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# OP12 - USER-CENTRIC TRAVEL DOCUMENT

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# APPLICATION CONTENTS

# Otterpool Park Future Mobility: User-Centric Travel

Otterpool Park LLP

70070672

September 2020

Future Mobility

# Otterpool Park Future Mobility: User-Centric Travel

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September 2020

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Future Mobility

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|---|---|---|---|
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# Contents

# 1 Introduction

# Introduction

## Report Context

This report seeks to outline the people-centric assessment to support the future mobility strategy at Otterpool Park. This builds upon the Mobility Vision document which sets out the mobility principles for how the scheme design could achieve a net zero carbon vision.

It is essential the scheme design and assessment recognises the rapidly developing future mobility policy context at all levels of government.

The user-centric report outlines the benefits and linkages between a traditional transport planning approach and the future mobility thinking deployed to ensure the full potential of a low carbon vision is achieved.

The approach is rooted in developing a robust scheme design from the start, whilst supporting the integration of ambitious, innovative and creative solutions to modern day country-side living. Initially the focus of the user-centric is on residential users but it is recommended this is extended at a later date to cover all site-users (in line with greater detail on the site's commercial occupiers).

A Monitoring and Evaluation Framework covering pre- and post-occupation also supplements this document and will be at the core of a successful transport strategy.

## The Vision

The vision for Otterpool Park is outlined as a mixed-use development

> *"enabling people to live affordable, happy and healthy lives in high-quality homes with social infrastructure that [...] incorporates ultra-fast fibre to all the premises and along with new technology will follow the principles of reduce, re-use and recycle at every level."*

This vision also encompasses an all-inclusive way of living, grounded in net zero carbon principles. In practice, this entails an integrated approach across housing design, placemaking, energy and transport strategies.

The new Transport strategy will facilitate the delivery of the Otterpool Park Vision, and will continue to be rooted in supporting low car ownership and excellent provision of sustainable transport alternatives provisioned throughout the scheme. The Transport strategy will extend to include:

- Building in flexibility within scheme design and infrastructure proposals
- A user-centric approach to ensure designs are tailored to the needs of future residents
- Early engagement with commercial partners to inform design proposals

# Policy Context

## National Context

The Government has recently published their approach to decarbonising transport, as a prelude to the Transport Decarbonisation Plan, which sets out the overarching challenge and the roadmap to achieving 'net zero' greenhouse gas (GHG) emissions by 2050. The Government will publish the final plan in Autumn 2020. The approach paper sets out emissions, by mode of transport, for movement of people and goods and sets out six strategic priorities. These priorities have been identified to deliver a net zero transport system:

1. Accelerating modal shift to public and active transport
2. Decarbonisation of road vehicles
3. Decarbonising how we get our goods
4. Place-based solutions
5. UK as a hub for green transport technology and innovation
6. Reducing carbon in a global economy

Particularly relevant for the Otterpool development is the promotion of 'place-based solutions' which acknowledges that different areas need different combinations of solutions to reduce emissions. Consequently it is appropriate to take a persona-led approach, recognising that for consumers, a wide range of different travel options is necessary to meet their needs and improve mobility. The plan highlights that methodologies informed by behavioural science to encourage people to make more environmentally friendly choices is key.

In 2019, the Government published the Future of Mobility: Urban Strategy, and highlighted that the wave of change in transport technologies and business models is creating an opportunity to support the UK's ambitions for decarbonisation and net zero. New types of travel and new business models, enabled by data and connectivity, automation and electrification are starting to transform how people and goods move. Many of these new forms of mobility are user-centric in their design and service offering, aiming to meet the needs of customers and subsequently increasing the range of different travel solutions available for implementation.

## Regional Context

At the regional level, the TfSE Draft Transport Strategy similarly supports a sustainable future, with a mission to provide clean, safe, seamless transport while protecting the environment. The TfSE Transport Strategy acknowledges that the future is uncertain, however the policy context encompasses future mobility and planning for low carbon community, by encouraging the thinking towards designing for people and places, rather than vehicles.

## Local Context

Within Kent, the Local Transport Plan 4: Delivering Growth without Gridlock 2016-2031 identifies the transport priorities for the borough, and sets out the key policies and funding streams for delivering strategic outcomes. This places particular importance on promoting sustainable growth and securing the required transport infrastructure to support it.

