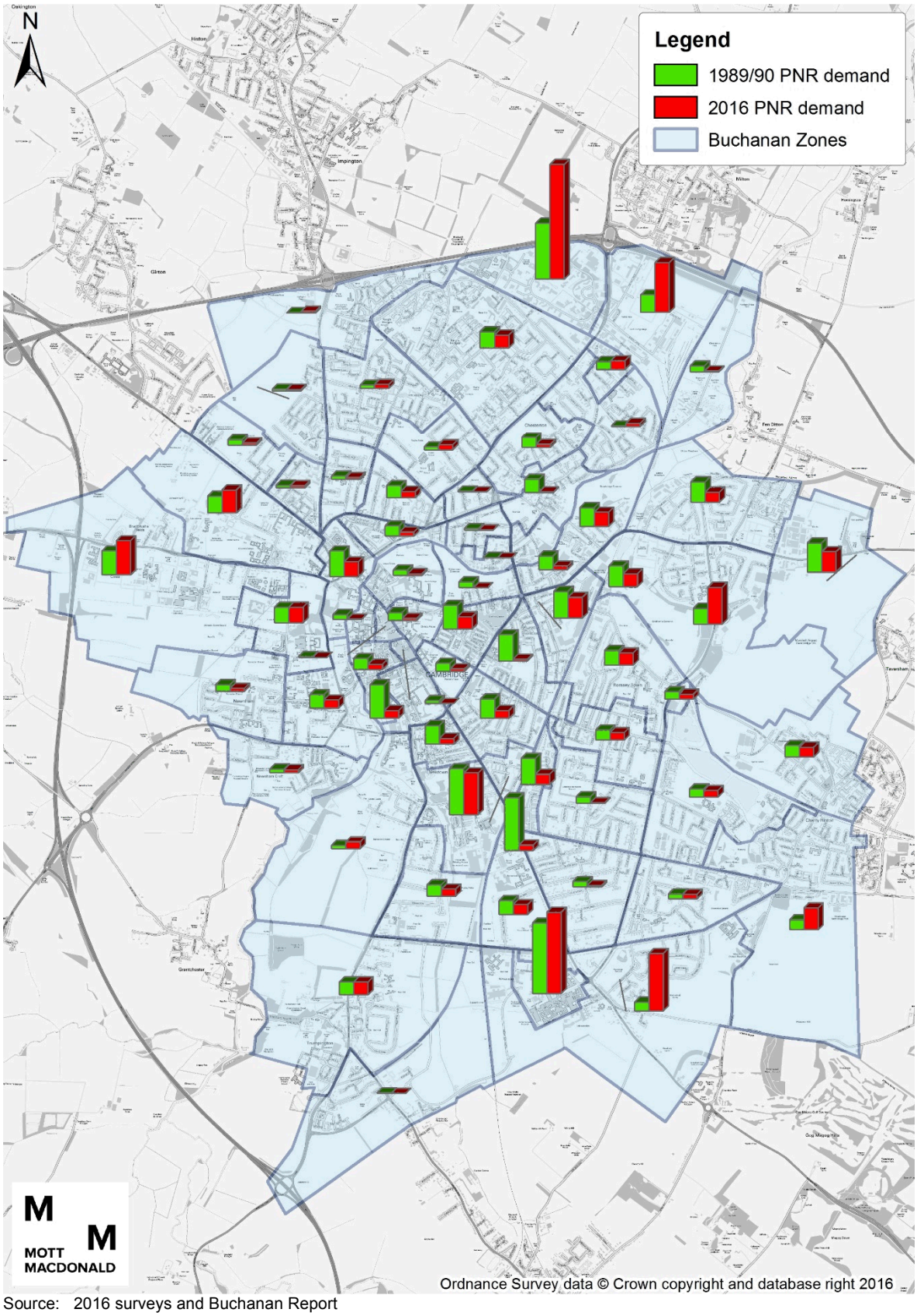
Total Demand (spaces)		Change	
2016 Survey Result	1989/90 Survey	Absolute Change	% Change
23,989	27,647	-3,658 spaces	-13.2%

Source: 2016 surveys and Buchanan Report

The following figure shows total demand results from both surveys by zone. The equivalent tabulated results are in Appendix C.1.

This figure shows a similar pattern of results to the equivalent figure for parking capacity shown in Figure 2 above, except that the increases in demand are generally not as significant as those for capacity and the decreases in demand are generally greater. The drop in PNR demand in the city centre is particularly noticeable.

Figure 10: Total measured 2016 PNR demand by zone and comparison with previous survey result



Source: 2016 surveys and Buchanan Report

3.3.2 Total Utilisation Results

The following table presents the total PNR utilisation level measured by the surveys and compares with the previous result from the 1989/90 Buchanan survey. As would be expected from the above capacity and demand results, this shows an absolute drop in average occupancy levels of nearly 12% (equivalent to a proportional decrease of 17.1%).

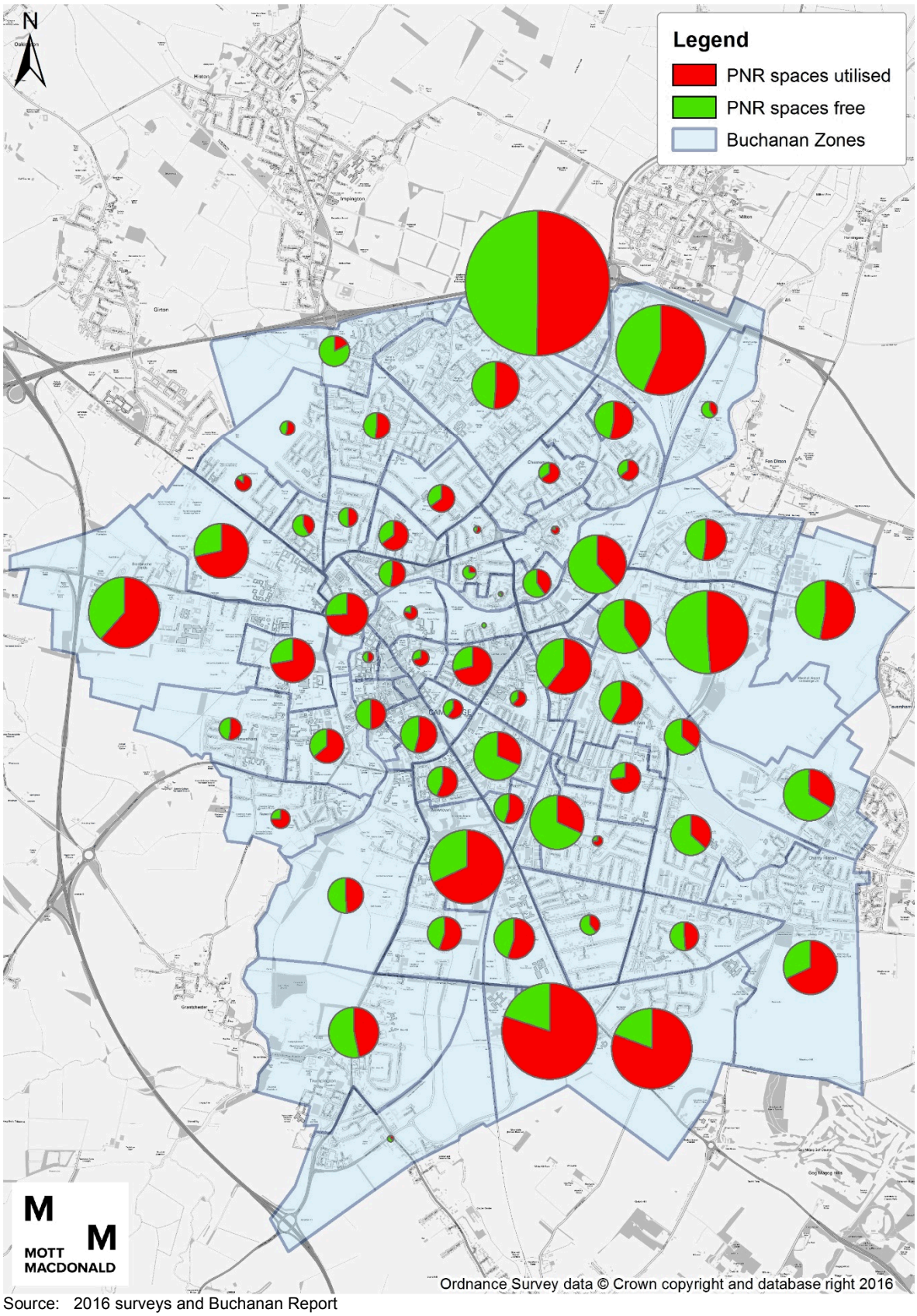
Table 3: Total measured 2016 PNR utilisation and comparison with previous survey result

Total Utilisation (Demand/Capacity)		Change	
2016 Survey Result	1989/90 Survey	Absolute	% Change
57.2%	68.4%	-11.2%	-16.4%

Source: 2016 surveys and Buchanan Report

The following figure shows utilisation results for the 2016 survey only by zone. The tabulated results for both surveys are in Appendix D.1.

Figure 11: Total measured 2016 PNR utilisation by zone

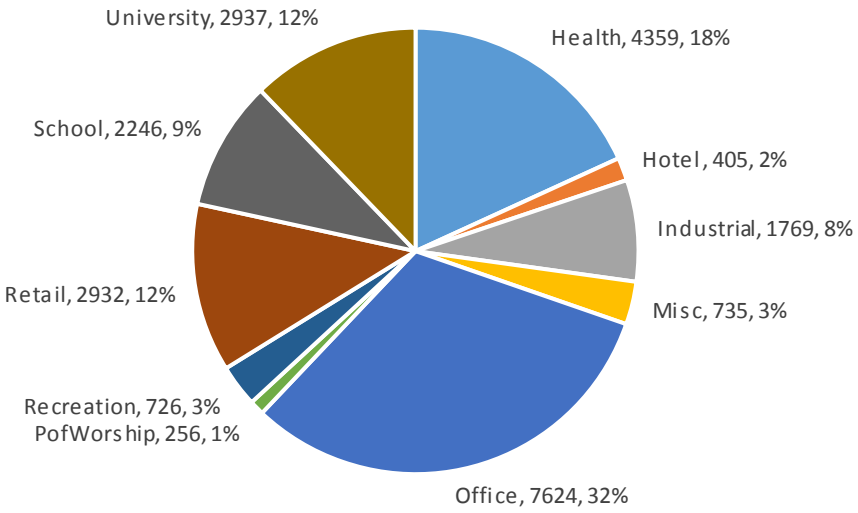


Source: 2016 surveys and Buchanan Report

3.3.3 2016 PNR Demand by Land Use Type

The following chart shows the distribution of PNR parking demand by associated land use.

Figure 12: Distribution of PNR demand by land use



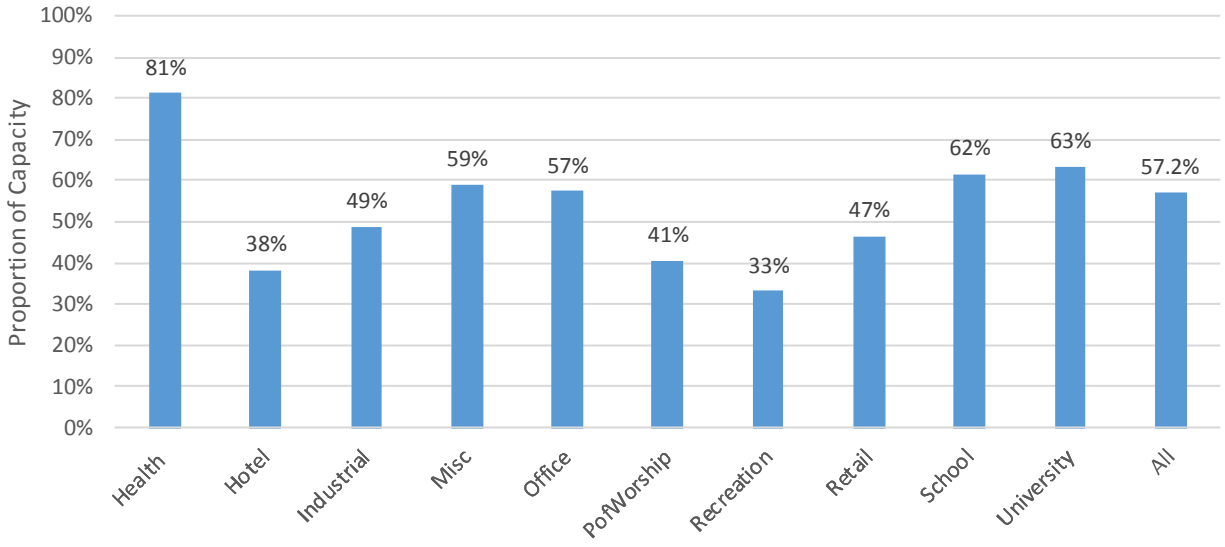
Source: 2016 survey data

This chart shows a similar distribution for PNR demand as does Figure 3 above for PNR capacity. However, comparison between the two shows does show some differences, which is accounted for by the fact that different land use car parks are used to different levels of utilisation. This is covered by the next chart.

3.3.4 2016 PNR Utilisation by Land Use Type

The following chart shows the average car park utilisation level by land use.

Figure 13: Distribution of average car park utilisation levels by land use



Source: 2016 survey data

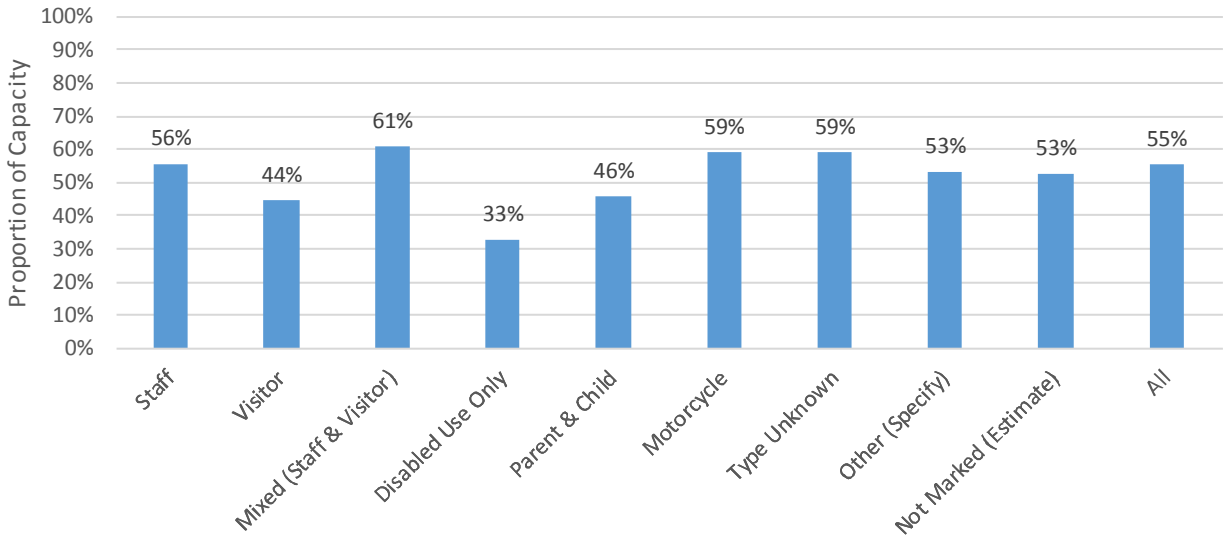
This chart shows that:

- Significantly the highest utilisation level is observed in health land use car parks
- The next highest level of utilisation is seen in the worker-related car parks for office and education land uses
- The lowest levels of utilisation are observed in the more visitor-related car parks for recreation, hotel and place of worship uses

3.3.5 2016 PNR Utilisation by Space Type

The following chart shows the average utilisation levels of each parking space type.

Figure 14: Average car park utilisation levels by parking space type



Source: 2016 survey data

This chart shows a similar level of utilisation across all parking spaces types, but with disabled parking showing noticeably the lowest level. In light of Figure 7 above, this suggests that parking standards could be requiring an over-provision of these spaces in private car parks.

4 Survey Summary

4.1 Survey Background

As an extension to the wider Cambridge Access Study, Cambridgeshire County Council commissioned Mott MacDonald in July 2016 to undertake a study of Private Non-Residential (PNR) parking in Cambridge. The overall aim of the study is to identify the capacity and weekday occupancy levels of all PNR parking in the city.

The last such study was conducted in 1989/90 by Colin Buchanan and Partners. This study serves to update and expand on that earlier work and therefore adopts the same survey area.

4.2 Survey Purpose and Methodology

The main purpose of the study is to identify current levels of PNR parking supply and weekday usage in Cambridge.

For the purposes of this study, PNR parking is defined as any off-street parking which specifically exists to serve a non-residential land use. It therefore includes all off-street parking except public general use car parks and private residential parking.

The study was undertaken in stages as follows:

- A desktop survey was undertaken by Mott MacDonald to identify all potential PNR sites in the study area
- A survey subcontractor visited all sites and confirmed capacity and land use details for valid sites where access was permitted, while also identifying ineligible sites to be removed from the survey
- Where access was not permitted, Mott MacDonald sought to secure access
- During school and university term-time weekdays (except Friday) in October 2016, the survey subcontractor visited all permitted sites and recorded parking utilisation at peak times of day

At the end of the survey, 93% of sites were accessed and surveyed, while site capacity data was obtained for all but two of the remainder. Utilisation levels for the non-accessed sites were estimated by applying the average utilisation level for each site's land use.

4.3 Survey Results Summary

The overall survey results and the equivalent Buchanan survey results are summarised in the following table.

Table 4: Total measured 2016 PNR results and comparison with previous survey

Parameter	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
Total Capacity	41,962	40,423	+1,539 spaces	+3.8%
Total Demand	23,989	27,647	-3,658 spaces	-13.2%
Average Utilisation	57.2%	68.4%	-11.2%	-16.4%

Source: 2016 surveys and Buchanan Report

This shows that, though PNR capacity levels have increased overall by 3.8% between 1989/90 and 2016, actual demand has dropped over 13%. This reflects the falling average car mode share in the city across the same period.

However, the results also show that this trend is not uniform across the city. The following table shows the above results for the city centre historic core (bounded by the River Cam and the East Road corridor and represented by zones 1-8, 66 and 67).

Table 5: Measured 2016 PNR result for City Centre Core and comparison with previous survey

Parameter	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
Total Capacity	1,546	4,001	-2,455 spaces	-61%
Total Demand	958	3,145	-2,187 spaces	-70%
Average Utilisation	62%	79%	-17%	-21%

Source: 2016 surveys and Buchanan Report

This table shows a noticeable drop in both capacity and demand levels in the city centre followed also by a decrease in utilisation. This reflects the measures implemented in Cambridge to reduce car usage in the city centre.

By contrast, the following tables show the above results for the Science Park / Northern Fringe East area (zone 58 and 38) and the Biomedical Campus (zone 56), which are both situated more to the outside edge of the city.

Table 6: Measured 2016 PNR result for Science Park / Northern Fringe and comparison with previous survey

Parameter	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
Total Capacity	9,581	3,469	+6,112 spaces	+176%
Total Demand	4,975	2,224	+2,751 spaces	+124%
Average Utilisation	52%	64%	-12%	-19%

Source: 2016 surveys and Buchanan Report

Table 7: Measured 2016 PNR result for Biomedical Campus and comparison with previous survey

Parameter	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
Total Capacity	3,066	2,021	+1,045 spaces	+52%
Total Demand	2,454	2,134	+320 spaces	+15%
Average Utilisation	80%	106%	-26%	-24%

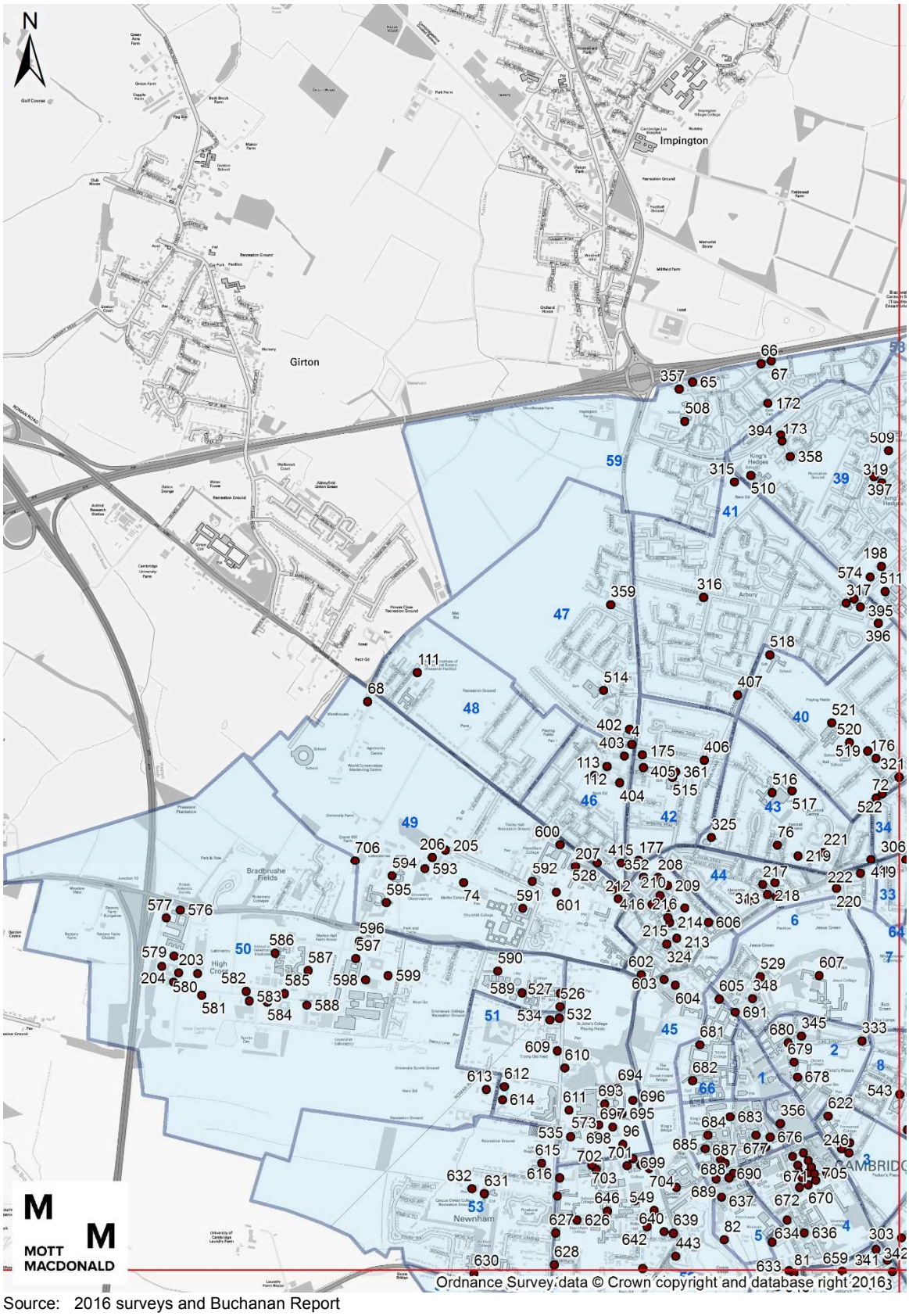
Source: 2016 surveys and Buchanan Report

These tables show significant increases in both supply and demand levels in both areas. The rise in capacity levels is particularly noticeable in the Science Park / Northern Fringe East area where the number of parking spaces provided has almost tripled since the previous survey. By contrast, utilisation levels have dropped in both areas by around 20%.

Appendices

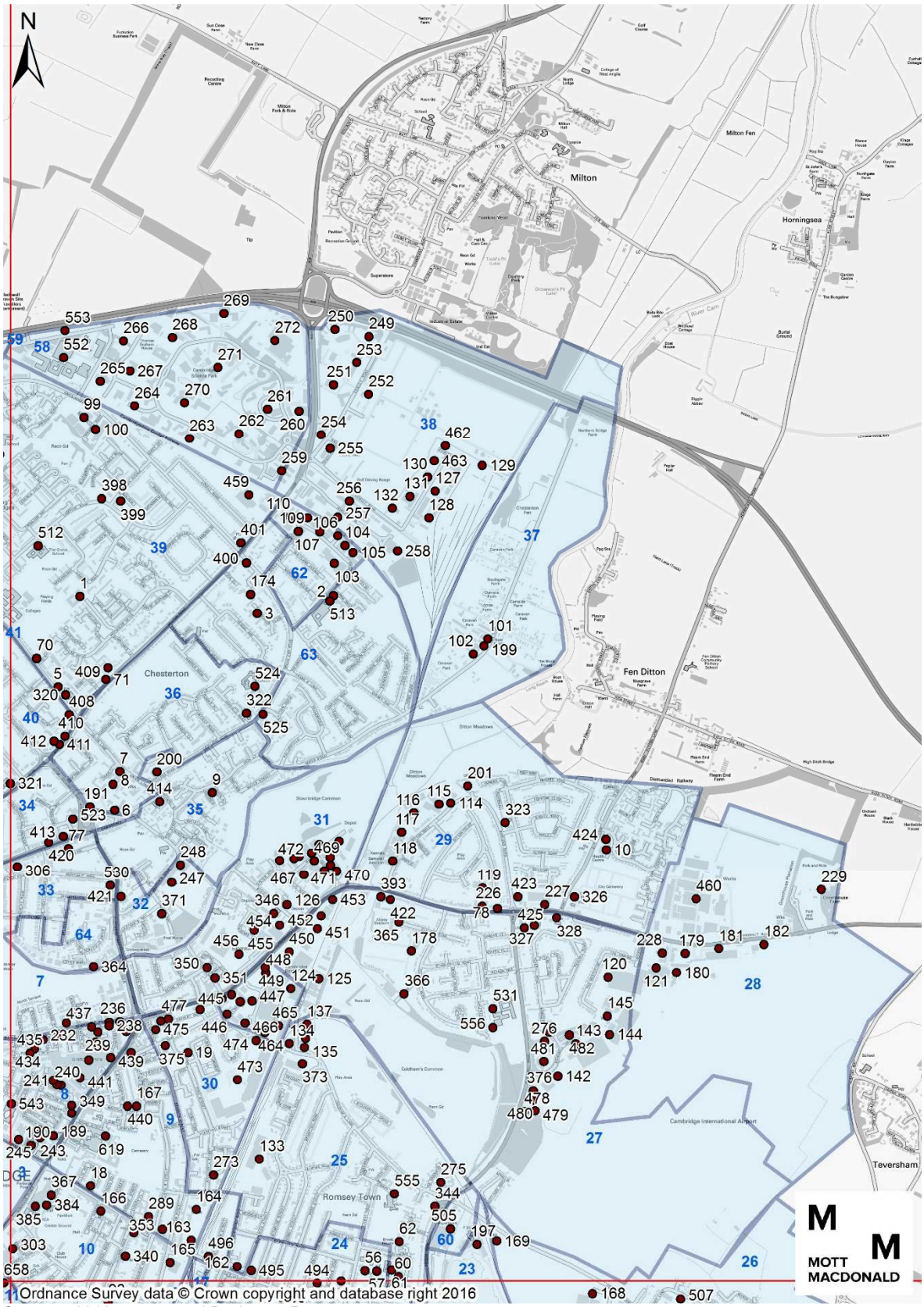
A. Full Site Specific Results

Figure 15: Zone structure and site locations in the survey area's north west quadrant



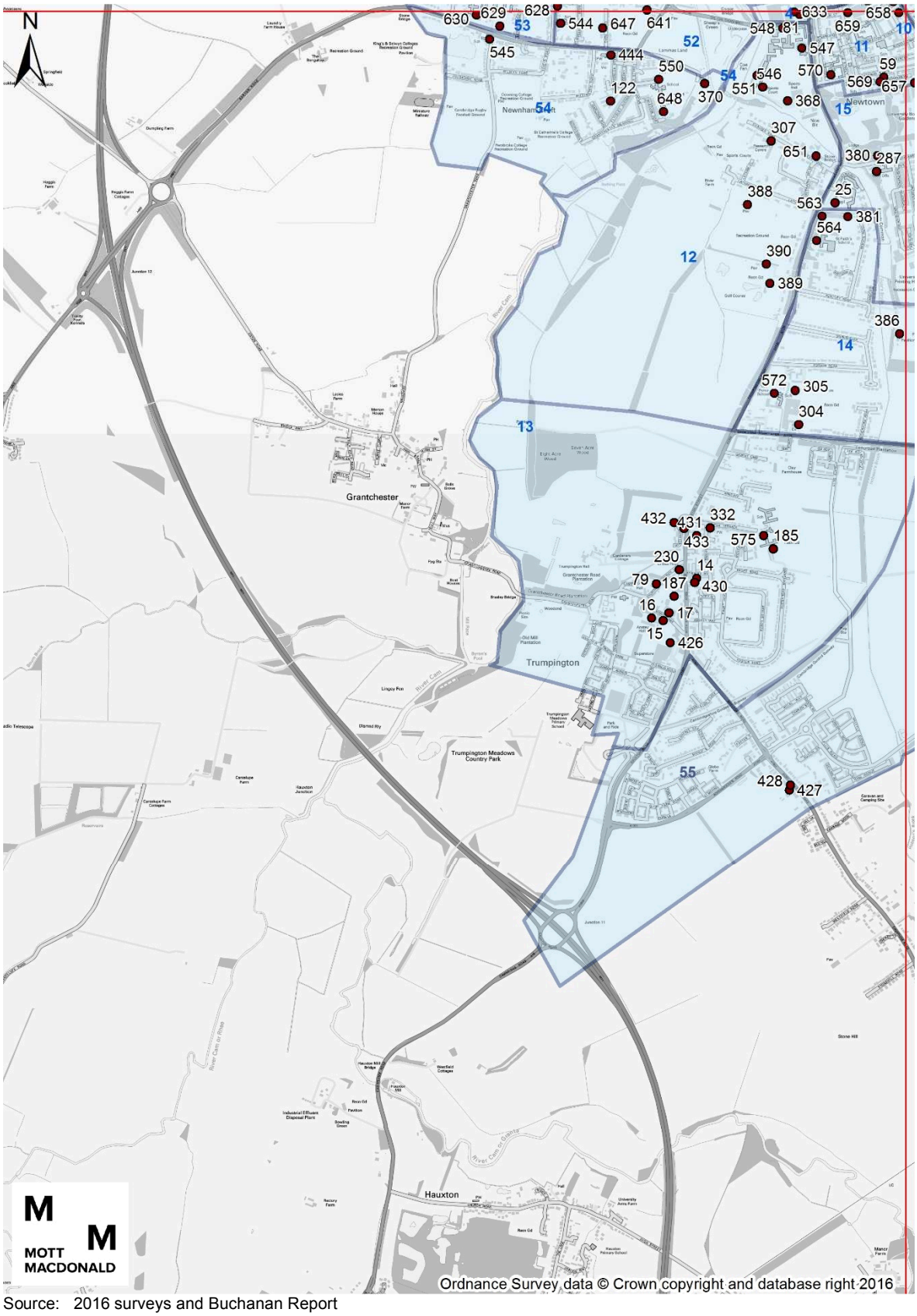
Source: 2016 surveys and Buchanan Report

Figure 16: Zone structure and site locations in the survey area's north east quadrant



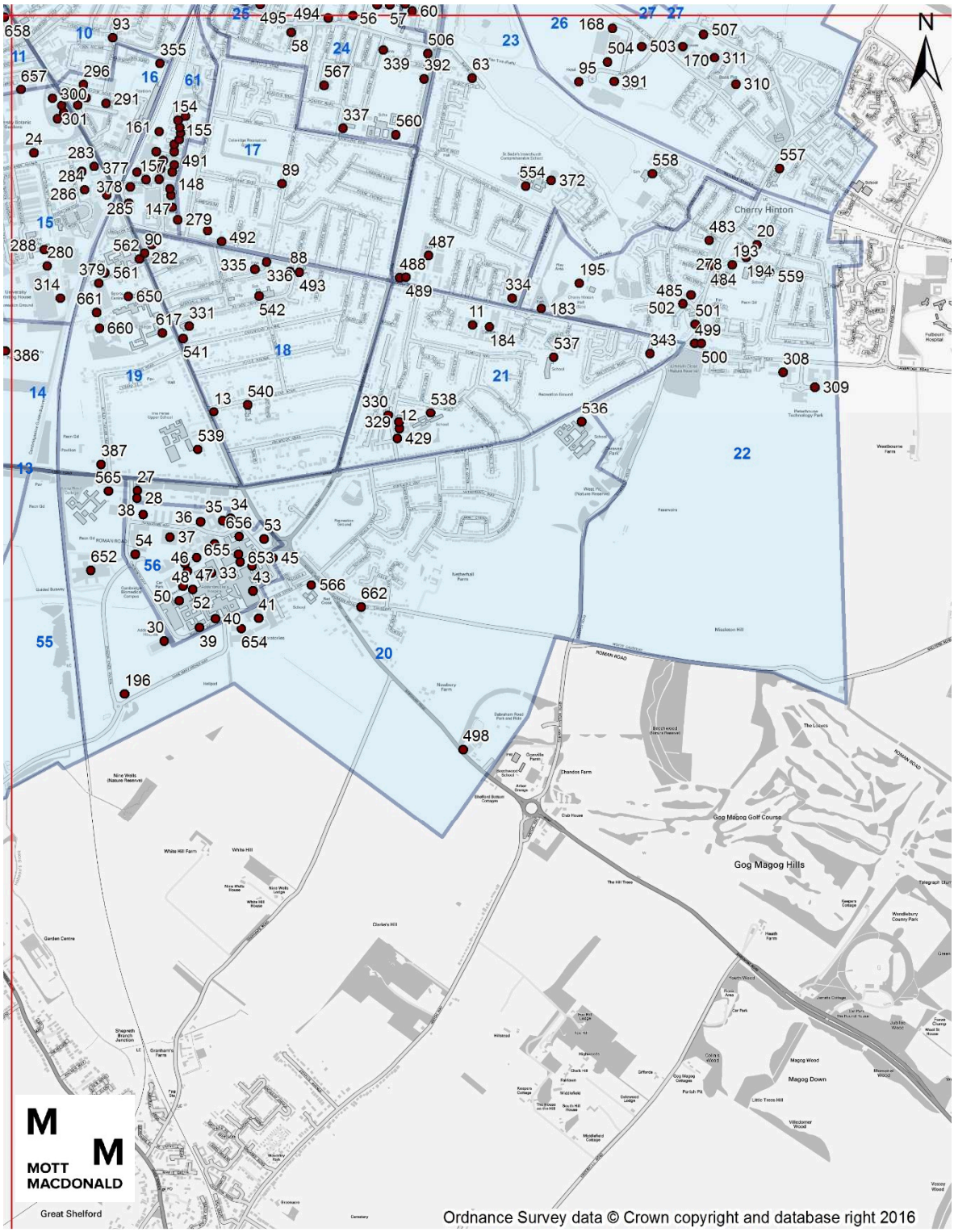
Source: 2016 surveys and Buchanan Report

Figure 17: Zone structure and site locations in the survey area's south west quadrant



Source: 2016 surveys and Buchanan Report

Figure 18: Zone structure and site locations in the survey area's south west quadrant



Source: 2016 surveys and Buchanan Report

Table 8: Full results per site, grouped and subtotalled by zone

Zone	Site No	Landuse	Capacity	Demand	Capacity								Demand							
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
2	333	PofWorship	4	4							4									4		
2	345	PofWorship	12	8									12									8
2	678	University	23	12			23									12						
2	679	University	32	25			32									23						2
2	680	University	18	14			18									13						1
Zone 2 Subtotal			**89**	**63**			**73**				**4**		**12**			**48**				**4**		**11**
3	246	Office	76	51		73		3							50		1					
3	621	Industrial	21	10																		
3	622	Industrial	6	3																		
3	623	Industrial	20	10																		
Zone 3 Subtotal			**123**	**74**		**73**		**3**							**50**		**1**					
4	81	Hotel	38	20							38									20		
4	369	Recreation	10	2	10									2								
4	624	University	34	19		34									19							
4	633	University	33	0		24					9				0					0		
4	634	University	24	19		20		3					1		17		2					0
4	636	University	10	7	10									7								
4	663	University	20	10		20									10							
4	664	University	35	25		35									25							
4	665	University	24	21			23	1								21	0					
4	666	University	6	5	6									5								
4	667	University	45	5		45									5							
4	668	University	10	9		10									9							
4	669	University	68	49			68									49						
4	670	University	8	5		8									5							
4	671	University	15	8		15									8							
4	672	University	15	10		15									10							
4	673	University	14	13		14									13							
4	674	University	26	12				1					25				0					12

Zone	Site No	Landuse	Capacity	Demand	Capacity								Demand							
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
4	705	University	5	0		5									0							
Zone 4 Subtotal			**440**	**239**	**26**	**245**	**91**	**5**			**47**		**26**	**14**	**121**	**70**	**2**			**20**		**12**
5	82	Hotel	151	63		145		5		1					62		0		1			
5	637	University	22	11		1	19	2							0	10	1					
5	675	University	3	3		3									3							
5	676	University	6	5			6									5						
5	677	University	6	5		4		2							4		1					
5	683	University	8	8							8									8		
5	684	University	4	4							4									4		
5	685	University	16	12							16									12		
5	686	University	23	23							23									20		3
5	687	University	8	0									8									0
5	688	University	19	14			18	1								14						
5	689	University	29	0	16		12		1					0		0		0				
5	690	University	5	3			3	2								3	0					
Zone 5 Subtotal			**300**	**151**	**16**	**153**	**58**	**12**	**1**	**1**	**51**		**8**	**0**	**69**	**32**	**2**	**0**	**1**	**44**		**3**
6	529	School	7	1									7									1
6	607	University	48	47							48									47		
6	691	University	6	0							6									0		
Zone 6 Subtotal			**61**	**48**							**54**		**7**							**47**		**1**
7	436	Retail	7	0		7									0							
Zone 7 Subtotal			**7**	**0**		**7**									**0**							
8	189	Misc	23	9			20	2		1						8	0		1			
8	190	Misc	35	27			32	1				2				27	0				0	
8	232	Office	51	29						2	46	3							0	28	1	
8	233	Office	5	8	5									5								3
8	234	Office	18	15			18									15						
8	235	Office	11	6		10		1							6		0					
8	236	Office	7	7		7									7							
8	237	Office	27	20		27									20							
8	238	Industrial	0	0																		

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
8	239	Office	16	6		16									6							
8	240	Office	11	8	9	2								6	2							
8	241	Office	15	9									15									9
8	242	Industrial	0	0																		
8	243	Office	108	106		108									106							
8	244	Office	7	7			7									6						1
8	245	Office	10	4		10									4							
8	435	Retail	39	30								39									30	
8	437	Retail	6	4		6									4							
8	439	Retail	22	20		22									20							
8	441	Retail	43	26			43									26						
8	442	Retail	8	7		8									7							
8	543	School	26	16		26																
Zone 8 Subtotal			**539**	**391**	**14**	**276**	**120**	**16**		**3**	**46**	**44**	**20**	**11**	**199**	**82**	**10**		**1**	**28**	**31**	**13**
9	18	Health	5	3									5									3
9	163	Industrial	2	1							2									1		
9	164	Office	9	9									9									9
9	167	Industrial	10	9		10									9							
9	188	Industrial	10	5																		
9	289	Office	14	9								14									9	
9	440	Retail	12	7									12									7
9	619	Industrial	25	12																		
Zone 9 Subtotal			**87**	**55**		**10**					**2**	**14**	**26**		**9**					**1**	**9**	**19**
10	93	Hotel	4	2									4									2
10	165	Industrial	28	26				3		1	12		12				1		1	12		12
10	166	Industrial	2	1			2									1						
10	303	Office	90	52																		
10	340	PofWorship	12	2							12									2		
10	367	Recreation	11	7							11									7		
10	382	Recreation	10	0							10									0		
10	384	Recreation	32	10				2			30						1			9		

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
10	385	Recreation	574	140				15	34		523	2					12	9		119	0	
Zone 10 Subtotal			**763**	**240**			**2**	**20**	**34**	**1**	**598**	**2**	**16**			**1**	**14**	**9**	**1**	**149**	**0**	**14**
11	59	Health	26	13	13			2			11			7			1			5		
11	297	Office	48	18	6	42								2	16							
11	341	School	17	11		5					12				3					8		
11	342	PofWorship	22	12				3			19						2			10		
11	383	Recreation	12	10				1			11						0			10		
11	569	School	29	25	5								24	7								18
11	570	School	42	0		42									0							
11	657	University	24	19				2			12		10				0			10		9
11	658	University	22	12							22									12		
11	659	University	69	54			61	2		2	4					53	0		1	0		
Zone 11 Subtotal			**311**	**174**	**24**	**89**	**61**	**10**		**2**	**91**		**34**	**16**	**19**	**53**	**3**		**1**	**55**		**27**
12	307	Office	28	19				1			27						0			19		
12	368	Recreation	59	41	8		2				19	2	28	6		0				17	0	18
12	388	Recreation	22	4				1			21						0			4		
12	389	Recreation	40	26		40									26							
12	390	Recreation	133	43																		
12	546	School	50	20			50									20						
12	547	School	37	25			36	1								25	0					
12	548	School	18	9							18									9		
12	551	School	19	9			9					10				9					0	
12	651	University	10	9									10									9
Zone 12 Subtotal			**416**	**205**	**8**	**40**	**97**	**3**			**85**	**12**	**38**	**6**	**26**	**54**	**0**			**49**	**0**	**27**
13	14	Health	8	5				3					5				1					4
13	15	Health	10	4		10									4							
13	16	Health	45	23									45									23
13	17	Health	17	9							17									9		
13	79	Hotel	18	4									18									4
13	185	Misc	81	48				3			48		30									
13	187	Misc	185	109	7	2		4			172											

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
13	230	Office	26	22		2	23	1							0	22	0					
13	332	PofWorship	10	1									10									1
13	426	Retail	296	123	13			14	11		258			0			3	3		117		
13	430	Retail	16	7				1			15						0			7		
13	431	Retail	43	10				2			41						0			10		
13	432	Retail	50	7	3						47			1						6		
13	433	Retail	12	1							12									1		
13	575	School	25	21			25									21						
Zone 13 Subtotal			**842**	**394**	**23**	**14**	**48**	**28**	**11**		**610**		**108**	**1**	**4**	**43**	**4**	**3**		**150**		**32**
14	304	Office	55	24	30	21		3				1		15	7		1				1	
14	305	Office	210	114	210									114								
14	381	Recreation	12	4																		
14	386	Recreation	44	32									44									32
14	563	School	37	23																		
14	564	School	15	9																		
14	572	School	12	7				1			11											
Zone 14 Subtotal			**385**	**213**	**240**	**21**		**4**			**11**	**1**	**44**	**129**	**7**		**1**				**1**	**32**
15	22	Health	95	69		6	77	5			7				4	55	4			6		
15	24	Health	8	4							8									4		
15	25	Health	131	125	19		58	1				53		19		54	1				51	
15	280	Office	403	291	335			4		28	35	1		256			1		9	25	0	
15	283	Office	90	52																		
15	284	Office	46	36			42	4		0						32	2		2			
15	285	Office	157	126			140	17								114	12					
15	286	Office	46	36			42	4		0						32	2		2			
15	287	Office	45	30									45									30
15	288	Office	240	129	170	29		12		29				103	18		3		5			
15	298	Office	128	76			122					6				73					3	
15	299	Office	9	8			8	1								8	0					
15	300	Office	85	65			45	3			37					33	2			30		
15	301	Office	41	28							41									28		

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
15	314	Office	285	164																		
15	380	Recreation	40	19									40									19
Zone 15 Subtotal			**1849**	**1257**	**524**	**35**	**534**	**51**		**57**	**128**	**60**	**85**	**378**	**22**	**401**	**27**		**18**	**93**	**54**	**49**
16	291	Office	55	33							55									33		
16	292	Office	66	26				3		1	62						2		1	23		
16	293	Office	50	38	9		2	2			37			7		2	1			28		
16	294	Office	48	28				2			46						0			28		
16	295	Hotel	22	18							22									18		
16	296	Office	54	20							54									20		
Zone 16 Subtotal			**295**	**163**	**9**		**2**	**7**		**1**	**276**			**7**		**2**	**3**		**1**	**150**		
17	21	Health	23	15							12		11							9		6
17	89	Hotel	3	1							3									1		
17	492	Retail	8	9							8									7		2
Zone 17 Subtotal			**34**	**25**							**23**		**11**							**17**		**8**
18	13	Health	12	3							12									3		
18	88	Hotel	24	3									24									3
18	90	Hotel	4	2							4									2		
18	282	Office	13	7			11	2														
18	331	PofWorship	12	1				1			11						0			1		
18	335	PofWorship	17	7				2					15				0					7
18	336	PofWorship	9	0									9									0
18	493	Retail	9	5				1			8						1			4		
18	540	School	13	11				1			8		4				1			7		3
18	541	School	4	1							4									1		
18	542	School	15	12									15									12
Zone 18 Subtotal			**132**	**52**			**11**	**7**			**47**		**67**				**2**			**18**		**25**
19	379	Recreation	31	17				2			29						1			16		
19	387	Recreation	70	0							70									0		
19	539	School	148	91			3	5		1	139											
19	561	School	76	72				4			72						3			69		
19	562	School	11	3			9	2								3	0					

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
19	617	Industrial	86	42																		
19	650	University	53	34				5			48											
19	660	University	72	44	20	44		6		2				20	24		0		0			
19	661	University	7	4							7											
Zone 19 Subtotal			**554**	**307**	**20**	**44**	**12**	**24**		**3**	**365**			**20**	**24**	**3**	**4**		**0**	**85**		
20	27	Health	8	5		6		2							4		1					
20	28	Health	18	16				2				16					1				15	
20	30	Health	1228	1091				70			1158						40			1051		
20	34	Health	18	42							18									17		25
20	41	Health	109	78	6		4				88	11		6		2				62	8	
20	45	Health	24	24			20						4			20						4
20	498	Retail	77	44	0	75		2							44		0					
20	536	School	58	56	1			1		2	54			1			0		2	53		
20	565	School	170	123			6		30	134						0		11	112			
20	566	University	48	41							25		23							24		17
20	652	University	280	144	221		59							122		22						
20	654	University	74	53	4	34		8			18	10		1	27		1			16	8	
20	662	University	39	21				2			36		1				0			21		0
Zone 20 Subtotal			**2151**	**1738**	**232**	**115**	**89**	**87**	**30**	**136**	**1397**	**37**	**28**	**130**	**75**	**44**	**43**	**11**	**114**	**1244**	**31**	**46**
21	11	Health	19	12			16	2				1				10	1				1	
21	12	Health	12	5			11	1								2	3					
21	184	Misc	73	43																		
21	329	PofWorship	22	13				1			21						0			13		
21	330	PofWorship	16	16							16									16		
21	343	PofWorship	64	2				7			57						0			2		
21	429	Retail	8	7									8									7
21	537	School	41	29				1			26	2	12				0			21	2	6
21	538	School	18	7	1			3			11		3	0			1			6		0
Zone 21 Subtotal			**273**	**134**	**1**		**27**	**15**			**131**	**3**	**23**	**0**		**12**	**5**			**58**	**3**	**13**
22	20	Health	13	7				1			12						1			6		
22	183	Misc	48	25				6			42						1			24		

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
22	193	Recreation	25	2			22	3								2	0					
22	194	Misc	22	19				1			21						0			19		
22	195	Misc	50	20				8			42						0			20		
22	278	Office	16	6							6		10							6		0
22	308	Office	496	362	475	13		8						351	8		3					
22	309	Office	173	132	169	3						1		130	1						1	
22	483	Retail	30	22									30									22
22	484	Retail	11	11							11									11		
22	485	Retail	16	16									16									16
22	499	Retail	34	22									34									22
22	500	Retail	13	4				2			11						0			4		
22	501	Retail	6	1							6									1		
22	502	Retail	6	2									6									2
22	559	School	9	8	8			1						7			1					
Zone 22 Subtotal			**968**	**659**	**652**	**16**	**22**	**30**			**151**	**1**	**96**	**488**	**9**	**2**	**6**			**91**	**1**	**62**
23	63	Health	5	4			5									4						
23	197	Misc	90	53																		
23	334	PofWorship	38	2				2			34		2				0			1		1
23	487	Industrial	276	37							258	9	9							28	5	4
23	488	Retail	24	19				2			19		3				0			18		1
23	489	Retail	12	9				2			8	2					2			7	0	
23	554	School	82	65			39	3				6	34			34	2				1	28
23	558	School	15	11							15									11		
Zone 23 Subtotal			**542**	**200**			**44**	**9**			**334**	**17**	**48**			**38**	**4**			**65**	**6**	**34**
24	55	Health	9	7	3			1			3		2	3			1			2		1
24	56	Health	22	16				1			21						0			16		
24	57	Health	119	106			116	3								104	2					
24	58	Health	6	3									6									3
24	337	PofWorship	4	2									4									2
24	339	PofWorship	3	1				1					2				0					1
24	392	Recreation	6	0							4		2							0		0

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
24	494	Retail	23	19							23									19		
24	495	Retail	16	8	3		7	2					4	2		6	0					0
24	496	Retail	18	18							17	1								17	1	
24	506	Retail	15	3							15									3		
24	560	School	49	30				3			46											
24	567	School	19	13			3	4			8	4				0	1			8	4	
Zone 24 Subtotal			**309**	**226**	**6**		**126**	**15**			**137**	**5**	**20**	**5**		**110**	**4**			**65**	**5**	**7**
25	60	Health	41	39	2		37	2						2		36	1					
25	61	Health	15	11				3			8		4				0			7		4
25	62	Health	25	4									25									4
25	133	Industrial	187	75			185	2								73	2					
25	134	Industrial	8	5									8									5
25	135	Industrial	19	5							19									5		
25	136	Industrial	26	24							26									24		
25	137	Industrial	40	17							40									17		
25	162	Industrial	20	12									20									12
25	275	Health	33	25				3			27		3				1			24		0
25	344	PofWorship	17	15				2			15						1			14		
25	373	Recreation	182	119				8			174						5			114		
25	555	School	15	12							15									12		
Zone 25 Subtotal			**628**	**363**	**2**		**222**	**20**			**324**		**60**	**2**		**109**	**10**			**217**		**25**
26	95	Hotel	57	30				5			51	1					1			28	1	
26	168	Industrial	60	3									60									3
26	169	Industrial	12	12							12									12		
26	170	Industrial	21	16							21									16		
26	310	Office	96	11		96									11							
26	311	Office	167	59			157	10								59	0					
26	391	Recreation	197	61	26			4	12		155			3			2	9		47		
26	503	Retail	35	15				4			31						1			14		
26	504	Retail	209	74				13			196						1			73		
26	507	School	12	8				1			3	4	4				1			3	0	4

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
26	557	School	16	9				1			9		6				0			7		2
Zone 26 Subtotal			**882**	**298**	**26**	**96**	**157**	**38**	**12**		**478**	**5**	**70**	**3**	**11**	**59**	**6**	**9**		**200**	**1**	**9**
27	120	Industrial	160	78																		
27	125	Industrial	149	82							32		117							32		50
27	142	Industrial	117	57																		
27	143	Industrial	40	19																		
27	144	Industrial	50	24																		
27	145	Industrial	9	4																		
27	178	Misc	8	3									8									3
27	276	Office	232	190	220	6		6						181	5		2					2
27	277	Office	40	19		40									19							
27	327	PofWorship	45	29		45									29							
27	328	PofWorship	51	37				1					50				0					37
27	365	Recreation	145	26	13	113	2	16				1		0	0	0	16				0	10
27	366	Recreation	205	35		192		8	2			3			32		1	2			0	
27	376	Recreation	14	4		14									4							
27	393	Recreation	44	20				4					40				3					17
27	422	Retail	56	10									56									10
27	425	Retail	36	27							36									27		
27	450	Retail	253	75				6	15		232						2	5		68		
27	451	Retail	169	40			163	4	2							38	0	2				
27	452	Retail	51	14				3	2		46						0	0		14		
27	453	Retail	84	70			32	2					50			24	0					46
27	478	Retail	20	15									20									15
27	479	Retail	36	52	6	30								6	30							16
27	480	Retail	15	8		15									8							
27	481	Retail	77	71			75	2								69	2					
27	482	Retail	77	50		77									50							
27	531	School	38	23			32	2		2		2				22	0		0		1	
27	556	School	46	24		42		4							24		0					
Zone 27 Subtotal			**2267**	**1107**	**239**	**574**	**304**	**58**	**21**	**2**	**346**	**6**	**341**	**187**	**201**	**153**	**26**	**9**	**0**	**141**	**1**	**206**

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
28	121	Industrial	24	12																		
28	179	Misc	210	124		210																
28	180	Industrial	74	36																		
28	181	Misc	118	90				2			116						0			90		
28	182	Misc	120	65			120									65						
28	228	Office	192	110		191		1														
28	229	Office	45	2		43		2							0		0					2
28	460	Retail	380	177		360		20														
Zone 28 Subtotal			**1163**	**616**		**804**	**120**	**25**			**116**				**0**	**65**	**0**			**90**		**2**
29	10	Health	36	20			33	3								19	1					
29	78	Hotel	24	9			9						15			3						6
29	114	Industrial	7	1									7									1
29	115	Industrial	17	4		17									4							
29	116	Industrial	145	73		21	92	4			7	11	10		17	38	2			5	3	8
29	117	Industrial	29	29									29									29
29	118	Industrial	15	9									15									9
29	119	Industrial	10	7			10									7						
29	201	Office	53	28									53									28
29	226	Office	10	3			10									3						
29	227	Office	126	79			122	2		2						79	0		0			
29	323	PofWorship	15	7									15									7
29	326	PofWorship	25	5							25									5		
29	423	Retail	29	16				2			27						0			16		
29	424	Retail	23	7							23									7		
Zone 29 Subtotal			**564**	**297**		**38**	**276**	**11**		**2**	**82**	**11**	**144**		**21**	**149**	**3**		**0**	**33**	**3**	**88**
30	19	Health	21	11		18		3							11		0					
30	83	Hotel	57	30				6			51						1			29		
30	273	Office	8	5	8									5								
30	375	Recreation	36	2																		2
30	473	Retail	824	547			733	54	37							465	51	31				
30	474	Retail	39	12							39									12		