Kent County Council are also exploring new mobility such as through potential trials of e-scooters, backed by the Government's announcement to support alternatives to private car in a post Covid-19 world.

Against this backdrop, the supportive national and regional policy context lends itself to more ambitious developments, which seek to facilitate healthy lives.

# User-Centric Precedent

## The Traditional Approach

A Transport Assessment (TA) that considers the traditional transport impact of Otterpool Park development across all transport modes is developed to support the scheme proposals. Whilst it covers some progressive measures on top of the traditional approach that aim to facilitate a sustainable and low-carbon development, these are separate to the interventions that will arise from the user-centric analysis.

The TA will provide the evidence base and design provisions to support the first phase of the development (up to 2,500 homes) and the associated critical infrastructure. The traditional approach provides **confidence that the appropriate infrastructure has been future-proofed** should certain demand thresholds be met. Such an approach also provides a **window of opportunity** to design and test a more progressive set of user-centric mobility interventions.

## Calls for User-Centric Planning

The Policy Context, particularly the national Transport Decarbonisation Plan and TfSE Draft Transport Strategy, highlights that there are increasing calls for a move away from planning for vehicles towards planning for people and places. This is echoed by the Healthy Streets Transport Assessment guidance recently issued by Transport for London, whereby the 'Transport Planning for People' chapter asks assessments to include an in-depth analysis of the users of the proposed developments and all the types of travel that can arise (beyond simply peak travel hours).

**An understanding of the needs, wants and experiences of users is crucial** in informing how mobility serves are designed, planned and implemented.

This is particularly important in lieu of the changing nature of the transport sector brought about by the digitisation of society. Progressive mobility interventions brought about by connected and automated technologies, zero emission vehicles, shared service models and new forms of access are disrupting how people, good and services move and have potential to facilitate a shift towards sustainable travel at Otterpool if implemented appropriately.

## Place-based agile solutions

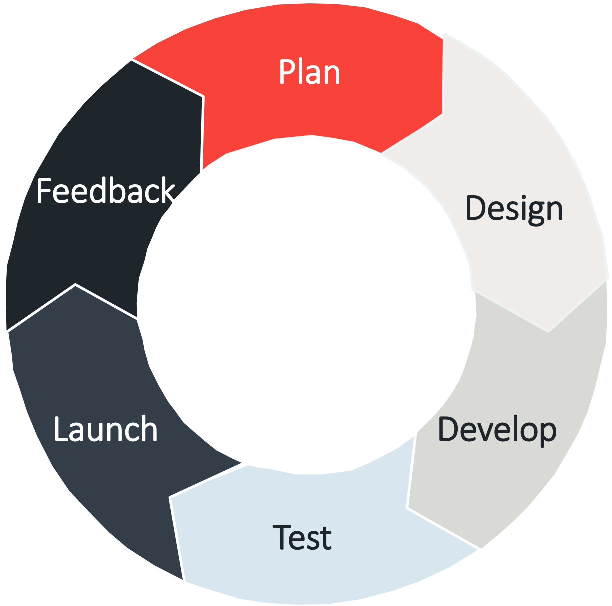
Acknowledging that **different people in different places require different combinations of solutions** is imperative to customer centric planning. However in order to truly put users at the centre of planning, active monitoring and evaluation is required so to ensure agile service implementation and scheme resilience.

Taking inspiration from other sectors, **interventions should be agile** in that they enable the widest consideration of opportunities and potential in a collaborative and iterative manner.

A waterfall approach is typically less flexible and entails a linear process of tasks which within traditional planning documentation can lead to limited flexibility within the downstream scheme delivery.

Conversely, digital and retail industries place user satisfaction at the heart of their solutions. Driven by innovation and identifying potential demand within the market, an agile way of working is employed.

The user-centric approach therefore adopts a similar approach to scoping the potential mobility needs for Otterpool Park and an iterative refinement of these solutions.