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
30	475	Retail	14	8		6							8		0							8
30	476	Retail	13	1		13									1							
30	477	Retail	7	1									7									1
Zone 30 Subtotal			**1019**	**617**	**8**	**37**	**733**	**63**	**37**		**90**		**15**	**5**	**12**	**465**	**52**	**31**		**41**		**11**
31	126	Industrial	18	4									18									4
31	138	Industrial	21	8		2					19				2					6		
31	139	Industrial	20	15	1	2				1	16			1	2				0	12		
31	140	Industrial	25	7				1			24						0			7		
31	141	Industrial	29	18			26	3								16	2					
31	192	Misc	69	34							65	4								34	0	
31	274	Office	41	24							38	3								24	0	
31	346	PofWorship	25	0									25									0
31	374	Recreation	32	5				3			29						0			5		
31	454	Retail	114	18				1			113						0			18		
31	455	Retail	115	42									115									42
31	456	Retail	484	173				24	16		444						11	8		154		
31	467	Retail	5	1				1			4						0			1		
31	468	Retail	65	48		20					11		34		16					9		23
31	469	Retail	29	14							29									14		
31	470	Retail	8	7				1			7						0			7		
31	471	Retail	12	8							12									8		
31	472	Retail	11	7							11									7		
Zone 31 Subtotal			**1123**	**433**	**1**	**24**	**26**	**34**	**16**	**1**	**822**	**7**	**192**	**1**	**20**	**16**	**13**	**8**	**0**	**306**	**0**	**69**
32	247	Office	168	78	35	15		16			102			35	13		0			30		
32	248	Office	10	7		9		1							6		1					
32	371	Recreation	74	19				6			18		50				1			14		4
32	421	Retail	8	0							8									0		
Zone 32 Subtotal			**260**	**104**	**35**	**24**		**23**			**128**		**50**	**35**	**19**		**2**			**44**		**4**
33	77	Hotel	30	8							5		25							0		8
33	94	Hotel	12	1							12									1		
33	306	Health	10	5									10									5

Zone	Site No	Landuse	Capacity	Demand	Capacity								Demand							
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
33	530	School	6	1									6									1
Zone 33 Subtotal			**58**	**15**							**17**		**41**							**1**		**14**
34	413	Retail	3	1							3									1		
34	420	Hotel	4	2									4									2
34	523	School	10	7				3			7						1			6		
Zone 34 Subtotal			**17**	**10**				**3**			**10**		**4**				**1**			**7**		**2**
35	9	Health	4	3		4									3							
35	200	Office	11	8				2			9						2			6		
35	414	Retail	7	7									7									7
Zone 35 Subtotal			**22**	**18**		**4**		**2**			**9**		**7**		**3**		**2**			**6**		**7**
36	6	Health	23	15				2			21						0			15		
36	7	Health	14	6		10		4							6		0					
36	8	Health	42	32	26	9		6		1				26	5		0		1			
36	191	Misc	29	27	4	1					24			2	1					24		
36	322	PofWorship	17	2				2		1	14						0		0	2		
36	524	School	19	12		17		2							12		0					
Zone 36 Subtotal			**144**	**94**	**30**	**37**		**16**		**2**	**59**			**28**	**24**		**0**		**1**	**41**		
37	101	Industrial	10	3									10									3
37	102	Industrial	25	10									25									10
37	199	Office	50	21									50									21
Zone 37 Subtotal			**85**	**34**									**85**									**34**
38	127	Industrial	152	62	130	22								48	14							
38	128	Industrial	147	9	44			2			63		38	0			0			9		0
38	129	Industrial	10	7									10									7
38	130	Industrial	11	9						1	10								1	8		
38	131	Industrial	126	38	84			2			25		15	26			0			5		7
38	132	Industrial	54	45	39					1		10	4	39					0		6	0
38	249	Office	75	73	33	4		2			36			33	4		0			36		
38	250	Office	105	0	62								43	0								0
38	251	Office	69	0	56			7		1			5	0			0		0			0
38	252	Office	84	0	79								5	0								0

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
38	253	Office	158	102				2			156						2			100		
38	254	Office	97	89	80	12		4				1		80	7		2				0	
38	255	Office	92	53	87		3	2						49		3	1					
38	256	Office	640	326	134	8		11			487			0	8		3			315		
38	257	Office	468	304			442	21		1		4				290	4		1		4	5
38	258	Office	296	331	286			5		5				286			3		3			39
38	462	Retail	18	10							18									10		
38	463	Retail	68	44									68									44
Zone 38 Subtotal			**2670**	**1502**	**1114**	**46**	**445**	**58**		**9**	**795**	**15**	**188**	**561**	**33**	**293**	**15**		**5**	**483**	**10**	**102**
39	1	Health	17	14			15	2								13	1					
39	5	Health	6	4									6									4
39	70	Hotel	7	0	3								4	0								0
39	71	Hotel	7	7		7									7							
39	99	Industrial	11	9			10	1								9	0					
39	100	Industrial	57	41			51	6								39	2					
39	173	Misc	14	11	1			2			11			1			1			9		
39	198	Misc	8	2				8									2					
39	319	PofWorship	20	5			20									5						
39	320	PofWorship	18	6									18									6
39	358	Recreation	15	10							13		2							8		2
39	394	Retail	11	8				1			10						1			7		
39	397	Retail	55	2									55									2
39	398	Retail	12	10		11		1							9		1					
39	399	Retail	11	1			10	1								1	0					
39	401	Retail	23	6				2			21						0			6		
39	409	Retail	40	9			38	2								9	0					
39	459	Retail	150	88	147			3						87			1					
39	509	School	58	28	45	12		1						16	12		0					
39	510	School	30	25	29			1						25			0					
39	511	School	94	54			61	3			10		20			43	2			6		3
39	512	School	29	17	5	17		2				5		2	12		0				1	2

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
39	574	School	50	26		48		2							26		0					
Zone 39 Subtotal			**743**	**383**	**230**	**95**	**205**	**38**			**65**	**5**	**105**	**131**	**66**	**119**	**11**			**36**	**1**	**19**
40	72	Hotel	6	3									6									3
40	176	Misc	20	8		16						4			7						1	
40	321	PofWorship	31	15				4			27						1			14		
40	408	Retail	6	4									6									4
40	410	Retail	2	2									2									2
40	411	Retail	10	4									10									4
40	412	Retail	14	5		14									5							
40	518	School	28	27		23		1				4			23		0				2	2
40	519	School	30	10									30									10
40	520	School	36	26				2			34						1			25		
40	521	School	54	48		48		2			4				46		1			1		
40	522	School	7	6									7									6
Zone 40 Subtotal			**244**	**158**		**101**		**9**			**65**	**8**	**61**		**81**		**3**			**40**	**3**	**31**
41	315	Retail	62	20	2			5			55			0			1			19		
41	316	PofWorship	18	0				2					16				0					0
41	317	PofWorship	6	2				6									2					
41	318	PofWorship	20	6			20									6						
41	395	Retail	94	76			84	10								70	6					
41	396	Retail	20	13			20									13						
41	407	Retail	14	5									14									5
Zone 41 Subtotal			**234**	**122**	**2**		**124**	**23**			**55**		**30**	**0**		**89**	**9**			**19**		**5**
42	175	Retail	14	5							9		5							3		2
42	177	Misc	7	3				7									3					
42	361	Retail	51	23							51									23		
42	405	Retail	10	9							10									9		
42	406	Retail	7	3									7									3
42	515	School	32	17		28		4							14		3					
Zone 42 Subtotal			**121**	**60**		**28**		**11**			**70**		**12**		**14**		**6**			**35**		**5**
43	76	Hotel	13	12				2			11						0			12		

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
43	219	Office	39	11									39									11
43	221	Office	53	29	53									29								
43	325	PofWorship	49	37		13	25	4			7				9	21	0			7		
43	419	Retail	8	6				1	1		6						1	1		4		
43	516	School	45	45	42			2		1				36			0		0			9
43	517	School	85	51	45	38		2						34	17		0					
Zone 43 Subtotal			**292**	**191**	**140**	**51**	**25**	**11**	**1**	**1**	**24**		**39**	**99**	**26**	**21**	**1**	**1**	**0**	**23**		**20**
44	75	Hotel	63	21							63									21		
44	217	Office	28	16				2			26						0			16		
44	218	Office	79	46							79									42		4
44	220	Office	30	15		28		2							10		0					5
44	222	Office	4	2		4									2							
44	312	Office	11	9	2			1			8			2			1			6		
44	313	Office	18	14				1			17						1			13		
Zone 44 Subtotal			**233**	**123**	**2**	**32**		**6**			**193**			**2**	**12**		**2**			**98**		**9**
45	208	Office	12	8							12									8		
45	209	Office	9	8							9									8		
45	210	Office	255	189						10	245								4	185		
45	211	Office	37	32	27			10						27			5					
45	213	Office	17	13		2		2			13				0		0			13		
45	214	Office	54	51				1			53						0			51		
45	215	Office	5	0				4				1					0				0	
45	216	Office	59	39				2			41	16					0			39	0	
45	324	PofWorship	21	14							21									14		
45	416	Retail	5	4								5									4	
45	602	University	29	13	10			1					18	6			0					7
45	603	University	15	10																		
45	604	University	64	53	12			2			50			8			1			44		
45	606	University	22	14		22																
Zone 45 Subtotal			**604**	**447**	**49**	**24**		**22**		**10**	**444**	**22**	**18**	**41**	**0**		**6**		**4**	**362**	**4**	**7**
46	112	Industrial	14	7							14									7		

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
46	113	Industrial	28	0							28									0		
46	403	Retail	45	39				5	3		37						1	3		35		
46	404	Retail	56	13							56									13		
46	415	Retail	7	1									7									1
46	528	PofWorship	7	5				1					6				0					5
Zone 46 Subtotal			**157**	**65**				**6**	**3**		**135**		**13**				**1**	**3**		**55**		**6**
47	4	Health	8	8									8									8
47	359	Recreation	15	0									15									0
47	402	Retail	33	20							22		11							10		10
47	514	School	17	13		15		2							13		0					
Zone 47 Subtotal			**73**	**41**		**15**		**2**			**22**		**34**		**13**		**0**			**10**		**18**
48	111	Industrial	85	72			71	2					12			60	0					12
Zone 48 Subtotal			**85**	**72**			**71**	**2**					**12**			**60**	**0**					**12**
49	64	Health	25	18									25									18
49	68	Hotel	67	12				4			59		4				1			11		0
49	74	Hotel	80	76				3			61		16				0			61		15
49	205	Office	18	21		2					16				2					13		6
49	206	Office	18	18									18									18
49	207	Office	31	24							31									24		
49	212	Office	140	77	10	7					123			5	6					66		
49	591	University	69	54				3			66						0			54		
49	592	University	31	21				1			26	4					0			15	4	2
49	593	University	192	157	40	67	74	2			9			37	60	31	1			8		20
49	594	University	116	105			96	4		4			12			89	3		2			11
49	595	University	66	44			58	2		6						43	1		0			
49	600	University	52	41							46	2	4							38	0	3
49	601	University	70	28				2			68						0			26		2
49 Sum			**975**	**696**	**50**	**76**	**228**	**21**		**10**	**505**	**6**	**79**	**42**	**68**	**163**	**6**		**2**	**316**	**4**	**95**
50	202	Office	81	99			73	2			6					69	1			5		24
50	203	Office	7	6							7									6		
50	204	Office	38	34									38									34

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
50	526	School	18	15									18									15
50	527	School	6	4									6									4
50	576	University	60	44		56		1		3					41		0		3			
50	577	University	15	14		14		1							13		1					
50	579	University	108	83	108									83								
50	580	University	101	73		97		2		2					71		0		2			
50	581	University	138	30		126		8		4					29		1		0			
50	582	University	71	27		65		4		2					27		0		0			
50	583	University	73	41		73									41							
50	584	University	78	48		75		3							48		0					
50	585	University	108	62		103		5							62		0					
50	586	University	23	8		22		1							8		0					
50	587	University	80	65		79		1							57		1					7
50	588	University	164	68		164									68							
50	589	University	42	28			22				20					8				19		1
50	590	University	41	20				4	7		26	4					1	0		15	4	
50	596	University	11	8	11									8								
50	597	University	82	47	82									47								
50	598	University	12	10		8		4							7		3					
50	599	University	295	183		280		15							182		1					
50	613	University	9	9			9									9						
50	706	University	10	3				2					8				0					3
Zone 50 Subtotal			**1671**	**1029**	**201**	**1162**	**104**	**53**	**7**	**11**	**59**	**4**	**70**	**138**	**654**	**86**	**9**	**0**	**5**	**45**	**4**	**88**
51	96	Hotel	59	41			47					2	10			36					1	4
51	532	School	20	19									20									19
51	534	School	10	4		10									4							
51	535	School	94	62	20		71	1				2		11		48	1				2	
51	573	School	20	19								20									19	
51	609	University	17	11			1						16									
51	610	University	15	10		15																
51	611	University	86	44		85		1							44		0					

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
51	614	University	6	1									6									1
51	693	University	154	139	84	63		6		1				56	58		0		0			25
51	694	University	10	9									10									9
51	695	University	35	32							35									32		
51	696	University	10	5		10									5							
51	697	University	90	67							90									67		
51	698	University	20	5		18		1		1					5		0		0			
Zone 51 Subtotal			**646**	**467**	**104**	**201**	**119**	**9**		**2**	**125**	**24**	**62**	**67**	**116**	**84**	**1**		**0**	**99**	**22**	**58**
52	443	Retail	21	1	1	1		1			1	1	16	0	0		0			0	0	1
52	544	School	5	5									5									5
52	549	School	15	10									15									10
52	616	University	14	14		8							6		8							6
52	625	University	23	16							23									16		
52	626	University	6	4				1			5											
52	627	University	17	11	8							9										
52	628	University	13	8									13									
52	638	University	22	19							22									19		
52	639	University	28	0							28									0		
52	640	University	8	7									8									7
52	641	University	8	5									8									5
52	642	University	35	27			34	1								27	0					
52	643	University	27	22							27									22		
52	646	University	52	22				2			50						1			45		
52	647	University	21	21									21									21
52	699	University	15	9									15									9
52	700	University	14	12	14									11								1
52	701	University	7	4	6			1						4			0					
52	702	University	27	19	1						11		15	0						9		10
52	703	University	7	7							7									7		
52	704	University	5	6	5									5								1
Zone 52 Subtotal			**390**	**249**	**35**	**9**	**34**	**6**			**174**	**10**	**122**	**20**	**8**	**27**	**1**			**118**	**0**	**76**

Zone	Site No	Landuse	Capacity	Demand	Capacity								Demand							
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
53	615	University	40	18							40									18		
53	629	University	84	51				1		4	78	1					0		1	50	0	
53	630	University	26	17							23	3								16	1	
53	631	University	4	0							4									0		
53	632	University	9	0			8				1					0				0		
Zone 53 Subtotal			**163**	**86**			**8**	**1**		**4**	**146**	**4**				**0**	**0**		**1**	**84**	**1**	
54	122	Industrial	30	23							30									23		
54	370	Recreation	65	56		60		5							56		0					
54	444	Retail	12	2									12									2
54	545	School	4	3									4									3
54	550	School	10	7									10									7
Zone 54 Subtotal			**121**	**91**		**60**		**5**			**30**		**26**		**56**		**0**			**23**		**12**
55	427	Retail	8	4		7		1							4		0					
55	428	Retail	4	0									4									0
Zone 55 Subtotal			**12**	**4**		**7**		**1**					**4**		**4**		**0**					**0**
56	29	Health	1058	823				64			994						18			805		
56	33	Health	22	22			14			8						14			8			
56	35	Health	57	47				2			55						0			47		
56	36	Health	42	29							42									29		
56	37	Health	1266	1175				55			1211						24			1151		
56	38	Health	272	156		272									156							
56	39	Health	10	2							10									2		
56	40	Health	5	4			5									4						
56	43	Health	18	18			6			3	2		7			6			3	2		7
56	44	Health	24	23			17						7			16						7
56	46	Health	20	18			20									18						
56	47	Health	16	9			7				9					6				3		
56	48	Health	15	3				9			6						0			3		
56	52	Health	5	5			4						1			4						1
56	53	Health	170	75			157		5		8					72		3		0		
56	54	Health	6	0									6									0

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
56	653	University	38	23			24					12	2			16					5	2
56	655	University	5	5	4			1						4			1					
56	656	University	17	17	10		3					4		10		3					4	
Zone 56 Subtotal			**3066**	**2454**	**14**	**272**	**257**	**131**	**5**	**11**	**2337**	**16**	**23**	**14**	**156**	**159**	**43**	**3**	**11**	**2042**	**9**	**17**
58	259	Office	203	54		188				1		12	2		52				0		2	0
58	260	Office	202	57	51	3		1			133		14	0	0		0			57		0
58	261	Office	318	102	75	7				2	231		3	0	1				0	101		0
58	262	Office	323	265	233	22		2		15			51	191	38		0		6			30
58	263	Office	239	188			1	4			234					0	1			187		
58	264	Office	504	300			18	6		2	473	5				10	1		3	281	5	
58	265	Office	105	30			8	1			96					0	0			30		
58	266	Office	111	80				2			109						0			80		
58	267	Office	257	30	130			2		3	116	1	5	0			0		0	30	0	0
58	268	Office	701	286	216		10	5		12	334		124	0		9	2		3	272		0
58	269	Office	370	0	302			14					54	0			0					0
58	270	Office	789	585		17		8		1	759	4			3		3		1	573	1	4
58	271	Office	859	443		18		14	2		824	1			5		1	2		434	1	
58	272	Office	395	218	178	16	33	4			144	20		134	10	9	0			54	11	
58	552	School	1018	617	8	18		14		6	939	33		8	4		5		6	576	18	
58	553	School	517	218	3					1	501	12		3					1	214	0	
Zone 58 Subtotal			**6911**	**3473**	**1196**	**289**	**70**	**77**	**2**	**43**	**4893**	**88**	**253**	**336**	**113**	**28**	**13**	**2**	**20**	**2889**	**38**	**34**
59	65	Hotel	130	12	10	112		8						0	12		0					
59	66	Hotel	96	8		89		7							5		3					
59	67	Hotel	24	0		24									0							
59	172	Misc	11	10		9		2							9		1					
59	357	Recreation	21	0				2			19						0			0		
59	508	School	31	25	30			1						24			1					
Zone 59 Subtotal			**313**	**55**	**40**	**234**		**20**			**19**			**24**	**26**		**5**			**0**		
60	505	Retail	424	152			374	25	24	1						136	12	4	0			
Zone 60 Subtotal			**424**	**152**			**374**	**25**	**24**	**1**						**136**	**12**	**4**	**0**			
61	87	Hotel	50	19				14			36						1			18		

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
61	146	Industrial	27	18							27									18		
61	147	Industrial	30	4		7		1			22				4		0			0		
61	148	Industrial	14	8							14									8		
61	149	Industrial	6	3									6									3
61	150	Industrial	6	2									6									2
61	151	Industrial	4	2									4									2
61	152	Industrial	4	2									4									2
61	153	Industrial	6	3									6									3
61	154	Industrial	7	4	2								5	2								2
61	155	Industrial	6	12									6									12
61	156	Industrial	21	16							9		12							9		7
61	157	Industrial	12	8							12									8		
61	158	Industrial	5	1							5									1		
61	159	Industrial	4	2							4									2		
61	160	Industrial	167	111			165	2								109	2					
61	161	Industrial	14	7				4			10						0			7		
61	279	Office	114	62			113	1								61	1					
61	378	Recreation	7	8							7									7		1
61	490	Retail	13	6				1			12						0			6		
61	491	Retail	11	11							11									8		3
Zone 61 Subtotal			**1154**	**491**	**2**	**7**	**278**	**49**			**769**		**49**	**2**	**4**	**170**	**5**			**273**		**37**
62	103	Industrial	53	50	24	29								24	26							
62	104	Industrial	28	9		28									9							
62	105	Industrial	159	86	141	5		3					10	83	1		2					0
62	106	Industrial	63	22				1			41		21				0			19		3
62	107	Office	13	5		11		1				1			3		1				1	
62	108	Industrial	7	5		2					5				2					3		
62	109	Industrial	20	24		20									17							7
62	110	Industrial	156	66	11	9		1			109	26		9	9		0			48	0	
Zone 62 Subtotal			**499**	**267**	**176**	**104**		**6**			**155**	**27**	**31**	**116**	**67**		**3**			**70**	**1**	**10**
63	2	Health	42	41	9			2			30	1		9			2			30	0	

Zone	Site No	Landuse	Capacity	Demand	Capacity									Demand								
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
63	3	Health	12	5							12									5		
63	174	Misc	24	5				2			7	1	14				0			2	0	3
63	400	Retail	7	2							4		3							0		2
63	513	School	55	38		51		2		2					38		0		0			
63	525	School	5	2		5									2							
Zone 63 Subtotal			**145**	**93**	**9**	**56**		**6**		**2**	**53**	**2**	**17**	**9**	**40**		**2**		**0**	**37**	**0**	**5**
64	364	Recreation	8	3									8									3
Zone 64 Subtotal			**8**	**3**									**8**									**3**
65	84	Hotel	8	1									8									1
65	123	Industrial	41	29		33		6					2		23		6					0
65	124	Industrial	136	110			128	8								107	3					
65	445	Retail	15	5				1			14						0			5		
65	446	Retail	20	0							20									0		
65	447	Retail	187	60				11	2		174						3	1		56		
65	448	Retail	288	85			261	25				2				78	7				0	
65	449	Retail	15	12			13	1				1				11	0				1	
65	464	Retail	77	4							77									4		
65	465	Retail	97	46				6			91						0			46		
65	466	Retail	61	35				4			57						3			32		
Zone 65 Subtotal			**945**	**387**		**33**	**402**	**62**	**2**		**433**	**3**	**10**		**23**	**196**	**22**	**1**		**143**	**1**	**1**
66	605	Industrial	25	12																		
66	681	Industrial	10	5																		
66	682	University	3	2							3									2		
Zone 66 Subtotal			**38**	**19**							**3**									**2**		
Grand Total			**41962**	**23989**	**5500**	**5644**	**5999**	**1261**	**206**	**315**	**18038**	**459**	**2987**	**3068**	**2508**	**3642**	**415**	**94**	**186**	**10681**	**244**	**1576**

Source: 2016 survey results

B. PNR Capacity Results

B.1 PNR Capacity Results by Zone

Table 9: Total measured 2016 PNR capacity by zone and comparison with previous survey result

Zone	Total Capacity (spaces)		Change	
	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
1	0	25	-25	-100.0%
2	89	268	-179	-66.8%
3	123	337	-214	-63.5%
4	440	1157	-717	-62.0%
5	300	447	-147	-32.9%
6	61	189	-128	-67.7%
7	7	204	-197	-96.6%
8	488	1040	-552	-53.1%
9	87	876	-789	-90.1%
10	763	891	-128	-14.4%
11	311	816	-505	-61.9%
12	416	160	256	+160.0%
13	842	664	178	+26.8%
14	385	467	-82	-17.6%
15	1849	2027	-178	-8.8%
16	295	1888	-1593	-84.4%
17	34	314	-280	-89.2%
18	132	386	-254	-65.8%
19	554	511	43	+8.4%
20	2151	290	1861	+641.7%
21	273	468	-195	-41.7%
22	968	676	292	+43.2%
23	542	532	10	+1.9%
24	309	569	-260	-45.7%
25	628	791	-163	-20.6%
26	882	605	277	+45.8%
27	2267	789	1478	+187.3%
28	1163	930	233	+25.1%
29	564	833	-269	-32.3%
30	1019	1331	-312	-23.4%
31	1123	1064	59	+5.5%
32	260	472	-212	-44.9%
33	58	126	-68	-54.0%
34	17	70	-53	-75.7%

Zone	Total Capacity (spaces)		Change	
35	22	516	-494	-95.7%
36	144	406	-262	-64.5%
37	85	302	-217	-71.9%
38	2670	955	1715	+179.6%
39	743	823	-80	-9.7%
40	244	208	36	+17.3%
41	234	296	-62	-20.9%
42	121	190	-69	-36.3%
43	292	556	-264	-47.5%
44	233	402	-169	-42.0%
45	604	1007	-403	-40.0%
46	157	143	14	+9.8%
47	73	110	-37	-33.6%
48	85	284	-199	-70.1%
49	975	957	18	+1.9%
50	1671	1211	460	+38.0%
51	646	575	71	+12.3%
52	390	587	-197	-33.6%
53	163	320	-157	-49.1%
54	121	175	-54	-30.9%
55	12	36	-24	-66.7%
56	3066	2021	1045	+51.7%
58	6911	2514	4397	+174.9%
59	313	28	285	+1017.9%
60	424	580	-156	-26.9%
61	528	1217	-689	-56.6%
62	499	321	178	+55.5%
63	145	29	116	+400.0%
64	8	31	-23	-74.2%
65	945	1076	-131	-12.2%
66	38	206	-168	-81.6%
67	0	128	-128	-100.0%

Source: 2016 surveys and Buchanan Report

C. PNR Demand Results

C.1 PNR Demand Results by Zone

Table 10: Total measured 2016 PNR capacity by zone and comparison with previous survey result

Zone	Total Demand (spaces)		Change	
	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
1	0	23	-23	-100.0%
2	63	242	-179	-74.0%
3	74	246	-172	-70.0%
4	239	1020	-781	-76.6%
5	151	327	-176	-53.8%
6	48	164	-116	-70.7%
7	0	174	-174	-100.0%
8	364	708	-344	-48.6%
9	55	792	-737	-93.0%
10	240	581	-341	-58.7%
11	174	565	-391	-69.2%
12	205	95	110	115.6%
13	394	393	1	+0.3%
14	213	337	-124	-36.7%
15	1257	1384	-127	-9.1%
16	163	1586	-1423	-89.7%
17	25	199	-174	-87.4%
18	52	167	-115	-68.6%
19	307	427	-120	-28.1%
20	1738	266	1472	+553.4%
21	134	140	-6	-4.2%
22	659	306	353	+115.4%
23	200	251	-51	-20.3%
24	226	296	-70	-23.6%
25	363	442	-79	-17.9%
26	298	346	-48	-13.9%
27	1107	474	633	+133.6%
28	616	876	-260	-29.6%
29	297	605	-308	-50.9%
30	617	799	-182	-22.8%
31	433	574	-141	-24.6%
32	104	411	-307	-74.7%
33	15	50	-35	-70.0%
34	10	29	-19	-65.5%

Zone	Total Demand (spaces)		Change	
35	18	404	-386	-95.5%
36	94	299	-205	-68.6%
37	34	187	-153	-81.8%
38	1502	528	974	+184.5%
39	383	484	-101	-20.9%
40	158	90	68	+75.6%
41	122	101	21	+20.8%
42	60	106	-46	-43.4%
43	191	362	-171	-47.2%
44	123	303	-180	-59.4%
45	447	770	-323	-41.9%
46	65	80	-15	-18.8%
47	41	57	-16	-28.1%
48	72	169	-97	-57.4%
49	696	509	187	+36.7%
50	1029	719	310	+43.1%
51	467	469	-2	-0.4%
52	249	410	-161	-39.3%
53	86	198	-112	-56.6%
54	91	110	-19	-17.3%
55	4	14	-10	-71.4%
56	2454	2134	320	+15.0%
58	3473	1696	1777	+104.8%
59	55	16	39	+243.8%
60	152	224	-72	-32.1%
61	309	789	-480	-60.8%
62	267	240	27	+11.3%
63	93	17	76	+447.1%
64	3	5	-2	-40.0%
65	387	621	-234	-37.7%
66	19	148	-129	-87.1%
67	0	93	-93	-100.0%

Source: 2016 surveys and Buchanan Report

D. PNR Utilisation Results

D.1 PNR Utilisation Results by Zone

Table 11: Total measured 2016 PNR utilisation by zone and comparison with previous survey result