# Vision and Validate

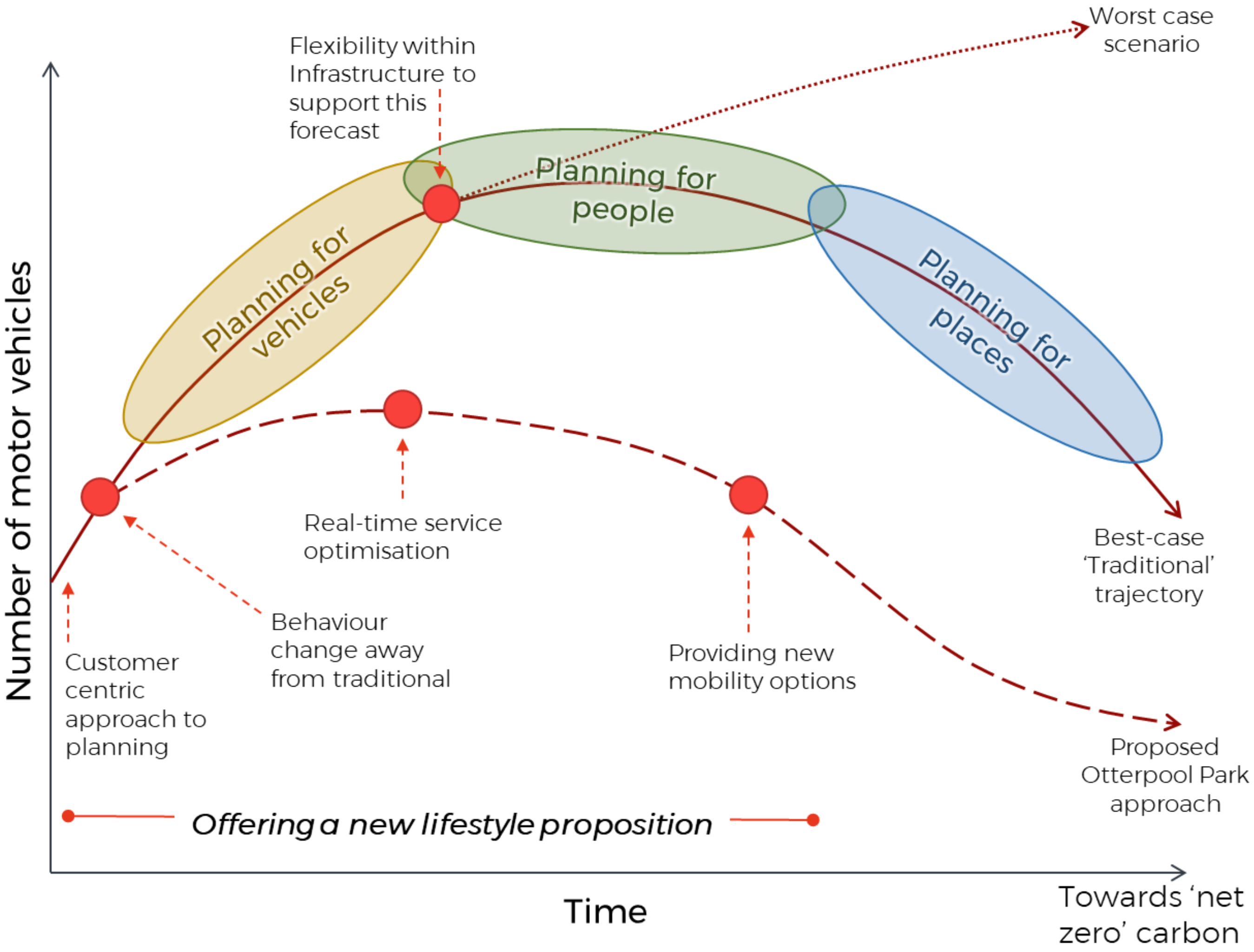
## The Vision and Validate Opportunity

The historical approach to transport planning is rooted in **planning for vehicles** and then supplemented by sustainable transport interventions. This can lead to the early and potential over-provision of significant transport infrastructure that could enable a future of private car ownership.

A user-centric approach that considers the mobility needs of future residents and visitors to Otterpool Park allows a move towards **planning for people.** As noted previously, the robust planning of highway infrastructure could still be provisioned for and only triggered by carefully set thresholds for trip generation agreed with the planning and highways officers. The tailored provision of new mobility options seeks to reduce the reliance on the private car.

The validation of lower private car trip rates and sustainable travel choices importantly could be measured early on as a means of justifiably pushing out the point in time that the highway infrastructure is delivered.