Zone	Total Utilisation (demand/capacity)		Absolute Change
	2016 Survey Result	1989/90 Survey	
1		92.0%	-92.0%
2	70.8%	90.3%	-19.5%
3	60.1%	73.0%	-12.9%
4	54.3%	88.2%	-33.8%
5	50.3%	73.2%	-22.8%
6	78.7%	86.8%	-8.1%
7	0.0%	85.3%	-85.3%
8	74.6%	68.1%	+6.5%
9	63.3%	90.4%	-27.1%
10	31.4%	65.2%	-33.8%
11	55.9%	69.2%	-13.3%
12	49.2%	59.4%	-10.1%
13	46.8%	59.2%	-12.4%
14	55.4%	72.2%	-16.8%
15	68.0%	68.3%	-0.3%
16	55.3%	84.0%	-28.8%
17	73.5%	63.4%	+10.2%
18	39.8%	43.3%	-3.5%
19	55.4%	83.6%	-28.1%
20	80.8%	91.7%	-10.9%
21	49.1%	29.9%	+19.2%
22	68.1%	45.3%	+22.8%
23	36.9%	47.2%	-10.2%
24	73.2%	52.0%	+21.2%
25	57.8%	55.9%	+1.9%
26	33.8%	57.2%	-23.4%
27	48.8%	60.1%	-11.2%
28	53.0%	94.2%	-41.2%
29	52.7%	72.6%	-20.0%
30	60.5%	60.0%	+0.5%
31	38.6%	53.9%	-15.4%
32	40.0%	87.1%	-47.1%
33	25.9%	39.7%	-13.8%
34	58.8%	41.4%	+17.4%

Zone	Total Utilisation (demand/capacity)		Absolute Change
35	81.8%	78.3%	+3.5%
36	65.3%	73.6%	-8.4%
37	40.0%	61.9%	-21.9%
38	56.3%	55.3%	+1.0%
39	51.5%	58.8%	-7.3%
40	64.8%	43.3%	+21.5%
41	52.1%	34.1%	+18.0%
42	49.6%	55.8%	-6.2%
43	65.4%	65.1%	+0.3%
44	52.8%	75.4%	-22.6%
45	74.1%	76.5%	-2.4%
46	41.4%	55.9%	-14.5%
47	56.2%	51.8%	+4.3%
48	84.7%	59.5%	+25.2%
49	71.4%	53.2%	+18.2%
50	61.6%	59.4%	+2.2%
51	72.3%	81.6%	-9.2%
52	63.8%	69.8%	-6.0%
53	52.8%	61.9%	-9.1%
54	75.2%	62.9%	+12.3%
55	33.3%	38.9%	-5.6%
56	80.0%	105.6%	-25.6%
58	50.3%	67.5%	-17.2%
59	17.6%	57.1%	-39.6%
60	35.8%	38.6%	-2.8%
61	58.5%	64.8%	-6.3%
62	53.5%	74.8%	-21.3%
63	64.1%	58.6%	+5.5%
64	37.5%	16.1%	+21.4%
65	41.0%	57.7%	-16.8%
66	50.2%	71.8%	-21.7%
67		72.7%	-72.7%

Source: 2016 surveys and Buchanan Report

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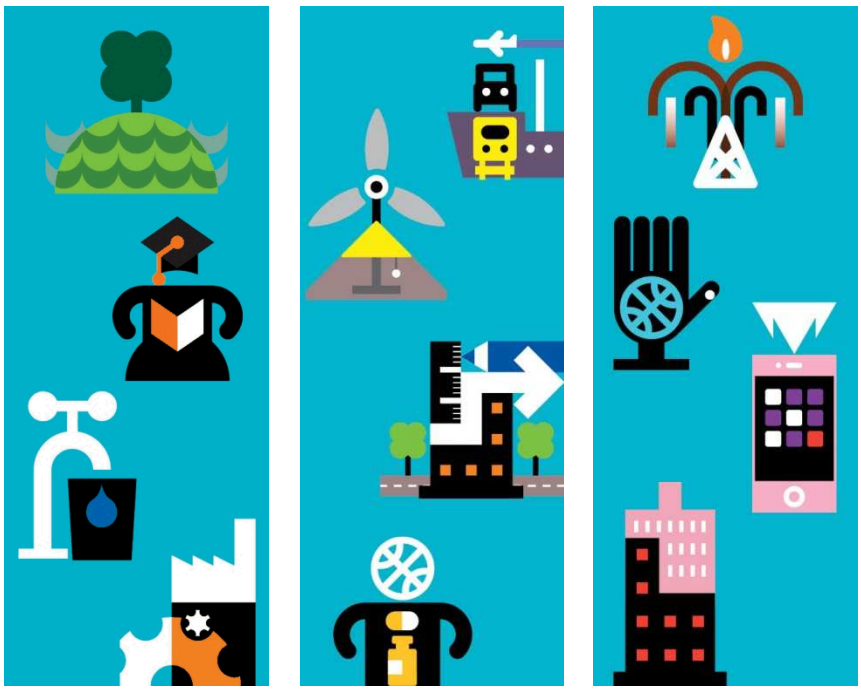

Cambridge On-Street Residential Parking Study

Stage 2 Survey Results

November 2016

Cambridgeshire County Council

Mott MacDonald

GREATER CAMBRIDGE CITY DEAL

Securing future prosperity

Report: Cambridge On-Street Residential Parking Study 06 January 2017

Explanatory Note

This report captures a snapshot of the volume and use of on-street parking spaces in residential areas within the City of Cambridge during April/May 2016.

The survey was commissioned by the Greater Cambridge City Deal in partnership with Cambridgeshire County Council and the Cambridge Joint Area Committee (CJAC), who have authority over on-street residential parking zones. The survey was managed by transport planning consultancy Mott MacDonald.

The on-street parking survey was undertaken by staff walking on streets in areas likely to be impacted by proposed future changes. The survey compared vehicles parked overnight with those parked during the morning and afternoon periods. Vehicles parked on-street overnight are most likely to be residents, whereas those parked on-street during the daytime period only are more likely be commuters.

Related Publications

Two parking survey reports are being published today. These surveys capture the volume and pattern of use of on-street and workplace parking in Cambridge.

The Board Paper on City Access is also being published today. It contains the next steps for the package of measures to tackle congestion and improve access to Cambridge city centre. It will be considered by the City Deal Joint Assembly on 18 January and the City Deal Executive Board on 25 January.

In the Board Paper, there is an officer recommendation that the Board actively supports the Cambridge City Joint Area Committee (CJAC) to add to areas of the city with on-street parking controls. It is envisaged that more controls will be needed around workplaces to manage the risk of people parking on-street should a workplace parking levy be introduced, near the new North Cambridge rail station, and more generally as competition for spaces increases with a growing workforce.

There is also a recommendation that City Deal involvement in the expansion of on-street parking controls and the design of a workplace parking levy scheme be combined within the Parking Management Delivery Plan to be led and managed from within the City Access team.

Background

The cost and availability of parking has a pivotal influence on people's choice of travel mode. Continuing to manage parking use is an important part of a holistic package of measures required to sustainably deliver growth in and around Cambridge.

On-street Parking Controls (including Residents' Parking) were part of the package of 8 measures to tackle peak-time congestion shared with the public in summer/autumn 2016 when feedback was requested through the "Tackling Peak-time Congestion" survey. The package includes a range of measures which, together, would reduce congestion, encourage more people to travel by public transport, bike or on foot and improve the environment generally in central Cambridge. Work defining the package is being led by the new City Access team which forms part of the City Deal officer team.

It should be easy to get into, out of, and around Cambridge by public transport, bike and on foot. This is the transport vision set out by the Greater Cambridge City Deal, which is developing a number of projects to help achieve this, including the Chisholm Trail cycleway and improved bus facilities from Cambourne to Cambridge and along the A1307. The City Access project is central to this and aims to help more people get into and out of Cambridge by sustainable means and to boost economic growth without increasing congestion.

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Cambridge On-Street Residential Parking Study

Stage 2 Survey Results

November 2016

Cambridgeshire County Council

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Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
A	7 July 2016	Annabel Shaw	Paul Parkhouse	Paresh Shingadia	DRAFT
B	23 August 2016	Luis Diaz Gutierrez	Paul Parkhouse	Paresh Shingadia	First issue, incorporating client comments
C	28 November 2016	Luis Diaz Gutierrez	Paul Parkhouse	Paresh Shingadia	Second issue, incorporating client comments

Contents

1 Introduction

1.1 Study Background

Cambridgeshire County Council (CCC) commissioned Mott MacDonald in March 2016 to undertake a parking study to investigate parking pressures on a sample of residential streets in Cambridge which are not currently subject to parking controls. The results of this survey are presented in our 'Stage 1 Survey Results' report of April 2016.

Following completion of the Stage 1 survey, CCC commissioned Mott MacDonald to conduct the same survey but over a wider area. Most of the streets in this Stage 2 survey are not currently subject to parking controls, but some are within an existing Residential Parking Zone (RPZ) area.

The purpose of this report is to present the methodology and results of the Stage 2 survey.

1.2 Report Structure

The report is structured as follows:

- The survey methodology is described in Section 2
- The survey results for streets not currently subject to parking controls are presented in Section 3
- The survey results for streets currently subject to RPZ controls are presented in Section 4
- The survey findings are summarised in Section 5

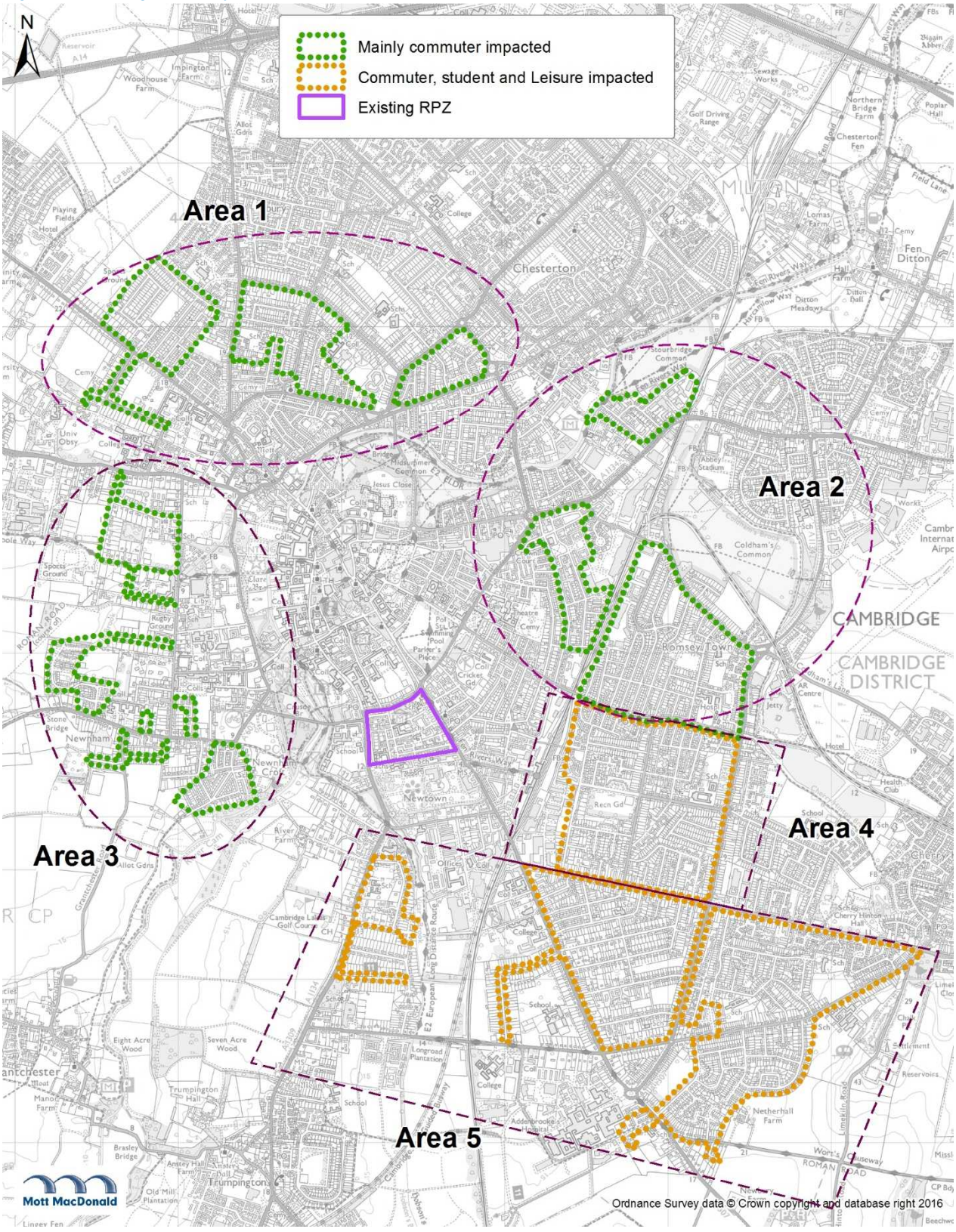
2 Study Methodology

2.1 Survey Areas

Figure 2.1 below shows the locations of the areas which CCC requested be included in the Stage 2 survey. These areas fall into one of three categories, as follows:

- Green zones – residential streets not currently subject to parking controls but which are likely to be primarily affected by daytime non-residential parking pressures. These zones have been grouped into three distinctive areas (Area 1 to 3) to facilitate interpretation of the results.
- Orange zones – residential streets not currently subject to parking controls but which are likely to be affected by both daytime and evening non-residential parking pressures. These zones have been grouped into two distinctive areas (Area 4 and 5) to facilitate interpretation of the results.
- Purple zone – residential streets which are currently subject to RPZ controls.

Figure 2.1: Stage 2 survey area



Source: CCC

2.2 Survey Specification

2.2.1 Currently Uncontrolled Areas (Green and Orange Zones)

The main purpose of the surveys for the currently uncontrolled residential streets is to identify:

1. The level of parking pressure exerted by residential parking during overnight hours
2. The level of parking pressure during weekday daytime hours (and evening hours in the orange zones) and the source of this pressure, i.e. residential or non-residential parking

In order to derive these two results, surveys were undertaken on a school term time weekday whereby the registration plates of all parked cars in each street were recorded at the following times:

Table 2.1: Green and orange zone parking survey beat specification

Beat Period	Zone	Period Label	Beat purpose
00:30 - 05:30	Green & Orange	Early morning	To record all residential parking and parking pressure in street
10:00 – 12:00	Green & Orange	Mid-morning	To record parking pressure and source of pressure at mid-morning
14:00 – 16:00	Green & Orange	Mid-afternoon	To record parking pressure and source of pressure at mid-afternoon
18:00 – 20:00	Orange only	Early evening	To record parking pressure and source of pressure in evening

In order to secure survey results before May Half Term, the surveys were undertaken on:

- Tuesday 17 and 24 May 2016 (green zones)
- Wednesday 18 May 2016 (orange zones)

The results include the streets assessed in the Stage 1 parking study.

2.2.2 Existing RPZ Area (Purple Zone)

The main purpose of the surveys for the existing RPZ area is to identify:

1. The level of parking pressure exerted by residential parking during overnight hours
2. The level of parking pressure in each bay type (Residential or Pay & Display) during weekday daytime and evening hours
3. The level of parking compliance in each bay type during bay operating periods

In order to derive these two results, surveys were undertaken on a school term time weekday whereby the registration plates of all parked cars in each street were recorded at the following times:

Table 2.2: Purple zone parking survey beat specification

Beat Period	Period Label	Beat purpose
00:30 - 05:30	Early morning	To record all residential parking and parking pressure in street
10:00 – 12:00	Mid-morning	To record parking pressure and source of pressure at mid-morning
14:00 – 16:00	Mid-afternoon	To record parking pressure and source of pressure at mid-afternoon
18:00 – 20:00	Early evening	To record parking pressure and source of pressure in evening

In addition, during the operating hours of each bay type, it was noted for each vehicle whether a valid parking permit or ticket was being displayed.

In order to secure survey results before May Half Term, the surveys were undertaken on:

- Wednesday 18 May 2016

2.3 Parking Capacity Calculation

In order to calculate parking pressures per street, it is necessary to calculate the theoretical parking capacity per street.

For the currently uncontrolled parking areas, we have measured the kerb length per street which is available for parking, taking into account:

- Carriageway width (determining whether parking is possible on one or two sides)
- Waiting/loading restrictions
- Driveways / accesses

To convert the available kerb length to a theoretical parking capacity, the length has been divided by 5 metres[1].

For the existing RPZ area, we measured the length of bay type and also divided by 5m to calculate theoretical parking capacity.

[1] As per the Lambeth Methodology: http://planning.croydon.gov.uk/DocOnline/47440_6.pdf

3 Survey Results – Uncontrolled Streets

3.1 Introduction

Survey results for the currently uncontrolled streets (green and orange zones in Figure 2.1) are summarised in this section.

3.2 Parking Pressures

For the green and orange zone areas, parking pressure results per survey period are shown in Figure 3.1 to Figure 3.4 below. For each street, these provide an indication of the proportion of theoretical parking capacity utilised at the time of each survey beat.

Green zone streets have been grouped into three areas (Area 1 to 3) to facilitate the interpretations of the results, while orange zone streets have been grouped into two areas (Area 4 and 5).

Table 3.1 and Table 3.2 provide a summary of the average occupancy levels by area for both green and orange street zones respectively. The results are coloured according to the scale shown in the figures below.

For reference, the exact parking capacities and utilisation levels for each street are attached in Appendix A for the green zone streets and in Appendix B for the orange zone streets.

It is worth noting that some streets presented a utilisation rate greater than 100% which reveals that a number of vehicles were parked in contravention during the survey. In these cases, utilisation exceeded theoretical capacity accounting for vehicles parked illegally.

Table 3.1: Green zone streets - summary results by area

	Average Parking Pressure (%)		
Area	05:30	10:00–12:00	14:00-16:00
1	54%	60%	60%
2	70%	68%	61%
3	34%	60%	58%

Table 3.2: Orange zone streets - summary results by area

	Average Parking Pressure (%)			
Area	05:30	10:00–12:00	14:00-16:00	18:00-20:00
4	48%	53%	49%	49%
5	31%	53%	48%	33%

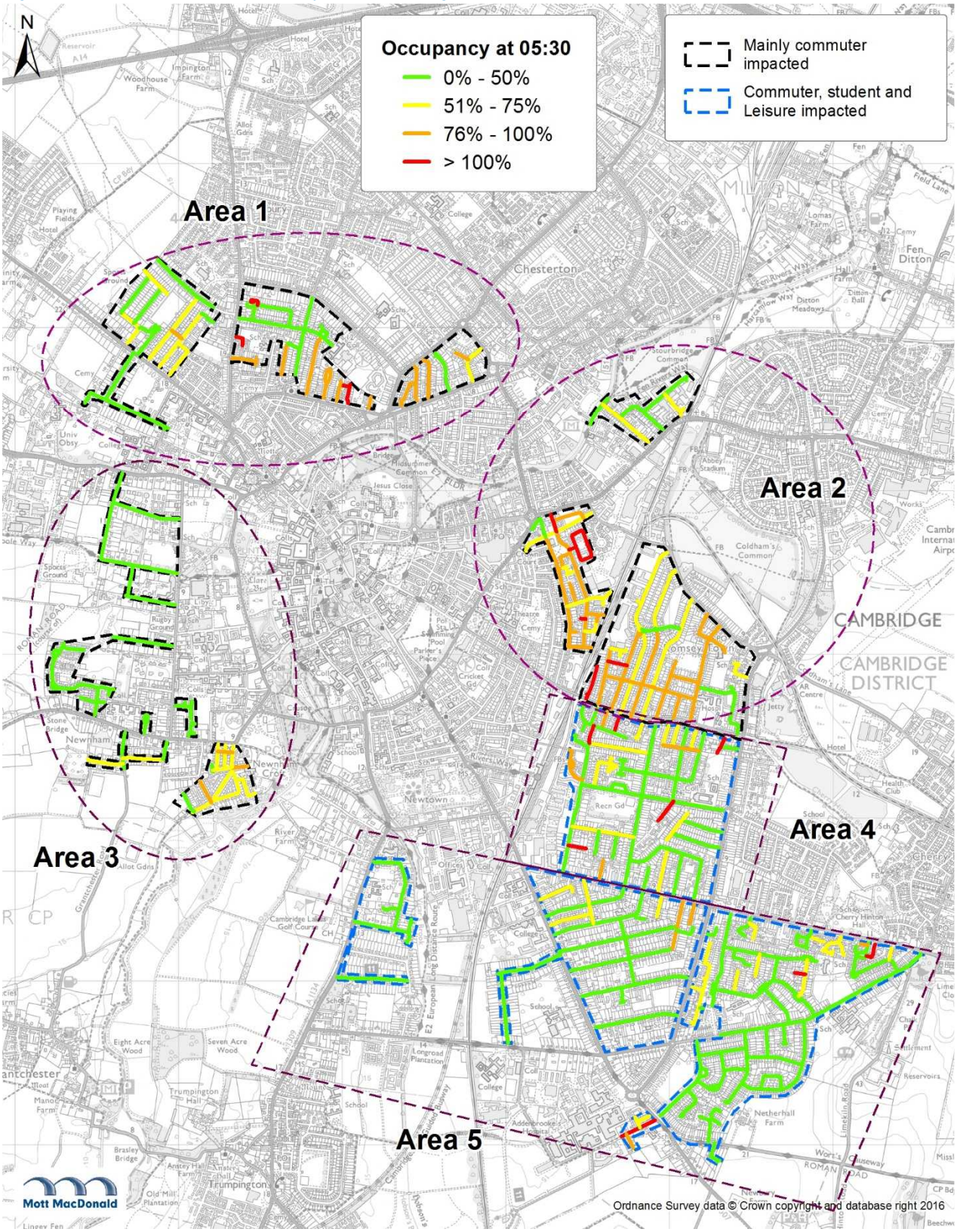
For the **green zone** streets, the results show that:

- Overall, throughout the course of the day, parking in seven streets exceeds or are very close to exceed theoretical capacity in all surveyed periods.
- On average, Area 2 presents the highest occupancy levels across all surveyed periods, with the early morning period being the busiest with a 70% occupancy level. These results highlight the residential nature of this area.
- Resident parking pressure levels are high in approximately half of the streets at 05:30, including for streets to the east of Anglia Ruskin university campus (Area 2) and for streets in the areas north of Mill Road, Victoria Road and Chesterton Road, where capacities are as high as 100%. Streets where parking exceeds theoretical capacity include Francis Darwin Court, Greens Road, Abbey Street and St Matthew's Gardens.
- During the mid-morning period, occupancy increases in Areas 1 and 3 with the exception of streets within Area 2, where occupancy slightly decreases by 2%. Particular areas that show an increase in occupancy include that to the east of the Anglia Ruskin university campus (Area 2), where all streets except two exceed 75% occupancy, and a number exceed 100% capacity, while the occupancy of streets immediately surrounding Robinson College (Area 3) increase to above 75% from a maximum of 50% at 05:30. The majority of streets in the Newnham Croft area (South Area 3) also exceed 75% occupancy, as do a number of streets to the north of Victoria Road and Chesterton Road (Area 1).
- The mid-afternoon period shows similar results to the mid-morning period, with the exception of the area to the east of the Anglia Ruskin university campus (Area 2), which returns to levels similar to those seen at 05:30.

For the **orange zone** streets, the results show:

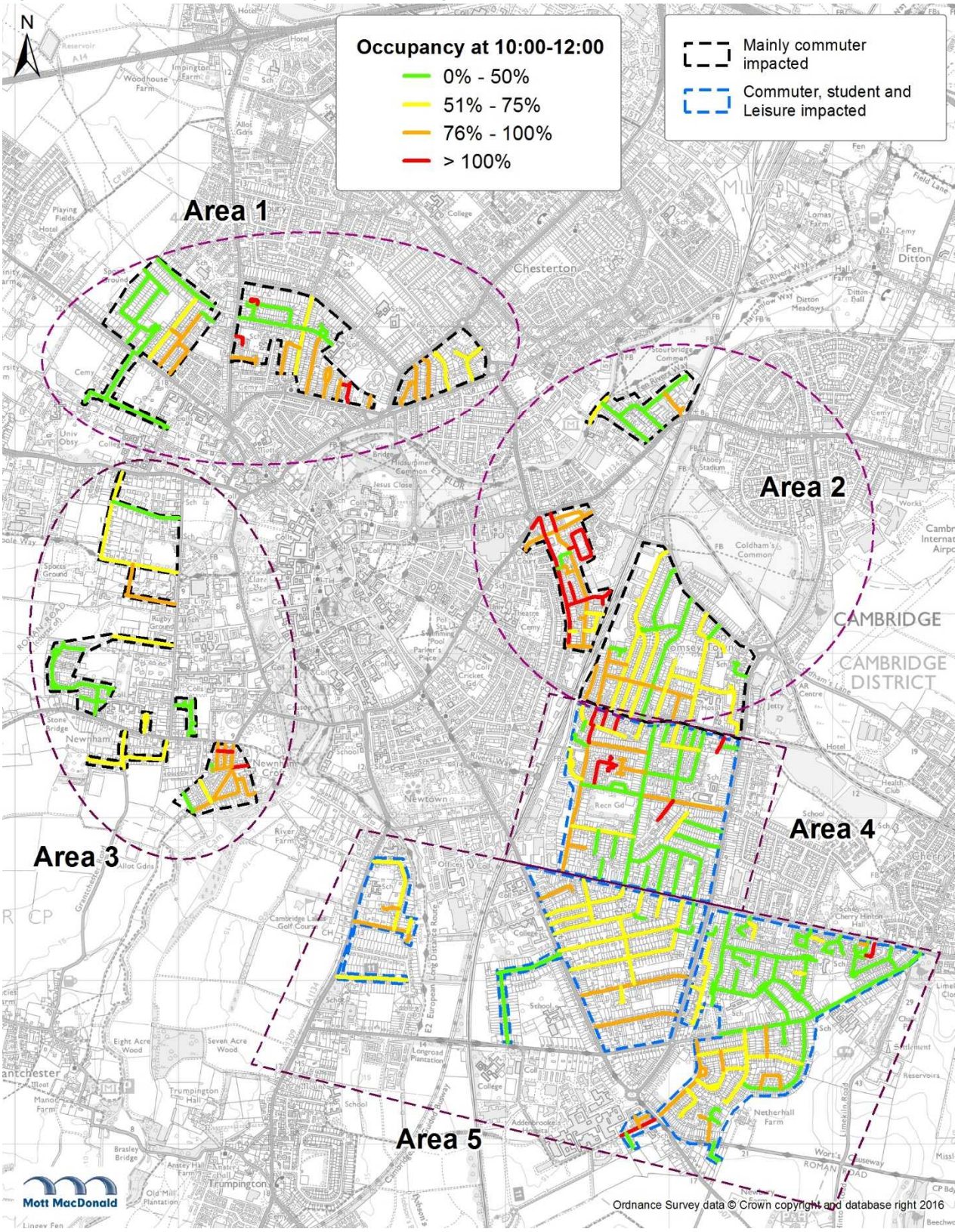
- Occupancy in orange zones are generally lower than in green areas.
- Overall, throughout the course of the day, parking in seven streets exceeds or are very close to exceed theoretical capacity in all surveyed periods.
- On average, Area 4 presents higher occupancy levels than Area 5 during the morning and evening periods, but it shows similar occupancy levels than Area 5 during the mid-morning and mid-afternoon periods.
- During the morning period, occupancy rates on the majority of streets are below 51%, with the exception of some short streets on the border of the orange zone, such as those immediately south of Mill Road, Montreal Road and Red Cross Lane, where occupancy exceeds capacity.
- By the mid-morning period, occupancy rates have generally increased, particularly on streets immediately to the east of the railway station. The greatest change in occupancy rate in this period is on streets within Area 5, which on average, experienced an increase of 22%. The increase is particularly acute on the area to the east of Homerton College, where occupancy increases in all but five streets, and in the region to the east of the Nightingale recreation ground, where over half the streets rise to an occupancy over 51%. All streets in the area to the south of the Nuffield Health hospital also experience an occupancy increase to over 51%.
- In the mid-afternoon period, most occupancy levels either remain the same as in the mid-morning period or decrease. Streets that reach a greater occupancy level in the mid-afternoon include Goldin Road (158%), Montreal Road (121%), Bosworth Road (129% and Red Cross Lane (165%).
- By the evening period, most streets have returned to the levels of occupancy seen at 05:30.

Figure 3.1: Uncontrolled street survey results: parking pressure levels – 05:30 beat



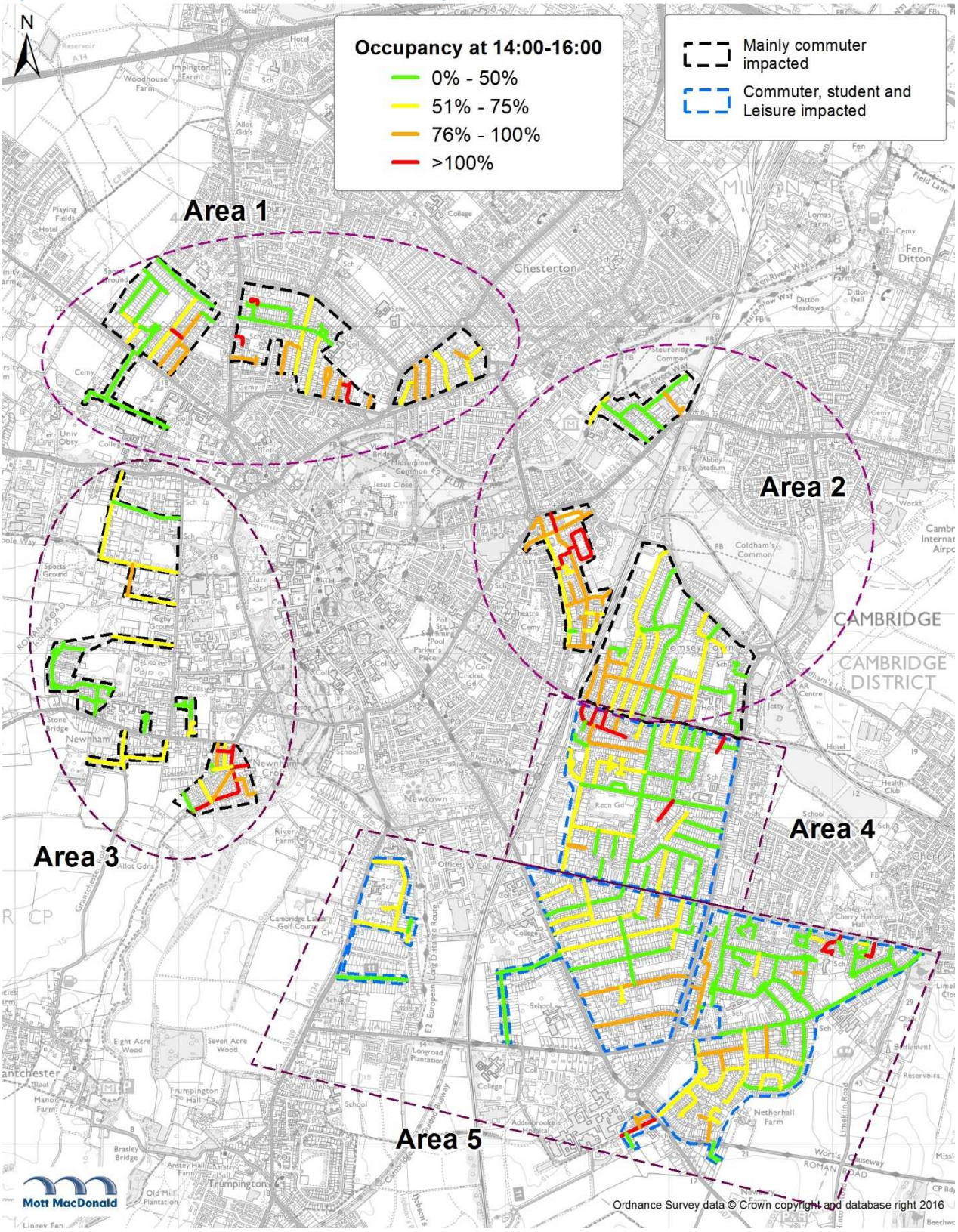
Source: Survey data

Figure 3.2: Uncontrolled street survey results: parking pressure levels – 10:00-12:00 beat



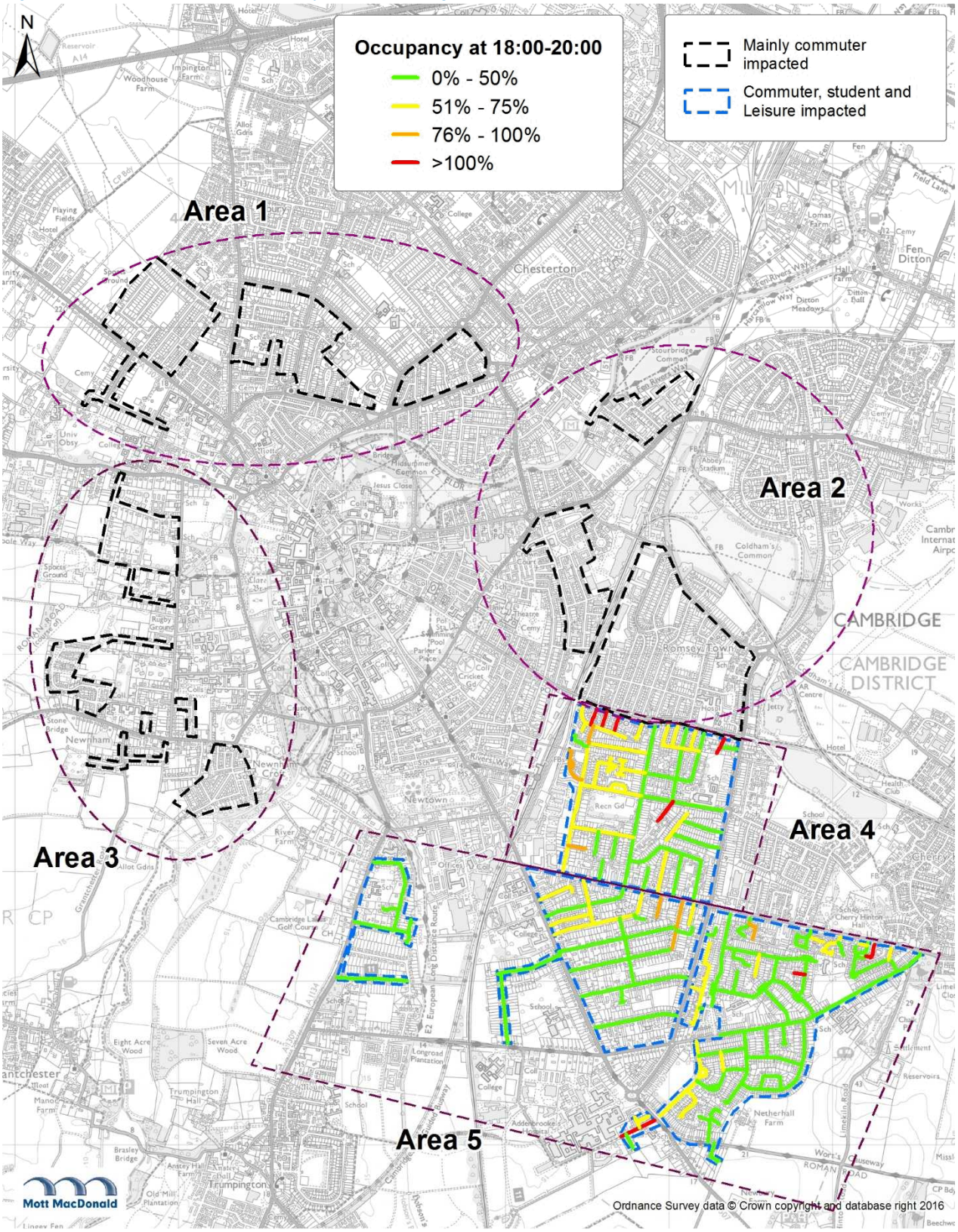
Source: Survey data

Figure 3.3: Uncontrolled street survey results: parking pressure levels – 14:00-16:00 beat



Source: Survey data

Figure 3.4: Uncontrolled street survey results: parking pressure levels – 18:00 – 20:00 beat



Source: Survey data

3.3 Non-Residential Parking Composition

For the green and orange zone areas, non-residential parking composition results per survey period are shown in Figure 3.5 to Figure 3.7 below. For each street, these provide an indication of the proportion of parking demand which is estimated to be non-residential at the time of each survey beat. Non-residential parking demand is assumed to be any vehicle which was not parked on the street during the 05:30 beat. Table 3.3 and Table 3.4 summarise the average non-residential parking demand by area.

For reference, the exact non-residential parking composition levels for each street are attached in Appendix A for the green zone streets and in Appendix B for the orange zone streets.

Table 3.3: Green zone streets - summary results by area

	Average Non-Residential Parking Composition (%)		
Area	05:30	10:00–12:00	14:00-16:00
1	0%	46%	49%
2	0%	37%	38%
3	0%	61%	64%

Table 3.4: Orange zone streets - summary results by area

	Average Non-Residential Parking Composition (%)			
Area	05:30	10:00–12:00	14:00-16:00	18:00-20:00
4	0%	50%	50%	50%
5	0%	69%	67%	44%

For the **green zone** streets, the results show that:

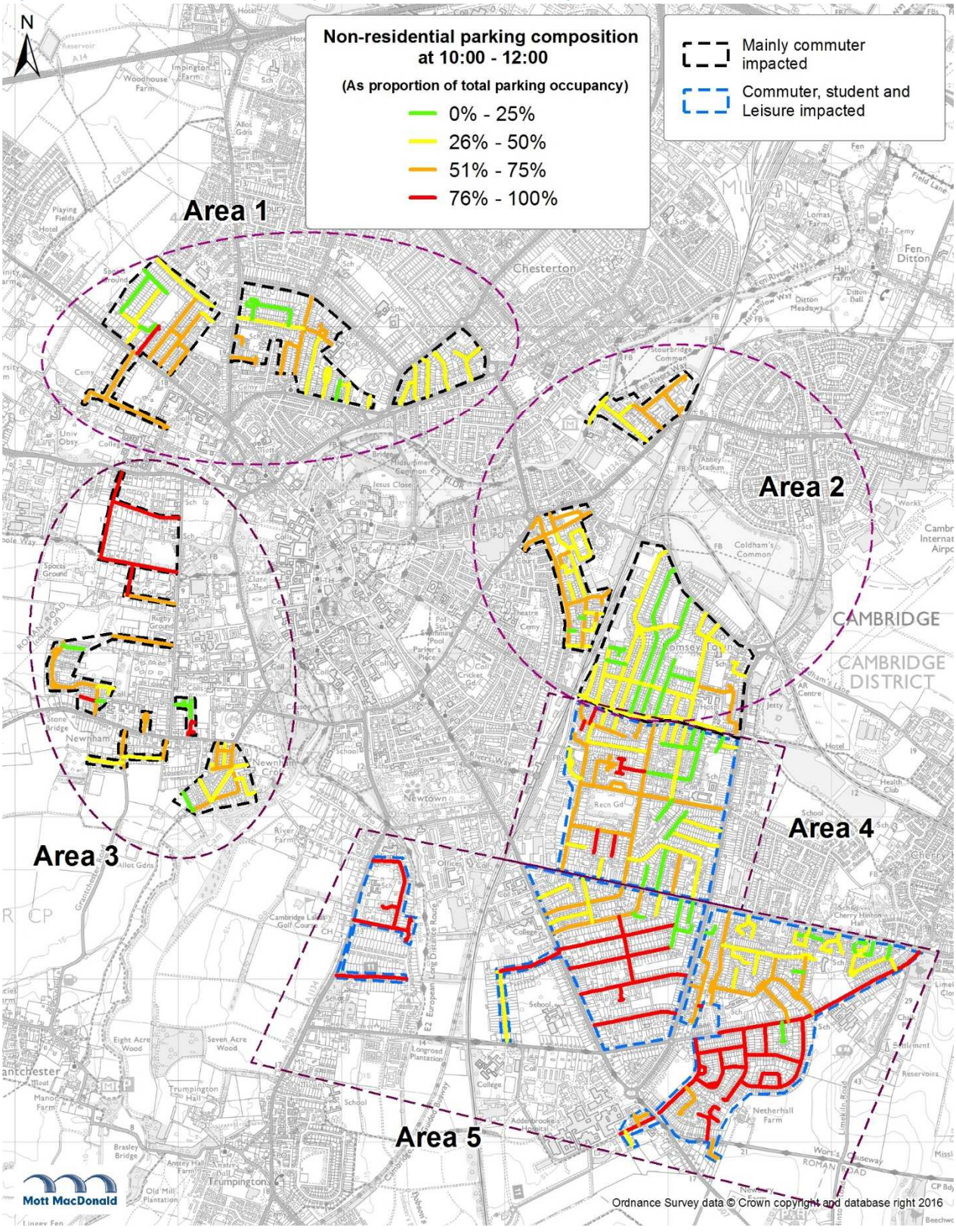
- On average, Area 3 shows the highest proportion of non-residential parking composition and Area 2 the lowest. The non-residential rates for the three areas remain roughly the same for both the mid-morning and the mid-afternoon periods.
- Of the seven streets that are over-capacity in all survey periods, four streets show that over 50% of this occupancy is attributed to non-residential parking in the mid-morning and mid-afternoon periods (Rackham Close, Abbey Street, St Matthew's Gardens and Newnham Croft Street).
- During the period 10:00-12:00, many streets have non-residential proportions of 50% or higher. Extreme cases of this include streets surrounding Robinson College (Area 3) where occupancy is over 50% in the mid-morning period and proportions of non-residents are in the range of 76% to 100%. Of all the streets that show occupancies greater than 100% in this period, all except four streets (in the area to the east of the Anglia Ruskin university campus) show that 51% to 75% is caused by non-residents. In the area to the east of Newnham Croft where occupancy exceeds 75% of the capacity, over 50% of this demand is generated by non-residents in about half of these streets.
- In the mid-afternoon period, the streets surrounding Robinson College (Area 3) maintain a non-resident composition of over 75%. The area to the east of Anglia Ruskin university campus (Area 2) shows a reduced non-resident composition, but some streets show increases, such as Storey's Way, Sturton Street and Occupancy Road.

For the **orange zone** streets, the results show that:

- On average, Area 5 shows a higher proportion of non-residential parking composition than Area 4 during the mid-morning and mid-afternoon periods, but a lower composition during the evening period.
- Non-residential composition remains constant at 50% in Area 4 for all the surveyed periods.

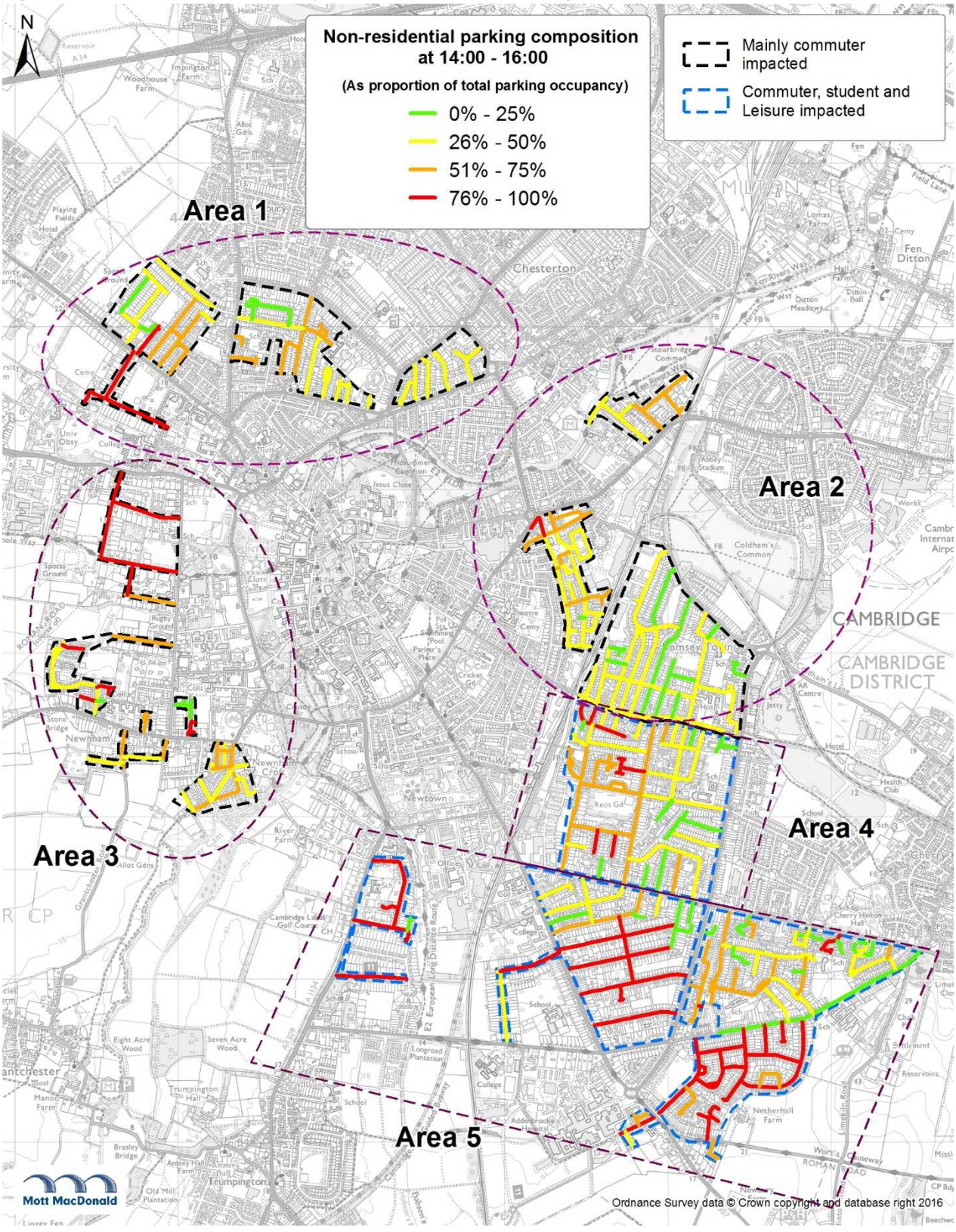
- Of the seven streets that are over-capacity in all survey periods, only one, Red Cross Lane, show that over 50% of this occupancy is attributed to non-residential parking in the daytime and evening periods.
- In the mid-morning period, Area 5 shows that the majority of streets are up to 100% occupied by non-residents. Area 4 on the other hand, shows that most of the streets are between 26% and 75% occupied by non-residents.
- By the mid-afternoon period, the proportion of non-residential parking remains the same or decreases compared with the mid-morning period. Streets that show an increased proportion of non-resident parking are Bosworth Road, Argyle Street and Bullen Close (all of which show a greater overall occupancy in the same period), as well as Glenacre Close.
- During the evening period, Area 5 decreases its proportion of non-residential vehicles by 23%. However, streets south of Queen Edith's Way (south of Area 4) still account for the majority of non-residential occupancy. Composition levels elsewhere within the orange zone streets are generally lower than during the day, but are still above 50% in many of the streets.

Figure 3.5: Uncontrolled street survey results: non-residential parking composition levels – 10:00-12:00 beat



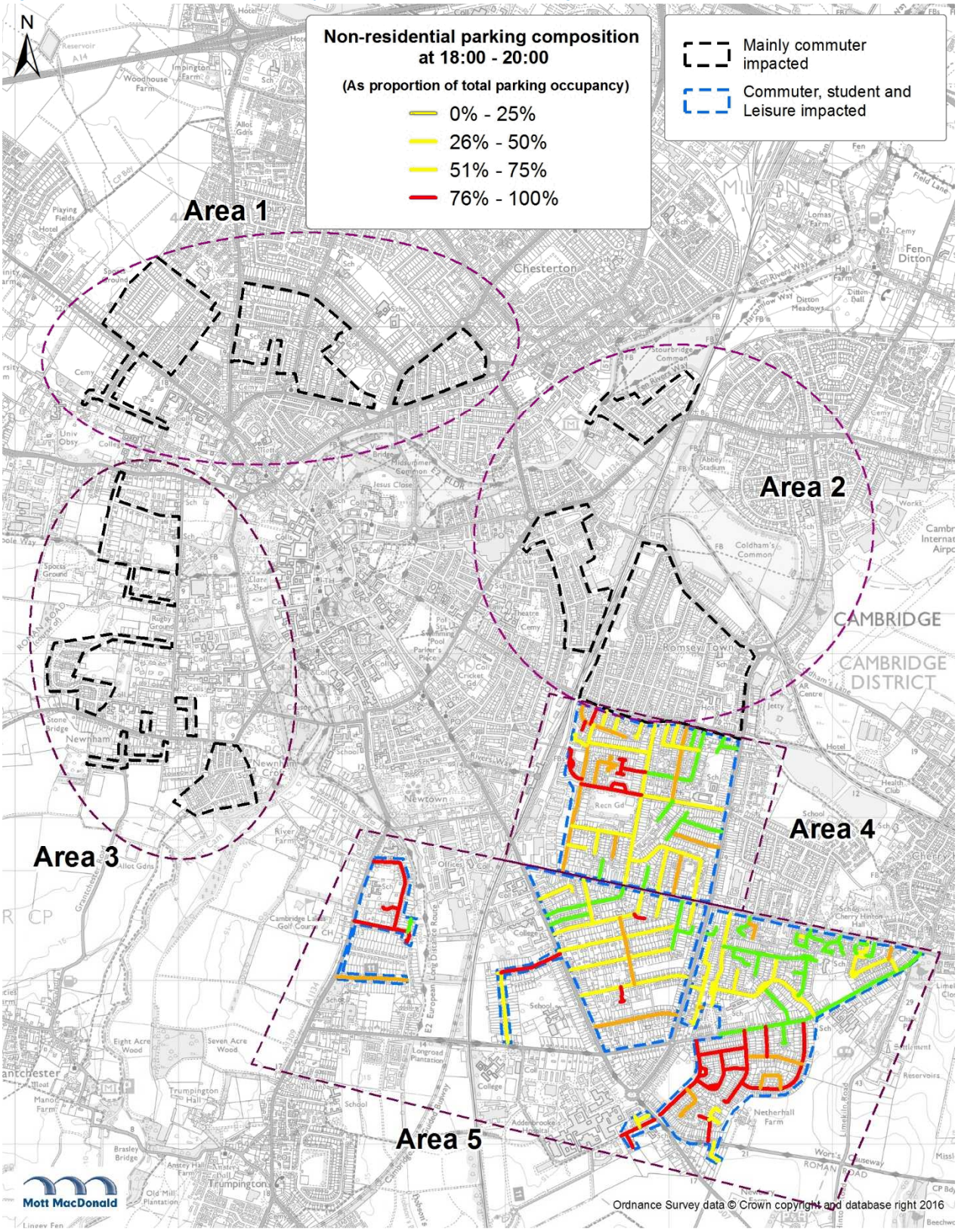
Source: Survey data

Figure 3.6: Uncontrolled street survey results: non-residential parking composition levels – 14:00-16:00 beat



Source: Survey data

Figure 3.7: Uncontrolled street survey results: non-residential parking composition levels – 18:00 – 20:00 beat



Source: Survey data

4 Survey Results – RPZ Streets

4.1 Introduction

Survey results for the existing RPZ controlled streets (the purple zone in Figure 2.1) are summarised in this section.

4.2 Parking Pressures

For the purple area streets, parking pressure results per survey period are shown in Figure 4.1 to Figure 4.4 below. For each street, these provide an indication of the proportion of theoretical parking bay capacity utilised at the time of each survey beat.

For reference, the exact parking capacities and utilisation levels for each street are attached in Appendix C.

The results show that:

- On average, parking pressure levels in the area remained around half of the theoretical capacity across all the surveyed periods. Average occupancy rates ranged from 49% at the early morning period to 57% at the mid-morning period, but far from overall capacity in all cases.
- Of all the resident permit bays, Brookside shows the lowest usage throughout the day. Highest usage is situated on George IV Street, where the survey records that the bays remain over-capacity throughout the day. Brookside also shows the lowest occupancy level throughout the day for pay and display bays. Pemberton Terrace has the highest levels of usage for pay and display bays across the day (a peak of 89% occupancy).
- In the early morning period, of all the streets that have resident permit bays, over half have an occupancy level of above 50%. By contrast, all pay and display bays were less than 51% occupied at 05:30.
- In the mid-morning period, the number of residential permit bays with occupancy greater than 50% increases, with the exception of Brookside (23%), St Eligius Street (38%) and Francis Passage (50%). Most of the pay and display areas are more than 51% occupied between 10:00 and 12:00, but Brookside, Panton Street and Russell Street remain below the 50% occupancy level.
- Between 14:00 and 16:00, the occupancy of resident permit bays remains above 50% capacity, with the exception of Brookside which maintains an occupancy level of below 51% throughout the day. Bays on Coronation Street and George IV Street are over-capacity. Occupancy levels at all pay and display areas, apart from those on Pemberton Street and Panton Street, fall below 51%. Brookside and Russell Court have no vehicles parked in these bays during this period.
- In the evening period, occupancy levels return to similar levels as recorded in the early morning period, except with more resident bay parking on Coronation Street and Russell Court (both over-capacity) and more pay and display bay parking on Pemberton Terrace, Panton Street and Russell Court.

Figure 4.1: RPZ street survey results: parking pressure levels – 05:30 beat

Source: Survey data

Figure 4.2: RPZ street survey results: parking pressure levels – 10:00-12:00 beat

Source: Survey data

Figure 4.3: RPZ street survey results: parking pressure levels – 14:00-16:00 beat

Source: Survey data

Figure 4.4: RPZ street survey results: parking pressure levels – 18:00 – 20:00 beat

Source: Survey data

4.3 Non-Compliant Parking Composition

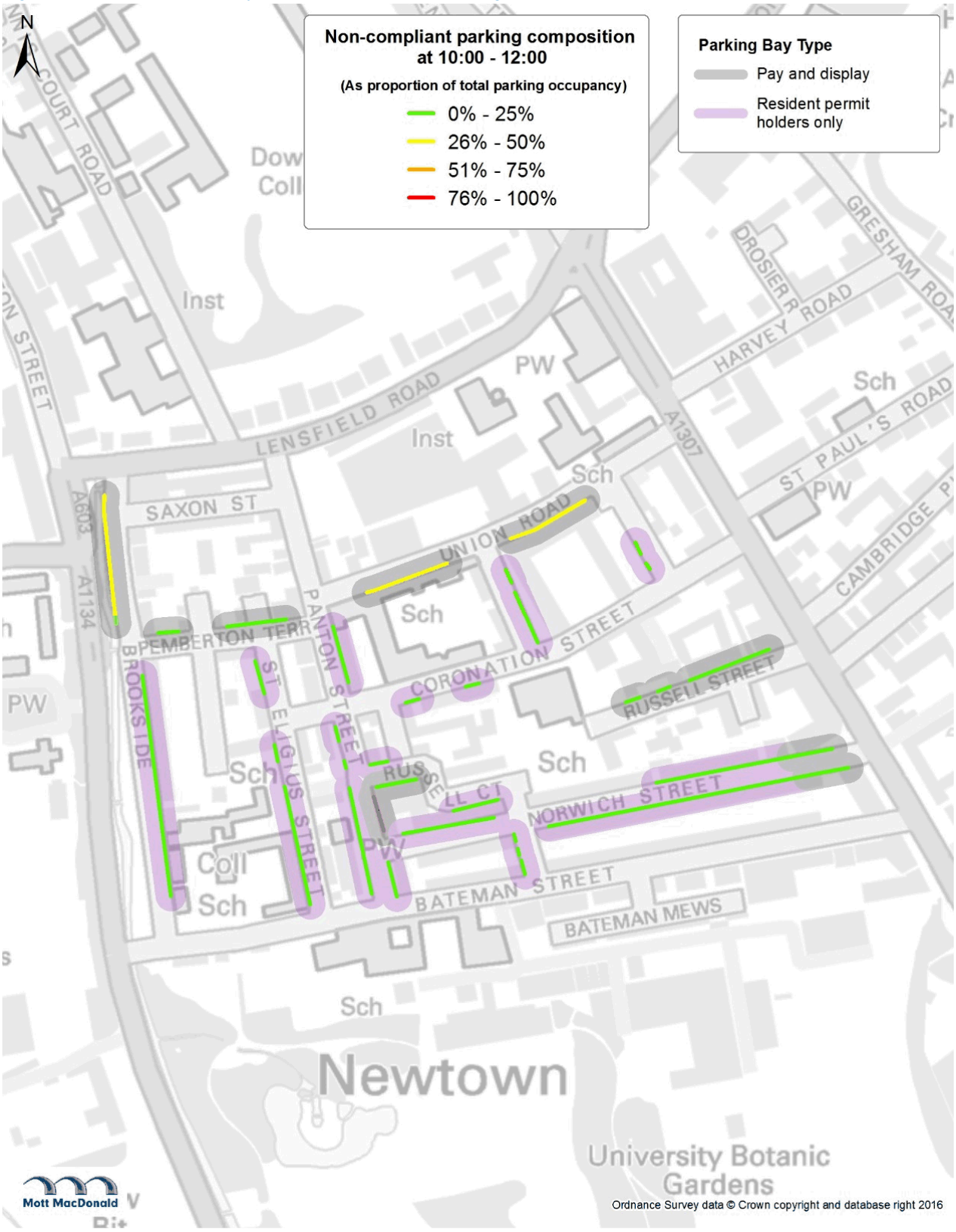
For the purple area streets, non-compliant parking composition results per survey period are shown in Figure 4.5 to Figure 4.7 below. For each street, these provide an indication of the proportion of parking demand which was recorded to be non-compliant at the time of each survey beat. Non-compliant parking demand is assumed to be any vehicle which was parked without a valid permit or ticket during the operational hours of the associated parking bay.

For reference, the exact non-compliant parking composition levels for each street are attached in Appendix C.

The results show that:

- In the morning period, no non-compliant parking was recorded as the parking bays were not yet operational.
- On average, non-compliant parking was generally low in all periods. The greatest overall proportion of non-compliant parking was recorded during the mid-morning period (11%) and the lowest during the evening period (3%) when most bays are no longer operational.
- In the mid-morning period, low levels of non-compliant parking were recorded at residential parking bays on Norwich Street (4%), St Eligius Street (11%) and Brookside (14%). For pay and display bays, non-compliant parking was recorded on six streets, with Panton Street (100%) and Union Road (38%) showing the highest proportions.
- Between 14:00 and 16:00, low levels of non-compliant parking were recorded at resident permit bays on Panton Street (4%) and St Eligus Street (8%). For pay and display bays, non-compliant parking was recorded on five streets, with Norwich Street (100%) and Union Road (75%) showing the highest proportions.
- In the evening period, Coronation Street has the highest proportion of non-compliant parking for residential permit bays (50%), while low levels were observed at Panton Street (4%) and Norwich Street (2%). At pay and display bays, there is no non-compliant parking as these bays are not operational in the evening.

Figure 4.5: RPZ street survey results: non-compliant parking composition levels – 10:00-12:00 beat

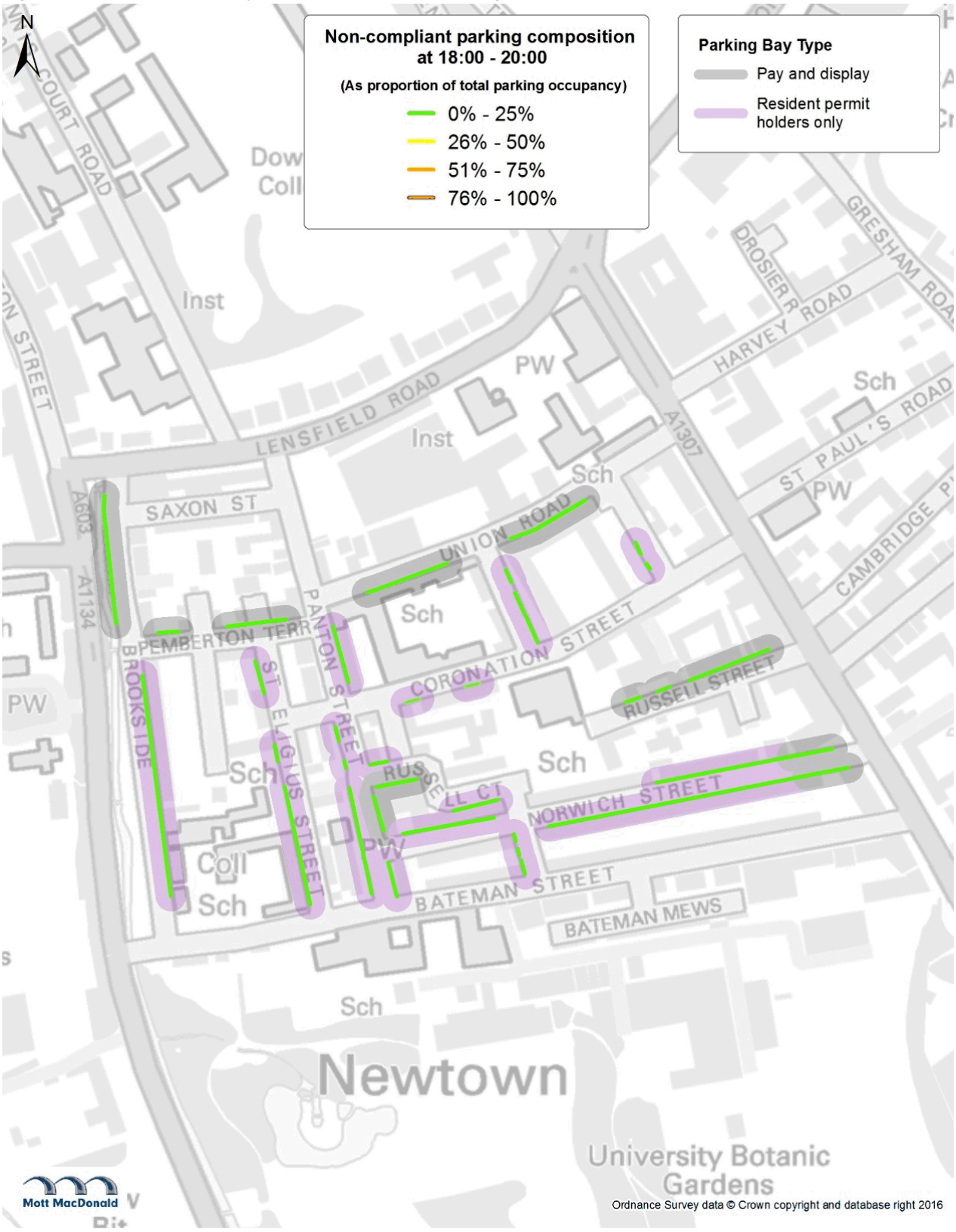


Source: Survey data

Figure 4.6: RPZ street survey results: non-compliant parking composition levels – 14:00-16:00 beat

Source: Survey data

Figure 4.7: RPZ street survey results: non-compliant parking composition levels – 18:00 – 20:00 beat



Source: Survey data

5 Survey Summary

5.1 Survey Background

Cambridgeshire County Council (CCC) commissioned Mott MacDonald in March 2016 to undertake a parking study to investigate parking pressures on a sample of residential streets in Cambridge which are not currently subject to parking controls. The results of this survey are presented in our 'Stage 1 Survey Results' report of April 2016.

Following completion of the Stage 1 survey, CCC commissioned Mott MacDonald to conduct the same survey but over a wider area, which is shown in Figure 2.1 above. This figure shows that the survey area is divided into three parking type categories, as follows:

- Green zones – residential streets not currently subject to parking controls but which are likely to be primarily affected by daytime non-residential parking pressures
- Orange zones – residential streets not currently subject to parking controls but which are likely to be affected by both daytime and evening non-residential parking pressures
- Purple zone – residential streets which are currently subject to RPZ controls

In addition, the streets in the green and orange zones are grouped into areas to facilitate interpretation, as also shown in Figure 2.1 above.

5.2 Survey Purpose and Methodology

The main purpose of the surveys is to identify:

1. The level of parking pressure exerted by residential parking during overnight hours
2. The level of parking pressure during weekday daytime hours and the source of this pressure, i.e. residential or non-residential parking
3. For the existing RPZ area only (purple zone), the level of parking compliance in each bay type during bay operating periods

In order to derive these results, surveys were undertaken on a school term time weekday whereby the registration plates (and permit/ticket details, where relevant) of all parked cars in each street were recorded at the following times:

- Early morning (05:30)
- Mid-morning (10:00-12:00)
- Mid-afternoon (14:00-16:00)
- Early evening (18:00-20:00 – orange and purple zones only)

5.3 Survey Results Summary

5.3.1 Uncontrolled Streets – Green Zone

Full survey results for green zone streets are attached in Appendix A.

The results show that, on average, Area 2 presents the highest occupancy levels across all surveyed periods, with the morning period being the busiest, with an average occupancy of 70%. These results are also confirmed by the low proportion of non-residential vehicles parked in the area during daytime and so they highlight the residential nature of Area 2.

Resident parking pressure levels are high in approximately half of the streets of Area 1 at 05:30 while, in Area 3, this proportion drops to 34%. By the mid-morning period, occupancy has increased in Areas 1 and 3, but levels in Area 2 show a slight decrease. The mid-afternoon period shows similar results to the mid-morning. In terms of overall parking pressure per street, the survey results show that parking in seven streets exceeds theoretical capacity, or is very close to exceeding capacity, in all surveyed periods.

In terms of the proportion of parking pressure which is generated by non-resident parking during the day, the survey results show that of the seven streets that are at or over-capacity in all survey periods, four streets show that over 50% of this occupancy is attributed to non-residential parking in the mid-morning and mid-afternoon periods. During the mid-morning and mid-afternoon periods, many streets in Area 1 and 3 have non-residential proportions of over 50%.

5.3.2 Uncontrolled Streets – Orange Zone

Full survey results for orange zone streets are attached in Appendix B.

Occupancy in orange zones are generally lower than in green areas. The results show that, on average, Area 4 experiences greater occupancy rates than Area 5 during the morning and evening periods, but similar rates as Area 5 during the mid-morning and mid-afternoon periods.

In terms of overall parking pressure per street, the survey results show that parking in seven streets exceeds theoretical capacity in all surveyed periods. For Area 4, occupancy levels remain around 50% throughout the course of the day while, for Area 5, occupancy is much lower in the early morning and evening periods.

In terms of the proportion of parking pressure which is generated by non-resident parking during the day, the survey results show that of the seven streets that are over-capacity in all survey periods, only one street shows that over 50% of this occupancy is attributed to non-residential parking.

Area 5 shows a higher proportion of non-residential parking composition than Area 4 during the mid-morning and mid-afternoon periods, but a lower composition during the evening period.

5.3.3 Existing RPZ – Purple Zone

Full survey results for purple zone streets are attached in Appendix C.

In terms of overall parking pressure per street, the survey results show that, of all the resident permit bays, Brookside shows the lowest occupancy levels throughout the day and George IV Street the highest. In the case of pay and display bays, Brookside shows the lowest and Pemberton Terrace shows the highest for occupancy levels. In the early morning period, whilst most of the resident permit bays show occupancy levels greater than 50%, all pay and display bays were less than 50% occupied. Most resident permit bays remain over 50% occupied throughout the survey periods. Most pay and display bays reach in excess of 50% occupancy in the mid-morning period but fall below 50% by the mid-afternoon. In the evening period, occupancy levels return to similar levels as recorded in the early morning period. On average, parking

pressure levels in the area remained around half of the theoretical capacity across all the surveyed periods. Average occupancy rates ranged from 49% at the early morning period to 57% at the mid-morning period, but far from overall capacity in all cases.

In terms of the proportion of parking pressure which is generated by non-compliant parking during the day, the survey results show that in the mid-morning period, non-compliant parking was recorded on six streets for pay and display bays, and on five streets in the mid-afternoon period. There are only low levels of non-compliant parking in resident permit bays throughout the day. In the evening period, only three streets experienced non-compliant resident bay parking.

Appendices

Appendix A. Green Zone Street Results

A.1 Parking Pressure Survey Results

The following table presents the survey results for green zone streets in terms of:

- Theoretical parking capacity of each street (measured in spaces)
- Recorded occupancy of each street per beat period (measured in cars parked)
- Corresponding parking pressure level of each street per period (shown as proportion of capacity)

Table A.1: Green zone survey results – parking pressures per beat period

			Parking Occupancy (Cars)			Parking Pressure (%)		
Area	Street	Capacity	05:30	10:00 - 12:00	14:00 - 16:00	05:30	10:00– 12:00	14:00- 16:00
1	Akeman Street	98	32	22	23	33%	22%	23%
1	Bateson Road	44	14	15	13	32%	34%	30%
1	Chesterton Hall Crescent	90	41	57	61	46%	63%	68%
1	Chestnut Grove	16	14	10	15	88%	63%	94%
1	Corona Road	25	22	22	24	88%	88%	96%
1	Darwin Drive	120	56	33	40	47%	28%	33%
1	Eachard Street	48	18	19	21	38%	40%	44%
1	Francis Darwin Court	9	16	10	11	178%	111%	122%
1	Gardens Walk	53	43	43	38	81%	81%	72%
1	George Street	45	40	41	39	89%	91%	87%
1	Greens Road	19	22	23	20	116%	121%	105%
1	Hale Avenue	23	10	19	19	43%	83%	83%
1	Halifax Road	87	60	72	68	69%	83%	78%
1	Harvey Goodwin Avenue	66	51	61	62	77%	92%	94%
1	Hawthorn Way	66	36	44	49	55%	67%	74%
1	Herbert Street	66	52	54	55	79%	82%	83%
1	Hoadly Road	15	9	6	7	60%	40%	47%
1	Linden Close	34	31	32	32	91%	94%	94%
1	Marion Close	30	0	3	2	0%	10%	7%
1	Nursery Walk	10	2	3	4	20%	30%	40%
1	Oxford Road	165	110	101	108	67%	61%	65%
1	Primrose Street	21	18	20	21	86%	95%	100%
1	Rackham Close	5	12	21	15	240%	420%	300%
1	Richmond Road	136	99	118	108	73%	87%	79%
1	Sherlock Close	20	9	6	5	45%	30%	25%
1	Sherlock Road	44	27	21	26	61%	48%	59%
1	Springfield Road	16	14	13	12	88%	81%	75%
1	Stoveys Way	177	33	75	78	19%	42%	44%
1	Strettham Avenue	143	63	91	80	44%	64%	56%

Area	Street	Capacity	Parking Occupancy (Cars)			Parking Pressure (%)		
			05:30	10:00 - 12:00	14:00 - 16:00	05:30	10:00– 12:00	14:00- 16:00
1	Victoria Park	106	82	95	88	77%	90%	83%
1	Wentworth Road	15	14	15	20	93%	100%	133%
1	Windsor Road	141	19	21	22	13%	15%	16%
1	Woodlark Road	52	22	18	19	42%	35%	37%
	Area 1 Average	2,005	1,091	1,204	1,205	54%	60%	60%
2	Abbey Street	15	9	13	13	225%	325%	375%
2	Abbey Walk	11	9	13	15	82%	18%	136%
2	Ainsworth Court	5	6	5	5	120%	100%	100%
2	Ainsworth Place	19	10	10	12	53%	53%	63%
2	Ainsworth Street	70	60	69	53	86%	99%	76%
2	Belgrave Road	40	37	35	31	93%	88%	78%
2	Brampton Road	128	80	57	55	63%	45%	43%
2	Bury Court	4	4	3	4	100%	75%	100%
2	Catharine Street	141	104	90	86	74%	64%	61%
2	Cavendish Place	17	11	7	8	65%	41%	47%
2	Cavendish Road	101	84	81	85	83%	80%	84%
2	Cromwell Road	71	49	40	39	69%	56%	55%
2	Fairfax Road	54	16	16	10	30%	30%	19%
2	Fairsford Place	20	15	17	14	75%	85%	70%
2	Garlic Row	71	26	34	33	37%	48%	46%
2	Great Eastern Street	39	45	34	37	115%	87%	95%
2	Harvest Way	22	17	17	17	77%	77%	77%
2	Hemingford Road	107	89	74	50	83%	69%	47%
2	Hooper Street	21	16	18	17	76%	86%	81%
2	Kerridge Close	6	5	4	3	83%	67%	50%
2	Mercers Row	50	8	25	23	16%	50%	46%
2	New Street	74	41	57	59	55%	77%	80%
2	Occupation Road	52	20	54	49	38%	104%	94%
2	Oyster Row	33	16	10	9	48%	30%	27%
2	Riverside	60	30	33	33	50%	55%	55%
2	Romsey Road	55	46	35	31	84%	64%	56%
2	Ross Street	233	158	113	97	68%	48%	42%
2	Sedgwick Street	113	87	81	79	77%	72%	70%
2	Seymour Street	85	33	52	24	39%	61%	28%
2	Sleaford Street	55	41	56	54	75%	102%	98%
2	St Mathews Gardens	9	15	18	10	167%	200%	111%
2	St Phillips Road	89	72	68	69	81%	76%	78%
2	Stanley Road	110	72	55	54	65%	50%	49%
2	Stone Street	27	21	20	17	78%	74%	63%
2	Sturton Street	86	65	91	52	76%	106%	60%
2	Swanns Road	31	16	31	31	52%	100%	100%
2	Thoday Street	159	125	102	100	79%	64%	63%

Area	Street	Capacity	Parking Occupancy (Cars)			Parking Pressure (%)		
			05:30	10:00 - 12:00	14:00 - 16:00	05:30	10:00– 12:00	14:00- 16:00
2	Vinery Road	118	102	71	76	86%	60%	64%
2	Vinery Way	19	15	7	0	79%	37%	0%
2	Wetenhall Road	30	32	28	27	107%	93%	90%
2	Wycliffe Road	18	12	2	4	67%	11%	22%
2	York Street	69	62	66	67	90%	96%	97%
2	York Terrace	21	20	22	17	95%	105%	81%
	Area 2 Average	2,558	1,801	1,734	1,569	70%	68%	61%
3	Adams Road	167	26	91	94	16%	54%	56%
3	Barton Close	38	6	20	17	16%	53%	45%
3	Champneys Walk	12	5	5	5	42%	42%	42%
3	Chedworth Street	14	11	15	15	79%	107%	107%
3	Clarkson Road	61	3	3	3	5%	5%	5%
3	Cranmer Road	128	30	92	78	23%	72%	61%
3	Dane Road	23	0	0	1	0%	0%	4%
3	Derby Street	39	28	33	23	72%	85%	59%
3	Eltisley Avenue	74	49	58	61	66%	78%	82%
3	Fulbrooke Road	69	41	40	41	59%	58%	59%
3	Gough Way	129	4	10	6	3%	8%	5%
3	Granchester Road	47	15	33	27	32%	70%	57%
3	Grantchester Street	80	51	80	81	64%	100%	101%
3	Harwick Street	36	24	31	28	67%	86%	78%
3	Herschel Road	104	36	83	77	35%	80%	74%
3	Kings Road	27	11	17	15	41%	63%	56%
3	Marlowe Road	49	39	35	32	80%	71%	65%
3	Merton Street	16	12	13	12	75%	81%	75%
3	Newnham Croft Street	4	4	7	9	100%	175%	225%
3	Owlstone Road	49	36	46	39	73%	94%	80%
3	Pearce Close	6	3	3	3	50%	50%	50%
3	Selwyn Road	54	35	36	34	65%	67%	63%
3	South Green Road	41	17	15	17	41%	37%	41%
3	Spens Avenue	16	2	2	3	13%	13%	19%
3	St Marks Court	12	2	5	9	17%	42%	75%
3	Stukeley Court	15	2	4	2	13%	27%	13%
3	Sylvester Road	63	10	52	49	16%	83%	78%
3	The Cenacle	10	4	2	4	40%	20%	40%
3	Wilberforce Road	155	15	96	103	10%	62%	66%
	Area 3 Average	1,538	521	927	888	34%	60%	58%

A.2 Non-Residential Parking Composition Survey Results

The following table presents the survey results for green zone streets in terms of:

- Theoretical parking capacity of each street (measured in spaces)
- Recorded non-residential parking occupancy of each street per beat period (measured in cars parked)
- Corresponding non-residential parking composition (shown as proportion of total parking occupancy)

Table A.2: Green zone survey results – non-residential parking composition per beat period

			Non-Residential Parking Occupancy (Cars)			Non-Residential Parking Composition (%)		
Area	Street	Capacity	05:30	10:00 - 12:00	14:00 - 16:00	05:30	10:00– 12:00	14:00- 16:00
1	Akeman Street	98	0	6	8	0%	27%	35%
1	Bateson Road	44	0	8	8	0%	53%	62%
1	Chesterton Hall Crescent	90	0	26	30	0%	46%	49%
1	Chestnut Grove	16	0	3	6	0%	30%	40%
1	Corona Road	25	0	7	9	0%	32%	38%
1	Darwin Drive	120	0	5	7	0%	15%	18%
1	Eachard Street	48	0	5	8	0%	26%	38%
1	Francis Darwin Court	9	0	0	0	0%	0%	0%
1	Gardens Walk	53	0	21	16	0%	49%	42%
1	George Street	45	0	13	11	0%	32%	28%
1	Greens Road	19	0	7	7	0%	30%	35%
1	Hale Avenue	23	0	11	11	0%	58%	58%
1	Halifax Road	87	0	38	35	0%	53%	51%
1	Harvey Goodwin Avenue	66	0	34	36	0%	56%	58%
1	Hawthorn Way	66	0	19	24	0%	43%	49%
1	Herbert Street	66	0	20	24	0%	37%	44%
1	Hoadly Road	15	0	1	2	0%	17%	29%
1	Linden Close	34	0	19	20	0%	59%	63%
1	Marion Close	30	0	3	2	0%	100%	100%
1	Nursery Walk	10	0	1	2	0%	33%	50%
1	Oxford Road	165	0	52	62	0%	51%	57%
1	Primrose Street	21	0	5	8	0%	25%	38%
1	Rackham Close	5	0	15	11	0%	71%	73%
1	Richmond Road	136	0	68	62	0%	58%	57%
1	Sherlock Close	20	0	1	0	0%	17%	0%
1	Sherlock Road	44	0	7	12	0%	33%	46%
1	Springfield Road	16	0	6	5	0%	46%	42%
1	Stoveys Way	177	0	54	59	0%	72%	76%
1	Strettham Avenue	143	0	49	44	0%	54%	55%
1	Victoria Park	106	0	33	31	0%	35%	35%
1	Wentworth Road	15	0	9	15	0%	60%	75%
1	Windsor Road	141	0	8	10	0%	38%	45%
1	Woodlark Road	52	0	3	4	0%	17%	21%
	Area 1 Average	2,005	0	557	589	0%	46%	49%

Area	Street	Capacity	Non-Residential Parking Occupancy (Cars)			Non-Residential Parking Composition (%)		
			05:30	10:00 - 12:00	14:00 - 16:00	05:30	10:00– 12:00	14:00- 16:00
2	Abbey Street	15	0	7	9	0%	54%	60%
2	Abbey Walk	11	0	7	9	0%	54%	60%
2	Ainsworth Court	5	0	0	0	0%	0%	0%
2	Ainsworth Place	19	0	3	4	0%	30%	33%
2	Ainsworth Street	70	0	35	23	0%	51%	43%
2	Belgrave Road	40	0	12	7	0%	34%	23%
2	Brampton Road	128	0	9	8	0%	16%	15%
2	Bury Court	4	0	2	2	0%	67%	50%
2	Catharine Street	141	0	34	34	0%	38%	40%
2	Cavendish Place	17	0	1	2	0%	14%	25%
2	Cavendish Road	101	0	23	34	0%	28%	40%
2	Cromwell Road	71	0	13	12	0%	33%	31%
2	Fairfax Road	54	0	6	4	0%	38%	40%
2	Fairsford Place	20	0	7	4	0%	41%	29%
2	Garlic Row	71	0	19	17	0%	56%	52%
2	Great Eastern Street	39	0	12	16	0%	35%	43%
2	Harvest Way	22	0	9	11	0%	53%	65%
2	Hemingford Road	107	0	18	2	0%	24%	4%
2	Hooper Street	21	0	5	5	0%	28%	29%
2	Kerridge Close	6	0	1	1	0%	25%	33%
2	Mercers Row	50	0	18	16	0%	72%	70%
2	New Street	74	0	36	40	0%	63%	68%
2	Occupation Road	52	0	40	39	0%	74%	80%
2	Oyster Row	33	0	3	4	0%	30%	44%
2	Riverside	60	0	12	13	0%	36%	39%
2	Romsey Road	55	0	4	3	0%	11%	10%
2	Ross Street	233	0	17	19	0%	15%	20%
2	Sedgwick Street	113	0	24	28	0%	30%	35%
2	Seymour Street	85	0	32	8	0%	62%	33%
2	Sleaford Street	55	0	31	33	0%	55%	61%
2	St Mathews Gardens	9	0	9	5	0%	50%	50%
2	St Phillips Road	89	0	24	28	0%	35%	41%
2	Stanley Road	110	0	16	18	0%	29%	33%
2	Stone Street	27	0	8	6	0%	40%	35%
2	Sturton Street	86	0	50	25	0%	55%	48%
2	Swanns Road	31	0	17	19	0%	55%	61%
2	Thoday Street	159	0	22	29	0%	22%	29%
2	Vinery Road	118	0	19	22	0%	27%	29%
2	Vinery Way	19	0	3	0	0%	43%	0%
2	Wetenhall Road	30	0	3	6	0%	11%	22%
2	Wycliffe Road	18	0	1	1	0%	50%	25%
2	York Street	69	0	20	27	0%	30%	40%

Area	Street	Capacity	Non-Residential Parking Occupancy (Cars)			Non-Residential Parking Composition (%)		
			05:30	10:00 - 12:00	14:00 - 16:00	05:30	10:00– 12:00	14:00- 16:00
2	York Terrace	21	0	7	5	0%	32%	29%
	Area 2 Average	2,558	0	639	598	0%	37%	38%
3	Adams Road	167	0	74	77	0%	81%	82%
3	Barton Close	38	0	15	12	0%	75%	71%
3	Champneys Walk	12	0	1	1	0%	20%	20%
3	Chedworth Street	14	0	5	7	0%	33%	47%
3	Clarkson Road	61	0	3	3	0%	100%	100%
3	Cranmer Road	128	0	64	50	0%	70%	64%
3	Dane Road	23	0	0	1	0%	0%	100%
3	Derby Street	39	0	14	11	0%	42%	48%
3	Eltisley Avenue	74	0	23	28	0%	40%	46%
3	Fulbrooke Road	69	0	11	17	0%	28%	41%
3	Gough Way	129	0	7	3	0%	70%	50%
3	Granchester Road	47	0	22	18	0%	67%	67%
3	Grantchester Street	80	0	48	49	0%	60%	60%
3	Harwick Street	36	0	16	16	0%	52%	57%
3	Herschel Road	104	0	51	46	0%	61%	60%
3	Kings Road	27	0	11	8	0%	65%	53%
3	Marlowe Road	49	0	13	13	0%	37%	41%
3	Merton Street	16	0	7	8	0%	54%	67%
3	Newnham Croft Street	4	0	4	6	0%	57%	67%
3	Owlstone Road	49	0	20	19	0%	43%	49%
3	Pearce Close	6	0	0	0	0%	0%	0%
3	Selwyn Road	54	0	12	12	0%	33%	35%
3	South Green Road	41	0	3	7	0%	20%	41%
3	Spens Avenue	16	0	1	3	0%	50%	100%
3	St Marks Court	12	0	4	8	0%	80%	89%
3	Stukeley Court	15	0	4	2	0%	100%	100%
3	Sylvester Road	63	0	49	46	0%	94%	94%
3	The Cenacle	10	0	1	2	0%	50%	50%
3	Wilberforce Road	155	0	87	94	0%	91%	91%
	Area 3 Average	1,538	0	570	567	0%	61%	64%

Appendix B. Orange Zone Street Figures

B.1 Parking Pressure Survey Results

The following table presents the survey results for orange zone streets in terms of:

- Theoretical parking capacity of each street (measured in spaces)
- Recorded occupancy of each street per beat period (measured in cars parked)
- Corresponding parking pressure level of each street per period (shown as proportion of capacity)

Table B.1: Orange zone survey results – parking pressures per beat period

			Parking Occupancy (Cars)				Parking Pressure (%)			
Area	Street	Capacity	05:30	10:00 - 12:00	14:00 - 16:00	18:00 – 20:00	05:30	10:00 – 12:00	14:00 - 16:00	18:00 – 20:00
4	Argyle Street	88	39	65	92	58	44%	74%	105%	66%
4	Bancroft Close	21	2	7	6	2	10%	33%	29%	10%
4	Brackyn Road	30	9	25	19	16	30%	83%	63%	53%
4	Charles Street	18	21	21	18	16	117%	117%	100%	89%
4	Cockburn Street	29	29	30	32	32	100%	103%	110%	110%
4	Coleridge Road	170	61	73	60	43	36%	43%	35%	25%
4	Coniston Road	19	7	6	4	5	37%	32%	21%	26%
4	Corrie Road	42	24	44	23	23	57%	105%	55%	55%
4	Cowper Road	93	68	43	52	55	73%	46%	56%	59%
4	Cyprus Road	50	36	26	26	31	72%	52%	52%	62%
4	David Street	16	0	2	0	1	0%	13%	0%	63%
4	Davy Street	119	29	43	19	60	24%	36%	16%	50%
4	Derby Road	19	18	7	0	0	95%	37%	0%	0%
4	Fanshawe Road	69	44	47	41	42	64%	68%	59%	61%
4	Flamsteed Road	17	21	16	17	17	124%	94%	100%	100%
4	Gisbourne Road	21	13	13	12	11	62%	62%	57%	52%
4	Golding Road	19	50	32	30	25	263%	168%	158%	132%
4	Greville Road	42	25	34	32	27	60%	81%	76%	64%
4	Hobart Road	150	74	58	60	72	49%	39%	40%	48%
4	Hope Street	15	16	16	14	17	107%	107%	93%	113%
4	Langham Road	44	12	9	10	8	27%	20%	23%	18%
4	Litchfield Road	168	28	28	26	37	17%	17%	15%	22%
4	Madras Road	44	31	19	19	26	70%	43%	43%	59%
4	Malta Road	36	22	16	22	20	61%	44%	61%	56%
4	Marmora Road	51	41	30	34	36	80%	59%	67%	71%
4	Montreal Road	19	29	22	23	22	153%	116%	121%	116%
4	Natal Road	19	9	7	8	6	47%	37%	42%	32%
4	Neville Road	82	6	14	15	19	7%	17%	18%	23%
4	Perne Avenue	46	8	10	13	11	17%	22%	28%	24%

			Parking Occupancy (Cars)				Parking Pressure (%)			
Area	Street	Capacity	05:30	10:00 - 12:00	14:00 - 16:00	18:00 – 20:00	05:30	10:00 – 12:00	14:00 - 16:00	18:00 – 20:00
4	Radegund Road	44	15	37	22	15	34%	84%	50%	34%
4	Romsey Terrace	15	11	8	8	8	73%	53%	53%	53%
4	Rustat Avenue	62	57	45	34	54	92%	73%	55%	87%
4	Rustat Road	155	73	129	106	89	47%	83%	68%	57%
4	Sterne Close	22	4	8	7	4	18%	36%	32%	18%
4	Stockwell Street	26	2	31	28	30	8%	119%	108%	115%
4	Suez Road	120	36	45	50	44	30%	38%	42%	37%
4	William Smith Close	26	9	12	11	11	35%	46%	42%	42%
	Area 4 Average	2,026	979	1,078	993	993	48%	53%	49%	49%
5	Almoner's Avenue	65	7	45	41	16	11%	69%	63%	25%
5	Alwyne Road	20	2	8	6	3	10%	40%	30%	15%
5	Baldock Way	74	9	40	26	10	12%	54%	35%	14%
5	Baycliffe Close	14	9	8	8	8	64%	57%	57%	57%
5	Beaumont Crescent	23	8	18	14	10	35%	78%	61%	43%
5	Beaumont Road	158	22	28	27	17	14%	18%	17%	11%
5	Bentley Road	51	1	45	35	17	2%	88%	69%	33%
5	Blenheim Close	7	2	0	0	1	29%	0%	0%	14%
5	Blinco Grove	145	72	93	93	89	50%	64%	64%	61%
5	Bosworth Road	24	15	12	31	13	63%	50%	129%	54%
5	Bowers Croft	14	2	7	8	2	14%	50%	57%	14%
5	Bullen Close	13	7	8	5	10	54%	62%	38%	77%
5	Carrick Close	8	5	3	3	3	63%	38%	38%	38%
5	Cavendish Avenue	186	36	101	99	45	19%	54%	53%	24%
5	Chalk Grove	18	2	14	15	4	11%	78%	83%	22%
5	Courtland Avenue	16	4	3	3	3	25%	19%	19%	19%
5	Diamond Close	8	0	6	0	0	0%	75%	0%	0%
5	Field Way	53	3	46	41	6	6%	87%	77%	11%
5	Glebe Road	159	54	134	137	57	34%	84%	86%	36%
5	Glenacre Close	10	6	3	3	6	60%	30%	30%	60%
5	Glenmere Close	50	22	18	18	16	44%	36%	36%	32%
5	Godwin Close	14	9	7	6	7	64%	50%	43%	50%
5	Godwin Way	69	21	26	32	23	30%	38%	46%	33%
5	Greenlands	10	8	2	2	3	80%	20%	20%	30%
5	Greystoke Court	12	10	10	9	7	83%	83%	75%	58%
5	Greystoke Road	65	30	19	19	23	46%	29%	29%	35%
5	Gunhild Close	15	10	7	8	10	67%	47%	53%	67%
5	Gunhild Court	18	9	3	5	9	50%	17%	28%	50%
5	Gunhild Way	87	31	29	33	24	36%	33%	38%	28%
5	Hartington Grove	158	75	115	68	73	47%	73%	43%	46%
5	Heron's Close	13	0	0	1	0	0%	0%	8%	0%
5	Hills Avenue	178	37	111	80	36	21%	62%	45%	20%
5	Hinton Avenue	68	61	43	35	53	90%	63%	51%	78%

			Parking Occupancy (Cars)				Parking Pressure (%)			
Area	Street	Capacity	05:30	10:00 - 12:00	14:00 - 16:00	18:00 – 20:00	05:30	10:00 – 12:00	14:00 - 16:00	18:00 – 20:00
5	Holbrook Road	127	40	117	103	54	31%	92%	81%	43%
5	Hulatt Road	91	54	65	71	49	59%	71%	78%	54%
5	Kinnaid Way	35	1	26	27	8	3%	74%	77%	23%
5	Lilac Court	24	20	8	8	15	83%	33%	33%	63%
5	Luard Road	73	3	28	27	10	4%	38%	37%	14%
5	Magnolia Way	5	0	0	0	1	0%	0%	0%	20%
5	Mander Way	7	2	1	1	1	29%	14%	14%	14%
5	Manners Way	13	0	11	11	8	0%	85%	85%	62%
5	Marshall Road	89	61	56	48	52	69%	63%	54%	58%
5	Missleton Court	19	7	3	4	2	37%	16%	21%	11%
5	Netherhall Way	76	17	48	47	21	22%	63%	62%	28%
5	Newton Road	77	3	42	41	24	4%	55%	53%	31%
5	Nightingale Avenue	77	34	65	57	47	44%	84%	74%	61%
5	Porson Road	69	6	39	34	10	9%	57%	49%	14%
5	Queen Ediths Way	295	0	1	0	0	0%	0%	0%	0%
5	Queen Emma Place	16	2	10	7	4	13%	63%	44%	25%
5	Rathmore Close	70	50	62	50	47	71%	89%	71%	67%
5	Rayleigh Close	15	0	15	8	3	0%	100%	53%	20%
5	Red Cross Lane	20	23	33	33	35	115%	165%	165%	175%
5	Rock Road	56	33	37	34	29	59%	66%	61%	52%
5	Rotherwick Way	21	9	14	14	11	43%	67%	67%	52%
5	Rothleigh Close	15	7	1	1	4	47%	7%	7%	27%
5	Sedley Taylor Road	119	26	36	37	31	22%	30%	31%	26%
5	Spalding Way	42	17	19	11	14	40%	45%	26%	33%
5	St Margaret's Square	15	11	11	13	14	73%	73%	87%	93%
5	Stansgate Avenue	13	8	10	11	8	62%	77%	85%	62%
5	Strangeways Road	32	5	9	6	5	16%	28%	19%	16%
5	Templemore Close	12	0	8	9	3	0%	67%	75%	25%
5	Tillyard Way	26	14	12	13	8	54%	46%	50%	31%
5	Topcliffe Way	61	9	39	34	19	15%	64%	56%	31%
5	Ventrees Close	7	9	4	7	8	129%	57%	100%	114%
5	Ventrees Farm Court	18	36	24	20	32	200%	133%	111%	178%
5	Wulfstan Way	144	24	42	29	22	17%	29%	20%	15%
	Area 5 Average	3,602	1,120	1,908	1,727	1,203	31%	53%	48%	33%

B.2 Non-Residential Parking Composition Survey Results

The following table presents the survey results for orange zone streets in terms of:

- Theoretical parking capacity of each street (measured in spaces)
- Recorded non-residential parking occupancy of each street per beat period (measured in cars parked)
- Corresponding non-residential parking composition (shown as proportion of total parking occupancy)

Table B.2: Orange zone survey results – non-residential parking composition per beat period

			Non-Residential Parking Occupancy (Cars)				Non-Residential Parking Composition (%)			
Area	Street	Capacity	05:30	10:00 - 12:00	14:00 - 16:00	18:00 – 20:00	05:30	10:00 – 12:00	14:00 - 16:00	18:00 – 20:00
4	Argyle Street	88	0	42	77	41	0%	65%	84%	71%
4	Bancroft Close	21	0	6	5	1	0%	86%	83%	50%
4	Brackyn Road	30	0	24	18	14	0%	96%	95%	88%
4	Charles Street	18	0	9	8	6	0%	43%	44%	38%
4	Cockburn Street	29	0	11	13	11	0%	37%	41%	34%
4	Coleridge Road	170	0	42	35	21	0%	58%	58%	49%
4	Coniston Road	19	0	1	0	0	0%	17%	0%	0%
4	Corrie Road	42	0	30	13	13	0%	68%	57%	57%
4	Cowper Road	93	0	7	10	15	0%	16%	19%	27%
4	Cyprus Road	50	0	10	11	8	0%	38%	42%	26%
4	David Street	16	0	2	0	1	0%	100%	0%	100%
4	Davy Street	119	0	32	10	52	0%	74%	53%	87%
4	Derby Road	19	0	2	0	0	0%	29%	0%	0%
4	Fanshawe Road	69	0	28	24	21	0%	60%	59%	50%
4	Flamsteed Road	17	0	5	6	8	0%	31%	35%	47%
4	Gisbourne Road	21	0	3	3	1	0%	23%	25%	9%
4	Golding Road	19	0	0	4	1	0%	0%	13%	4%
4	Greville Road	42	0	16	16	11	0%	47%	50%	41%
4	Hobart Road	150	0	12	16	18	0%	21%	27%	25%
4	Hope Street	15	0	6	4	5	0%	38%	29%	29%
4	Langham Road	44	0	3	2	1	0%	33%	20%	13%
4	Litchfield Road	168	0	11	8	18	0%	39%	31%	49%
4	Madras Road	44	0	4	3	5	0%	21%	16%	19%
4	Malta Road	36	0	6	12	10	0%	38%	55%	50%
4	Marmora Road	51	0	7	10	12	0%	23%	29%	33%
4	Montreal Road	19	0	2	5	2	0%	9%	22%	9%
4	Natal Road	19	0	2	0	0	0%	29%	0%	0%
4	Neville Road	82	0	8	9	13	0%	57%	60%	68%
4	Perne Avenue	46	0	3	6	6	0%	30%	46%	55%
4	Radegund Road	44	0	27	11	6	0%	73%	50%	40%

			Non-Residential Parking Occupancy (Cars)				Non-Residential Parking Composition (%)			
Area	Street	Capacity	05:30	10:00 - 12:00	14:00 - 16:00	18:00 – 20:00	05:30	10:00 – 12:00	14:00 - 16:00	18:00 – 20:00
4	Romsey Terrace	15	0	6	4	4	0%	75%	50%	50%
4	Rustat Avenue	62	0	20	19	42	0%	44%	56%	78%
4	Rustat Road	155	0	85	73	60	0%	66%	69%	67%
4	Sterne Close	22	0	7	7	3	0%	88%	100%	75%
4	Stockwell Street	26	0	31	28	30	0%	100%	100%	100%
4	Suez Road	120	0	21	24	27	0%	47%	48%	61%
4	William Smith Close	26	0	7	5	5	0%	58%	45%	45%
	Area 4 Average	2,026	0	538	499	492	0%	50%	50%	50%
5	Almoner's Avenue	65	0	41	37	14	0%	91%	90%	88%
5	Alwyne Road	20	0	6	4	1	0%	75%	67%	33%
5	Baldock Way	74	0	34	21	6	0%	85%	81%	60%
5	Baycliffe Close	14	0	2	2	2	0%	25%	25%	25%
5	Beaumont Crescent	23	0	14	10	7	0%	78%	71%	70%
5	Beaumont Road	158	0	24	23	14	0%	86%	85%	82%
5	Bentley Road	51	0	45	35	17	0%	100%	100%	100%
5	Blenheim Close	7	0	0	0	0	0%	0%	0%	0%
5	Blinco Grove	145	0	47	47	30	0%	51%	51%	34%
5	Bosworth Road	24	0	4	25	3	0%	33%	81%	23%
5	Bowers Croft	14	0	6	7	1	0%	86%	88%	50%
5	Bullen Close	13	0	4	3	7	0%	50%	60%	70%
5	Carrick Close	8	0	1	0	0	0%	33%	0%	0%
5	Cavendish Avenue	186	0	77	75	17	0%	76%	76%	38%
5	Chalk Grove	18	0	13	15	4	0%	93%	100%	100%
5	Courtland Avenue	16	0	0	0	0	0%	0%	0%	0%
5	Diamond Close	8	0	6	0	0	0%	100%	0%	0%
5	Field Way	53	0	45	40	5	0%	98%	98%	83%
5	Glebe Road	159	0	106	116	23	0%	79%	85%	40%
5	Glenacre Close	10	0	0	2	4	0%	0%	67%	67%
5	Glenmere Close	50	0	5	5	3	0%	28%	28%	19%
5	Godwin Close	14	0	3	4	3	0%	43%	67%	43%
5	Godwin Way	69	0	19	21	10	0%	73%	66%	43%
5	Greenlands	10	0	1	1	3	0%	50%	50%	100%
5	Greystoke Court	12	0	1	2	1	0%	10%	22%	14%
5	Greystoke Road	65	0	6	7	7	0%	32%	37%	30%
5	Gunhild Close	15	0	2	3	2	0%	29%	38%	20%
5	Gunhild Court	18	0	1	1	1	0%	33%	20%	11%
5	Gunhild Way	87	0	10	12	6	0%	34%	36%	25%
5	Hartington Grove	158	0	60	18	16	0%	52%	26%	22%
5	Heron's Close	13	0	0	1	0	0%	0%	100%	0%
5	Hills Avenue	178	0	93	68	16	0%	84%	85%	44%

			Non-Residential Parking Occupancy (Cars)				Non-Residential Parking Composition (%)			
Area	Street	Capacity	05:30	10:00 - 12:00	14:00 - 16:00	18:00 – 20:00	05:30	10:00 – 12:00	14:00 - 16:00	18:00 – 20:00
5	Hinton Avenue	68	0	5	4	8	0%	12%	11%	15%
5	Holbrook Road	127	0	98	84	28	0%	84%	82%	52%
5	Hulatt Road	91	0	42	42	16	0%	65%	59%	33%
5	Kinnaid Way	35	0	26	27	8	0%	100%	100%	100%
5	Lilac Court	24	0	2	2	4	0%	25%	25%	27%
5	Luard Road	73	0	26	26	8	0%	93%	96%	80%
5	Magnolia Way	5	0	0	0	1	0%	0%	0%	100%
5	Mander Way	7	0	0	0	0	0%	0%	0%	0%
5	Manners Way	13	0	11	11	8	0%	100%	100%	100%
5	Marshall Road	89	0	16	8	7	0%	29%	17%	13%
5	Missleton Court	19	0	1	1	0	0%	33%	25%	0%
5	Netherhall Way	76	0	41	40	15	0%	85%	85%	71%
5	Newton Road	77	0	40	38	22	0%	95%	93%	92%
5	Nightingale Avenue	77	0	50	46	36	0%	77%	81%	77%
5	Porson Road	69	0	36	32	7	0%	92%	94%	70%
5	Queen Ediths Way	295	0	1	0	0	0%	100%	0%	0%
5	Queen Emma Place	16	0	9	6	3	0%	90%	86%	75%
5	Rathmore Close	70	0	30	16	14	0%	48%	32%	30%
5	Rayleigh Close	15	0	15	8	3	0%	100%	100%	100%
5	Red Cross Lane	20	0	28	30	33	0%	85%	91%	94%
5	Rock Road	56	0	18	16	13	0%	49%	47%	45%
5	Rotherwick Way	21	0	10	9	6	0%	71%	64%	55%
5	Rothleigh Close	15	0	0	0	2	0%	0%	0%	50%
5	Sedley Taylor Road	119	0	17	18	13	0%	47%	49%	42%
5	Spalding Way	42	0	13	5	4	0%	68%	45%	29%
5	St Margaret's Square	15	0	4	4	4	0%	36%	31%	29%
5	Stansgate Avenue	13	0	6	7	4	0%	60%	64%	50%
5	Strangeways Road	32	0	5	2	1	0%	56%	33%	20%
5	Templemore Close	12	0	8	9	3	0%	100%	100%	100%
5	Tillyard Way	26	0	7	7	2	0%	58%	54%	25%
5	Topcliffe Way	61	0	36	31	17	0%	92%	91%	89%
5	Ventrees Close	7	0	0	0	2	0%	0%	0%	25%
5	Ventrees Farm Court	18	0	3	2	3	0%	13%	10%	9%
5	Wulfstan Way	144	0	28	16	9	0%	67%	55%	41%
	Area 5 Average	3,602	0	1,308	1,152	527	0%	69%	67%	44%

Appendix C. Purple Zone Results

C.1 Parking Pressure Survey Results

The following table presents the survey results for purple zone streets in terms of:

- Theoretical parking capacity of each street and bay type (measured in spaces)
- Recorded occupancy of each street per beat period (measured in cars parked)
- Corresponding parking pressure level of each street per period (shown as proportion of capacity)

Table C.1: Purple zone survey results – parking pressures per beat period

Street	Bay Type	Bay Times	Capacity	Parking Occupancy (cars)				Parking Pressure (%)			
				05:30	10:00 – 12:00	14:00 - 16:00	18:00 – 20:00	05:30	10:00 – 12:00	14:00 - 16:00	18:00 – 20:00
Bentinck Street	Resident Permit	09:00-20:00	10	7	8	8	8	72%	82%	82%	82%
Brookside	Pay & Display	08:30-18:30	18	4	4	0	0	22%	22%	0%	0%
Brookside	Resident Permit	09:00-20:00	31	9	7	10	8	29%	23%	32%	26%
Coronation Street	Resident Permit	08:30-18:30	4	1	3	11	4	25%	75%	275%	100%
Francis Passage	Resident Permit	09:00-20:00	4	3	2	3	3	75%	50%	75%	75%
George IV Street	Resident Permit	09:00-20:00	3	3	4	5	5	111%	148%	185%	185%
Norwich Street	Pay & Display	09:00-17:00	12	1	10	1	1	9%	87%	9%	9%
Norwich Street	Resident Permit	09:00-20:00	69	49	45	41	43	71%	65%	59%	62%
Panton Street	Pay & Display	09:00-17:00	5	1	2	3	3	20%	40%	61%	61%
Panton Street	Resident Permit	09:00-20:00	31	29	26	27	25	93%	83%	87%	80%
Pemberton Terrace	Pay & Display	09:00-17:00	11	5	10	8	10	45%	89%	71%	89%
Russell Court	Pay & Display	09:00-17:00	6	1	3	0	3	18%	53%	0%	53%
Russell Court	Resident Permit	09:00-20:00	9	7	7	8	9	78%	78%	89%	101%
Russell Street	Pay & Display	09:00-17:00	16	0	4	5	4	0%	25%	31%	25%
St Eligius Street	Resident Permit	09:00-20:00	24	14	9	13	9	59%	38%	54%	38%
Union Road	Pay & Display	09:00-17:00	24	2	13	8	11	8%	55%	34%	46%
Purple Zone Average			276	136	157	151	146	49%	57%	55%	53%

C.2 Non-Residential Parking Composition Survey Results

The following table presents the survey results for purple zone streets in terms of:

- Theoretical parking capacity of each street and bay type (measured in spaces)
- Recorded non-compliant parking occupancy of each bay type per beat period (measured in cars parked)
- Corresponding non-compliant parking composition (shown as proportion of total parking occupancy)

Table C.2: Purple zone survey results – non-compliant parking composition per beat period

Street	Bay Type	Bay Times	Capacity	Non-Compliant Parking Occupancy (cars)				Non-Compliant Parking Composition (%)			
				05:30	10:00 – 12:00	14:00 - 16:00	18:00 – 20:00	05:30	10:00 – 12:00	14:00 - 16:00	18:00 – 20:00
Bentinck Street	Resident Permit	09:00-20:00	10	0	0	0	0	0%	0%	0%	0%
Brookside	Pay & Display	08:30-18:30	18	0	2	0	0	0%	50%	0%	0%
Brookside	Resident Permit	09:00-20:00	31	0	1	0	0	0%	14%	0%	0%
Coronation Street	Resident Permit	08:30-18:30	4	0	0	0	2	0%	0%	0%	50%
Francis Passage	Resident Permit	09:00-20:00	4	0	0	0	0	0%	0%	0%	0%
George IV Street	Resident Permit	09:00-20:00	3	0	0	0	0	0%	0%	0%	0%
Norwich Street	Pay & Display	09:00-17:00	12	0	2	1	0	0%	20%	100%	0%
Norwich Street	Resident Permit	09:00-20:00	69	0	2	0	1	0%	4%	0%	2%
Panton Street	Pay & Display	09:00-17:00	5	0	2	1	0	0%	100%	33%	0%
Panton Street	Resident Permit	09:00-20:00	31	0	0	1	1	0%	0%	4%	4%
Pemberton Terrace	Pay & Display	09:00-17:00	11	0	1	2	0	0%	10%	25%	0%
Russell Court	Pay & Display	09:00-17:00	6	0	0	0	0	0%	0%	0%	0%
Russell Court	Resident Permit	09:00-20:00	9	0	0	0	0	0%	0%	0%	0%
Russell Street	Pay & Display	09:00-17:00	16	0	1	1	0	0%	25%	20%	0%
St Eligius Street	Resident Permit	09:00-20:00	24	0	1	1	0	0%	11%	8%	0%
Union Road	Pay & Display	09:00-17:00	24	0	5	6	0	0%	38%	75%	0%
	Average Purple Zone		276	0	17	13	4	0%	11%	9%	3%

GREATER CAMBRIDGE CITY DEAL

Securing future prosperity

Report To:	Greater Cambridge City Deal Executive Board	25 January 2017
Lead Officer:	Tanya Sheridan – City Deal Director	

Change control and issue management

Purpose

1. To set out in a consolidated way the approach to change control and issue management across the City Deal programme.

Recommendations

2. It is recommended that the Executive Board:
   (a) Notes and endorses the codification of the principles used in the City Deal for change control and issue management.
   (b) Agree the proposed approach for reporting issues and change control.

Reasons for Recommendations

3. The City Deal has change control and issue management approaches and principles, but these have not previously been set out in one place. Change control and issue management are part of good programme management, which significantly improves delivery of major programmes.

Background

4. Change control sets out a clear process and set of responsibilities for effective management and decision making around requests for modifications to projects in terms of cost, scope or timeframes, recognising the impacts that for instance a cost change on one project can have on the wider programme.

5. Issue management relates to mitigating the impact of problems and/or constraints that already exist and continue to affect delivery, in contrast to risk management, which relates to identifying and mitigating problems that could occur in the future. When a risk occurs, it will typically become an issue that needs to be managed accordingly.

6. Change control and issue management are inherently linked to risk management, which is governed according to the Risk Management Framework (RMF) adopted by the Executive Board. The linkages and flow between those processes are illustrated (at a high level) in Appendix 1.

Considerations

7. Industry evidence demonstrates that major projects that use formal programme management and processes operate in a more efficient and effective way, and have

greater certainty of delivering successful outcomes. In the case of the Greater Cambridge City Deal, this means enhancing the likelihood of the various projects being successful in delivering the infrastructure Greater Cambridge needs, on time and on budget. It is also important to help meet the 'triggers' that will guide Government decisions on whether to provide future tranches of City Deal funding needed to deliver the infrastructure to support sustainable growth in Greater Cambridge..

8. The City Deal Programme Board, consisting of senior officers representing all partner organisations and workstreams, has the operational responsibility for maintaining and overseeing programme management in the City Deal. It is therefore responsible for ensuring good disciplines are in place, including for change control and issue management. It does, though, operate within the framework set by the Executive Board (as the key decision-making body), therefore Executive Board endorsement of the approach and principles is sought.

9. Where possible, issues are managed at 'project' level. If an issue has a significant impact on the overall programme, it is escalated to the Programme Board or the appropriate senior officer to resolve. Where Executive Board decisions are needed to manage the issue, it will be escalated and reported accordingly.

10. The key change control principles and practices, which are part of the City Deal's good practice, forming the proposed codified approach are:

    (a) The Executive Board decides on the allocation of City Deal funds to projects or schemes to meet City Deal objectives.
    (b) Capital schemes are treated as having two stages, each of which has a budget and timeframe agreed by the Executive Board. Those two stages are development (i.e. up to the point of decision to deliver a scheme) and delivery (i.e. after that point).
    (c) Project Managers are responsible for managing capital schemes within the parameters set by the Board.
    (d) Any change to a project or stage that is anticipated to exceed the agreed budget and/or timeframe is to be reported to the Executive Board for consideration and (if relevant) agreement of appropriate action.
    (e) Resourcing implications are set out in reports to the Executive Board as a specific section, to clarify the resourcing implications of decisions sought. Officers attend Joint Assembly and Executive Board meetings and can advise on resourcing implications of recommendations and decisions.
    (f) To make the most of the City Deal's funds and to ensure that Board and Joint Assembly members have consistent information to guide decisions/recommendations, new spending proposals need to have a proportionate business case, using the template agreed as part of the Medium-term financial strategy in November 2016.
    (g) Project or scheme objectives and scope are to be agreed at project initiation, i.e. when a project, including its funding and resourcing is agreed and it becomes part of the programme. Proposed objectives and scope should be set out in reports proposing that resources be allocated to particular schemes or projects and the project's contribution to achieving the overall aims of the City Deal explained. Any changes to these are to be determined by the Executive Board.
    (h) Project Managers and senior officers manage projects within the boundaries of the County Council's financial procedure rules. (The Executive Board's Terms of reference para 5.1 state that 'Cambridgeshire County Council shall

act as the Accountable Body for the Executive Board in respect of financial matters and its financial procedure rules will apply in this context.')[1]

11. Risks are reported to the Executive Board on a six-monthly basis, with exception reporting through the regular Progress Reports where necessary. As risk management is ongoing, this regular oversight is needed. Since issue management and change control tend to be less predictable and more reactive, they need to be capable of being considered at the appropriate point. Regular scheduled reporting to the Executive Board on issue management and change control is therefore not proposed, but issues and/or changes that need to be brought to the Executive Board's attention will be escalated using the regular Progress Reports, accompanied if necessary by a separate paper.

Options

12. The Executive Board is recommended to note and endorse the codification of the principles used in the City Deal for change control and issue management. This will support effective project and programme management across the City Deal.

13. The Executive Board could choose not to endorse change management principles, or could ask for new change management principles to be developed. This report seeks to codify and clarify rather than to change the current approach. It sets out the principles commonly followed for Local Government infrastructure and other project decision-making.

Implications

14. In the writing of this report, taking into account financial, legal, staffing, risk management, equality and diversity, climate change, community safety and any other key issues, the following implications have been considered: -

Financial and other resources

15. The approach to change control and issue management described allows more effective consideration of the impacts of change requests and mitigating actions on finance and other resources, so that decisions can be informed by that consideration and financial and other resources can be managed robustly.

Risk Management

16. Clear principles for change control and issue management would align effectively with the adopted Risk Management Framework, with those processes being inherently linked as demonstrated in Figure 1.

Consultation responses and Communication

17. The proposal is the result of discussion with senior officers from across the City Deal partnership, who have recognised the beneficial effect that codifying these principles would have on control across the programme.

Background Papers

[1] Cambridgeshire County Council Scheme of Financial Management can be accessed at the following link: http://www.cambridgeshire.gov.uk/info/20050/council_structure/288/councils_constitution ('Part 4 - Rules of Procedure', section 4.6)

Greater Cambridge City Deal Risk Management Framework:
http://scambs.moderngov.co.uk/documents/s97513/Risk%20Management%20Framework%20-%20appendix.pdf

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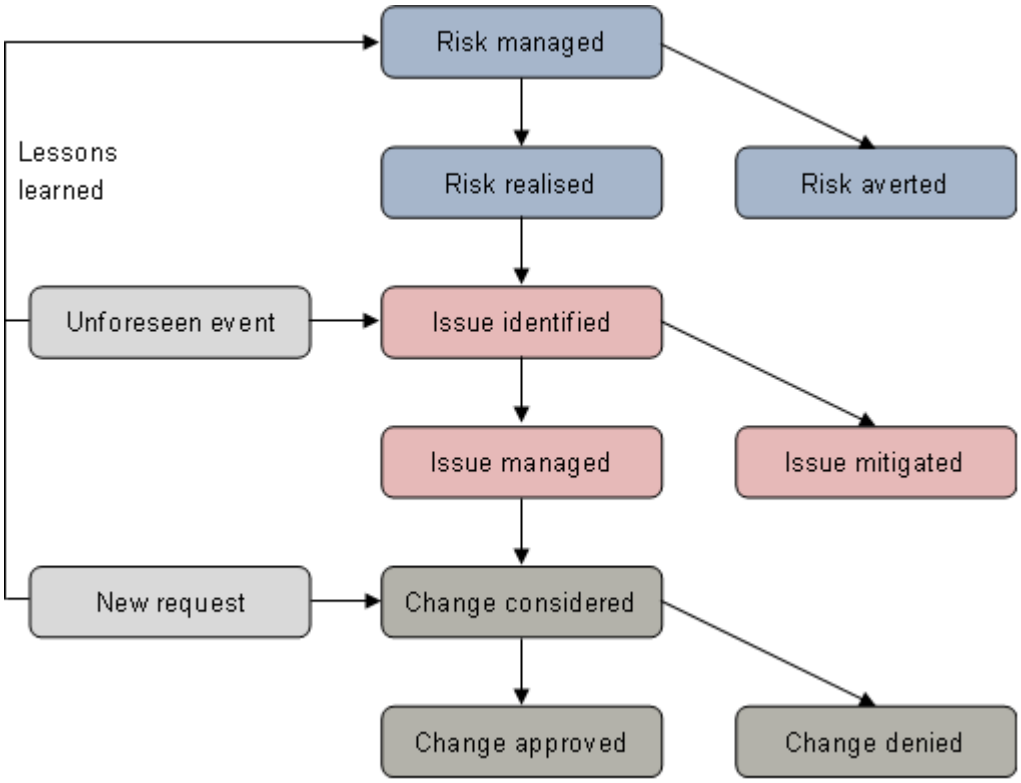
Appendix 1: High-level illustration of links between risk management, issue management and change control



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Greater Cambridge City Deal Executive Board

25 January 2017 – City Deal progress report

Workstream	Update	Upcoming milestones
INFRASTRUCTURE PROGRAMME Create and deliver an infrastructure investment programme that draws together national and local funding streams to invest in infrastructure that will drive economic growth in the area.		
A1307 corridor to include bus priority / A1307 additional Park & Ride Achieve faster and more reliable bus journey times between Haverhill, Cambridge and key areas in between, through bus priority at key congestion points on the A1307 and provision of an outer Park & Ride site on the corridor.	• Work is continuing to develop a preferred option, drawing upon the public consultation that ended in August, for recommendation to the Executive Board.	• 8 March 2017: Executive Board to consider the outcomes of public consultation and select a preferred option.
A428-M11 segregated bus route / A428 corridor Park & Ride / Madingley Road bus priority Ensure that bus journeys between Cambourne and Cambridge are direct and unaffected by congestion by providing high quality bus priority measures between the A428/A1303 junction and Queen's Road, Cambridge and one or more Park & Ride or rural interchange sites on the corridor.	• Following the Executive Board discussion on 13 October, further detailed work is being undertaken to develop a proposal to be brought to the Executive Board ahead of the next round of public consultation.	• 2 February 2017: Next Local Liaison Forum meeting • February/ March 2017: LLF Workshops • 26 July 2017: Executive Board to consider detailed work undertaken since the October Board decision and approve public consultation. • (est.) Autumn 2017: (Pending Executive Board approval) Public consultation on preferred option.
Chisholm Trail cycle links A high quality strategic cycle route from Cambridge Station in the south of the city through to the new [Cambridge North] Station, providing connections between the Science and Business Parks in the north and the commercial hub around Cambridge Station and the Biomedical Campus.	• The planning application for the Chisholm Trail Phase 1 is currently being considered and will be determined in March 2017. • The Executive Board on 10 November approved construction of phase one of the scheme, subject to gaining planning permission.	• January 2017: Work towards finalisation of land agreements. • End of January 2017: Submit application to Secretary of State for Commons consent, work towards finalisation of land agreements and appoint contractor. • February 2017: Cambridgeshire County Council Planning Committee due to

		determine the Chesterton-Abbey Bridge application. • March 2017: Cambridge Fringes Joint Development Control Committee due to determine the cycle links application.
City Access Improve the reliability of, and capacity for public transport, cycling and walking movements in the city centre through a variety of potential measures to relieve congestion and manage the city's transport network.	• Public engagement on the proposed access and congestion package closed on 10 October, with over 10,000 responses received.	• To be determined at this meeting.
Cross-city cycle improvements and A10 Cycle scheme Facilitate continued growth and an increased proportion of cycling trips in Cambridge, lifting cycling levels to around 40% by enhancing the connectivity, accessibility and safety of the cycling network.	• Construction is complete on phase 1 of the Arbury Road scheme. • Detailed development is progressing on the other four schemes, for construction beginning in 2017. • The Hills Road/Long Road and Links to North Cambridge station schemes are due to commence in February/March 2017.	• 2017: Construction of the remaining schemes. • Mid-February 2017: Construction on the Frog End to Melbourn cycleway is due to be completed. • 8 March 2017: Executive Board due to determine Traffic Regulation Orders.
Histon Road bus priority / Milton Road bus priority Ensure that bus journeys along Histon and Milton Roads are direct and unaffected by congestion through the provision of high quality on-line bus priority measures between the Histon and Milton Interchanges and Cambridge city centre.	• Detailed work is being undertaken on the preferred measures in preparation for public consultation, working with Local Liaison Forums and including engaging with stakeholders. • Workshops are taking place to inform the public consultation.	• End January 2017: Workshop process to be completed. • 8 March 2017: Executive Board to consider the outcomes from design workshops and determine a response to Local Liaison Forum resolutions on project design principles for Milton Road and set delivery priorities for both Milton Road and Histon Road projects. • July 2017: Executive Board to consider detailed design for statutory consultation. • July 2017: Executive Board to consider Histon Road workshop outcomes and determine a response to Local Liaison

		Forum resolutions on design principles.
Tranche 2 programme development Develop a prioritised programme of infrastructure investments, informed by an analysis of their anticipated economic impacts, to be delivered during the tranche 2 period (2020/21-2024/25).	• The Executive Board on 8 December agreed to next steps on the tranche 2 programme.	• February/March: Workshops on prioritisation criteria and long listing.
OTHER WORKSTREAMS		
Communications Communicate the vision and aims of the City Deal to a range of audiences	• The public communications survey (December 2016) saw 155 responses received – feedback will be used to inform the communications delivery plan in 2017/18. • A part-time (0.4 FTE) digital media officer has been recruited jointly with Cambridge City Council to provide some in-house multi-media capacity, including graphics/video.	• January: Improved public questions and answers process for public meetings introduced, including publication of questions and agreed written responses following meetings. • February: Refreshed communications strategy and stakeholder engagement plan, and submission for the 2017/18 budget.
Economic development and promotion Enhance the alignment of public and private sector partners in Greater Cambridge to enhance the attractiveness and promotion of the Greater Cambridge economy to high-value investors around the world, and align appropriate activities that support existing businesses to develop.	• The Cambridge Promotion Agency has responded to 125 enquiries in just over a year. Over $10M has been invested following CPA actions. It is progressing with a 'press office' function. Currently working on three >£M investment leads, potentially >200 jobs.	
Finance Manage and monitor the delivery of the infrastructure investment programme and relevant City Deal-related expenditure, and bring together appropriate local funding streams to complement and enhance the delivery of City Deal objectives.	• The Executive Board on 10 November adopted a City Deal Financial Strategy. • The Local Government finance settlement was published in December. This will reduce New Homes Bonus payments to Local Authorities going forward, a contingency the City Deal has planned for.	• 8 March 2017: Executive Board to consider annual budget for the City Deal.
Governance	• All Councils have now agreed the proposed	• Work with Combined Authority on

Create a governance arrangement for joint decision making between the local Councils that provides a coordinated approach to the overall strategic vision, including exploring the creation of a Combined Authority to allow the Councils to collaborate more closely to support economic development.	Devolution Deal for Cambridgeshire and Peterborough, with a Combined Authority to be established. • The establishment of a Combined Authority for Cambridgeshire and Peterborough means that a Combined Authority for Greater Cambridge cannot be created.	potential for joint working, particularly in the context of developing City Deal tranche 2 projects (pending Board decision)
Housing Explore the creation of a joint venture to drive quicker delivery of 2,000 of the affordable new homes envisaged in the draft Local Plans, potentially drawing in land holdings from the partners and external investment to deliver more affordable housing, and deliver 1,000 extra new homes on rural exception sites.	• The Greater Cambridge Housing Development Agency (HDA) has completed 63 new homes in 2016/17 with a further 157 due to be completed by the end of March 2017. • The HDA Management Board has agreed the SCDC self-build vanguard will be managed through the HDA.	• March 2017: Councils expected to consider proposal for future operating model for the Housing Development Agency.
Payment-by-results mechanism Implement a payment-by-results mechanism where Greater Cambridge is rewarded for prioritising and investing in projects that deliver the greatest economic impact over 15 years, commencing in 2015-16.	• Now that the independent economic assessment panel has been procured on behalf of Greater Cambridge and several other Localities, inception work has begun with the panel. • A plan for specific timeframes is being developed, and will be reported back to the Board when available.	• Work with the panel to develop the generic and local evaluation frameworks.
Skills Create a locally responsive skills system that maximises the impact of public investment, forges stronger links between employers and skills providers, and drives growth across Greater Cambridge, including delivering 420 additional apprenticeships in growth sectors over five years.	• 'Form the Future' is reporting good progress against the KPIs in the contract for the City Deal Skills Service. • The Executive Board on 10 November agreed (among other things) to: o Extend Form the Future's contract for a further 12 months to August 2018 o Set aside £160,000 for the 2017/18 academic year and assume a continuation of funding for a brokerage	• Working with schools to develop careers advice and engagement capacity. • Working with Cambridge Regional College to develop employer outreach.

	service in 2018/19 at approximately the same funding level. ○ Review the focus and targets for the period 2017/18 and begin contract negotiations along these lines. ○ Set aside £35,000 for January-December 2017 and assume a continuation of this into 2018 to develop Career Champions in schools.	
Smart Cambridge Explore, in partnership with academic and business expertise, technological opportunities to complement the aims of the infrastructure investment programme and improve the functioning of the Greater Cambridge economy, finding smart solutions to a series of issues constraining the economic growth potential of the area and positioning the area as a Smart Cities leader.	• The City Management Platform workstreams are ongoing, including network and sensor deployment, data hub and associated tools/website and "beta" version of a new transport planning app. All workstreams are on track. • Intelligent Mobility workstreams relating to Integrated and On-line Transport Ticket purchase and a feasibility study for trialling autonomous vehicles on the busway are both underway and on track. • A collaborative funding bid was submitted in November to the CCAV (Centre for Connected Autonomous Vehicles) Competition overseen by Innovate UK. The outcome is expected in late February/early March.	• End February 2017: Integrated ticketing and busway autonomous vehicles feasibility reports due for completion. • End March 2017: Completion of Phase 1 City Management Platform (data hub, sensor and network deployment). "Beta" version of app due for release in late Spring 2017.
Strategic planning Underpin and accelerate the delivery of the Cambridge City and South Cambridgeshire Local Plans, including undertaking an early review of the Local Plans beginning in 2019 to take into account the anticipated changed infrastructure landscape, and work towards developing a combined Local Plan	• Hearings were held between June and September 2016 relating to Cambridge Local Plan-specific issues. • South Cambridgeshire-specific hearings were held in November and December 2016 relating to: ○ Climate change policies; ○ Promoting successful communities policies (these hearings considered the	• January-March 2017: Further South Cambridgeshire-specific hearings to be held, relating to: ○ Delivering high quality places policies (policies on the design of new developments and public art); ○ Protecting and enhancing the natural and historic environment policies; and

that includes other relevant economic levers.	policies for the provision and protection of services and facilities, and the environmental health policies); and • Delivering high quality homes policies (these hearings considered the housing allocations at villages and housing policies).	○ Building a strong and competitive economy policies (policies for employment and retail proposals and allocations, including the modification to allocate land south of Cambridge Biomedical Campus). • Details of the remaining South Cambridgeshire-specific hearings and joint Cambridge/South Cambridgeshire sessions to take place in 2017 are to be confirmed by the Inspectors.

GREATER CAMBRIDGE CITY DEAL

Securing future prosperity

Report To:	Greater Cambridge City Deal Executive Board	25th January 2017
Lead Officer:	Chris Malyon, Chief Finance Officer Cambridgeshire County Council	

Greater Cambridge City Deal Financial Monitoring

1. Purpose

1.1 The purpose of this report is to provide the Joint Assembly/Executive Board with the financial monitoring position for the period ending 31 December 2016.

2. Recommendations

2.1 It is recommended that the Joint Assembly/Executive Board note the financial position as at 31 December 2016.

3. Reasons for Recommendations

3.1 The Joint Assembly/Executive Board will be receiving regular financial monitoring reports throughout the financial year that set out expenditure against budget profiles.

4. Financial Position for the period ending 31 December 2016

4.1 Programme

4.1.1 Attached as an Appendix to this report are the programme costs incurred to the end of December 2016.

4.1.2 A summary of the expenditure as at the end of December against the profiled budget for the period is set out in the table below. The forecast variance relates to an in year underspend due to profiling and does not impact on the total cost of the scheme:-

Project Description	Total Budget £'000	2016-17 Budget £'000	Expenditure to date £'000	Forecast Spend - Outturn £'000	Forecast Variance – Outturn £'000
Histon Road Bus Priority	4,280	280	116	280	0
Milton Road Bus Priority	23,040	297	150	297	0
Chisholm Trail	8,400	1,040	349	580	-460
Cambourne to Cambridge / A428 Corridor	59,040	500	738	900	+400
Programme management & Early	10,450	1,940	460	500	-1,440

scheme development					
City Centre Capacity Improvements	3,000	300	414	450	+150
A1307 Bus Priority	39,000	500	61	250	-250
Cross-City Cycle Improvements	8,000	900	412	700	-200
Western Orbital	5,900	600	308	400	-200
A10 North Study	2,600	500	28	250	-250
A10 cycle route (Shepreth to Melbourn)	550	550	106	550	0
Total	**164,260**	**7,407**	**3,139**	**5,157**	**-2,250**

4.1.3 Histon Road – Bus Priority

Revised date to review scheme design is now set for 8th March 2017 Executive Board. The current delivery plans assume two further rounds of consultation in late 2017 and early 2018; public consultation on the detailed designs followed by a statutory consultation on draft traffic regulation orders. Forecast spend for 2016/2017 remains on track to achieve the annual out turn budget.

4.1.4 Milton Road – Bus Priority

Revised date to review scheme design is now set for 8th March 2017 Executive Board. The current delivery plans assume two further rounds of consultation in late 2017 and early 2018; public consultation on the detailed designs followed by a statutory consultation on draft traffic regulation orders. Forecast spend for 2016/2017 remains on track to achieve the annual out turn budget.

4.1.5 Chisholm Trail:

The forecast spend for the 2016/2017 has been revised to £580,000. The project section between Cambridge North station and Coldhams Lane has attracted considerable opposition and challenges introducing delays to planning application submission to the JDCC (Joint Development Control Committee) and hence delayed further contract work. Phase 1 Chisholm Trail is going before Joint Development Control Committee (JDCC) date of 15 March 2017.

There are also ongoing land negotiations underway with Network Rail along the southern section of The Chisholm Trail and with the two development sites Ridgeons, Cromwell Road and the City Council Depot. These still offer some uncertainties as to how the trail will be routed through the new developments and the developers' timescales. It is now not expected to submit a planning application for this particular phase of works until later in 2017.

4.1.6 Cambourne to Cambridge / A428 Corridor

The project outturn costs have been increased. The project is still within early design stages to establish an approved route alignment. A number of iterations and additional pieces of work have taken place over the last quarter including land surveys, further tests on a route alignment and preferred sites for Park and Ride, all adding to an increase in design time and cost. This is to be expected with a project of

this magnitudes and sensitive. There is likely to be an upward trend in spend as the project continues to evolve over the coming year and is in line with City Deal Executive Board key decision of 13th October.

4.1.7 Programme management & early scheme development

The Early Scheme Development preparation work is not expected to achieve the forecast outturn cost and a revised figure of £500k is recommended. Initial resources for work on the prioritisation of Tranche 2 schemes have been allocated, and are accounted for in this revised figure.

4.1.8 City Centre Capacity

Priority continues to further development the 8 key objectives. The validation of modelling and integration of output data on other major works continues to take a high priority. There were additional costs incurred over the last quarter primarily on further design iterations and modelling validation tests.
There is projected uplift in forecast spend for 2016/2017 due to additional work undertaken on modelling data.

4.1.9 A1307 Bus Priority

Further resources have now been allocated to develop the project and to mobilise a project team. The scheme remains on programme for delivery beyond 2020. With the new project team now in place it is expected to return to profile spend during the course of 2017.

4.1.10 Cross-City Cycle Improvements

Although spend is currently ahead of profile, the projected out-turn for the year is only expected to be £700,000 and thus the forecast spend for 2016/2017 is not now expected to achieve the original annual out turn budget.

Detailed design is progressing on all five of these schemes. Some further localised consultations and traffic regulation orders are required on some scheme elements, whereas other schemes are due to commence on site early in 2017, though a little later than first expected due to prolonged discussions around traffic management arrangements.

Site investigation work such as trial holes and vegetation trimming has been taking place, and some works to divert utilities will be commencing soon.

4.1.11 Western Orbital

Executive Board have reviewed the outline business case and refined the project to align more closely with Highways England Proposals for the M11 and junction improvements. The scheme has therefore been reviewed and design time reduced resulting in a reduction in outturn costs in 2016/2017.

4.1.12 A10 North Study Tranche 2

Current spend profiles are below forecast spend and are not now expected to fully achieve outturn costs. There are however expected costs for the development of modelling during the next quarter.

4.1.13 A10 cycle route (Shepreth to Melbourn)

On 9th June the City Deal Board approved expenditure of £550,000 for the A10 cycle route (Shepreth to Melbourn).
Work on site has now commenced with completion by March 2017.

4.2 Operations

4.2.1 This report includes the carry forward of funding for Skills (£59k) and Smart Cambridge (£20k), from 2015/16 underspends.

4.2.2 Any underspend at year end will be considered as part of an outturn report in order to determine whether the resources not utilised during the period are required in 17/18.

4.2.3 A decision has been made under powers delegated to the section 151 officer and in consultation with all Executive Board members to bring in some interim resource to provide additional leadership and strategic capability. The City Deal needs this extra capacity in the first half of this year to oversee the continued delivery of its ambitious and growing portfolio of work, ensure there is sufficient resource, capacity and the right organisational model as the Programme moves to its delivery phase and make the most of the opportunities the combination of the City Deal and the Combined Authority and Devolution Deal provide for our area.

Following the consultation with all Members of the City Deal Board and with the Local Enterprise partnership, the Chief Executives of the 3 City Deal Local Partner authorities have secured the services of Rachel Stopard as an interim City Deal Chief Executive for a six to nine month period. The cost of the appointment for 2016/17 is £63k. The current financial forecast for the Central Coordination and Strategic Communication functions for this year has sufficient capacity to fund this expenditure without requesting any additional budgetary provision from the Board for the current year. The financial implications associated with this assignment for 2017/18 will be included within the 2017/18 Budget Report that will be considered by the Board in March.

4.2.4 The actual expenditure incurred as at the end of December is as follows:-

Activity	**Budget £000**	**Budget to date £000**	**Actual to date £000**	**Forecast Out-turn £000**	**Forecast Variance £000**
Programme Central Co-Ordination Function	268.5	201.4	148.7	307.4	38.9
Strategic Communications	137.7	103.3	57.7	92.1	-45.6
Skills	190.0	142.5	140.0	187.5	-2.5
Economic Assessment	10.0	0.0	0.0	10.0	0.0
Smart Cambridge	220.0	28.0	27.9	220.0	0.0
Cambridge Promotions Agency	90.0	90.0	90.0	90.0	0.0
Housing	200.0	150.0	150.0	200.0	0.0
Affordable Housing	50.0	0.0	0.0	50.0	0.0
Intelligent Mobility	200.0	0.0	0.0	200.0	0.0
Total	**1,366.2**	**715.2**	**614.4**	**1,357.0**	**-9.2**

5. Implications

5.1 Financial and other resources
The outcome of any delays in incurring expenditure for which budgetary provision has been made in 2016/17 will be dealt with as part of the outturn report.

5.2 Risk Management
There are no implications that directly result from this report.

6. Background Papers

a) Capital Programme report at January Joint Assembly meeting
b) Partnership Budget report at March Joint Assembly meeting

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GREATER CAMBRIDGE CITY DEAL

Securing future prosperity

Project Description	Works Budget	Spend	Expenditure (Cumulative) Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Out-turn
City Deal - Histon Road Bus Priority	**280,000**	Profile	7,000	29,000	54,000	75,000	100,000	125,000	150,000	175,000	200,000	225,000	250,000	280,000	280,000
		Actual	7,351	30,328	68,476	71,524	102,505	106,042	108,507	116,035	116,035				116,035
City Deal - Milton Road Bus Priority	**297,000**	Profile	7,000	12,000	48,000	70,000	100,000	130,000	160,000	190,000	210,000	235,000	260,000	297,000	297,000
		Actual	7,287	21,546	57,935	61,311	79,950	84,776	135,940	147,828	147,828				147,828
City Deal - Chisholm Trail	**1,040,000**	Profile	25,000	30,000	60,000	90,000	120,000	250,000	290,000	320,000	350,000	400,000	500,000	580,000	580,000
		Actual	47,812	98,874	116,760	165,565	219,213	258,882	310,973	332,342	348,870				348,870
City Deal - Cambourne to Cambridge / A428 Corridor	**500,000**	Profile	30,000	95,000	120,000	150,000	175,000	200,000	250,000	600,000	700,000	750,000	825,000	900,000	900,000
		Actual	42,043	112,266	102,228	196,247	215,921	461,281	661,219	726,645	737,665				737,665
Programme Management and Early Scheme	**1,940,000**	Profile	5,000	15,000	30,000	50,000	100,000	125,000	150,000	175,000	460,000	460,000	460,000	500,000	500,000
		Actual	4,654	9,215	6,936	23,693	32,592	42,626	76,972	460,200	460,200				460,200
City Deal - City Centre Capacity	**300,000**	Profile	25,000	50,000	75,000	100,000	125,000	150,000	175,000	200,000	400,000	420,000	435,000	450,000	450,000
		Actual	831	59,073	86,463	138,531	145,797	174,562	201,090	321,143	413,520				413,520
City Deal - A1307 Bus Priority	**500,000**	Profile	25,000	50,000	75,000	100,000	125,000	150,000	210,000	230,000	235,000	240,000	245,000	250,000	250,000
		Actual	331	3,830	23,952	58,230	60,340	60,834	60,834	60,834	60,834				60,834
City Deal - Cross City Cycle Improvements	**900,000**	Profile	13,000	20,000	50,000	80,000	120,000	260,000	300,000	350,000	400,000	550,000	625,000	700,000	700,000
		Actual	32,702	70,081	126,231	161,151	230,253	315,876	343,666	404,371	411,946				411,946
City Deal - Western Orbital & M11 Jct 11 Bus Slip Rd	**600,000**	Profile	50,000	100,000	150,000	200,000	250,000	300,000	350,000	360,000	370,000	380,000	390,000	400,000	400,000
		Actual	18,965	42,341	39,146	71,382	83,126	135,685	213,115	299,535	308,253				308,253
A10 North Study (Tranche 2)	**500,000**	Profile	25,000	50,000	75,000	100,000	125,000	150,000	210,000	220,000	230,000	235,000	240,000	250,000	250,000
		Actual	0	0	12,000	17,168	22,814	26,224	26,224	27,633	27,633				27,633
A10 Frog End to Melbourn	**550,000**	Profile	0	0	5,000	10,000	20,000	30,000	40,000	160,000	280,000	400,000	530,000	550,000	550,000
		Actual	0	0	4,820	11,996	20,802	34,811	84,764	100,277	106,431				106,431
OVERALL TOTAL	**7,407,000**	Profile	**212,000**	**451,000**	**742,000**	**1,025,000**	**1,360,000**	**1,870,000**	**2,285,000**	**2,980,000**	**3,835,000**	**4,295,000**	**4,760,000**	**5,157,000**	**5,157,000**
		Actual	**161,976**	**447,554**	**644,947**	**976,797**	**1,213,314**	**1,701,600**	**2,223,303**	**2,996,845**	**3,139,214**	**0**	**0**	**0**	**3,139,214**