A progressive Vision and Validate strategy ultimately should align with **planning for places** which puts the vision and design of the place ahead of the negative impacts of accommodating dominant private car infrastructure.



# User Personas

The use of user personas in design is associated with enabling a greater understanding of user needs. It allows us to better view the users, their behaviours and to open our eyes to new opportunities. It helps us to generate meaningful solutions that are human-centred rather than technology focused.

Transport for London have in recent years used their Transport Classification of Londoners (TCoL) tool which allows a multi-modal customer segmentation and a high-level understanding of travel choices and motivations for making those decisions. Seven key variables are used to help determine the TCoL segmentation, which ultimately group Londoners into nine high level segments (as outlined below), with 32 lower level segmentations.

| | | |
|---|---|---|
| **City Living**<br>High incomes<br>High PT especially Tube/active travel<br>Average level of change | **Educational Advantage**<br>Well educated, high income<br>High PT/active, low car<br>Higher level of change | **Suburban Moderation**<br>Families with children<br>High car, some bus<br>Average level of change |
| **Affordable Transitions**<br>New jobs & families<br>Low car, high bus, walk, cycle<br>Highest level of change | **Family Challenge**<br>Low income families<br>High bus, average others<br>Higher level of change | **Settled Suburbia**<br>Lower income families<br>High car<br>Below average level of change |
| **Urban Mobility**<br>Young workers, good incomes<br>Low car, high cycle/PT<br>Above average change | **Students & Graduates**<br>Students & young grads<br>Low car, high bus/walk<br>Average level of change | **Detached Retirement**<br>'Empty nest'/retired<br>Very high car<br>Very low levels of change |

In a similar vein, to consider different offers of Otterpool Park there are already personas that have been explored as part of the branding strategy as well as those identified by potential development partners such as SNRG.

To consider the potential future users of Otterpool Park from a mobility perspective, WSP have attributed behavioural insights against the proposed housing tenure types and the Experian Mosaic dataset.

## Experian Mosaic

Experian Mosaic data can be used to understand the different demographic groups that make up localities in the UK.

Experian's consumer classification data provides an understanding of the demographics, lifestyles and behaviour of all different communities across the UK. It divides the UK population into 15 different groups, with information about the dominant characteristics of each group. It can therefore be used to understand the potential interactions of different segments of the population with different methods of transportation and be used as a basis from which  hypothesises can be made about future mobility uptake.

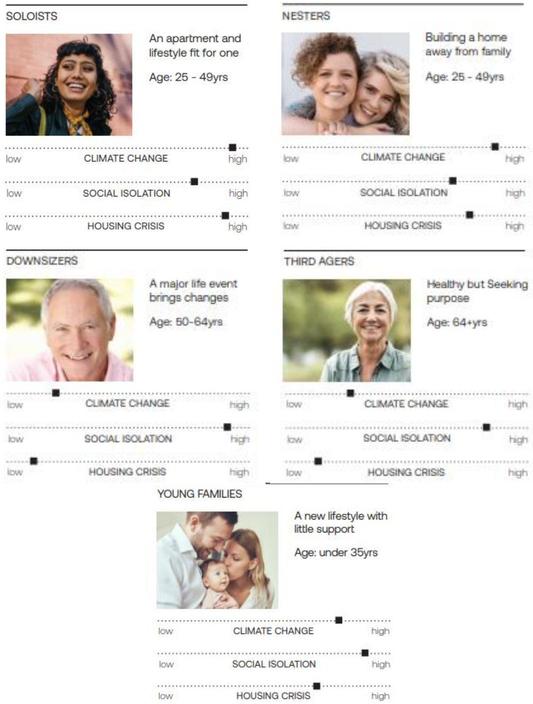
This provides a highly granular evidence base for which to build mobility insights upon, through the joining to extensive survey data.

## Otterpool Park Personas

The Otterpool Park branding strategy identified the following persona groups as representative future site users:

- Existing residents
- New residents
- Existing businesses and local organisations

Further personas work has been developed as part of the private rental residential proposition at Otterpool Park (sourced from SNRG). Within this context, the following future resident persona groups have been identified:



# User Personas

## Personas for Mobility

As illustrated in the table below, the most dominant Mosaic population segments are:

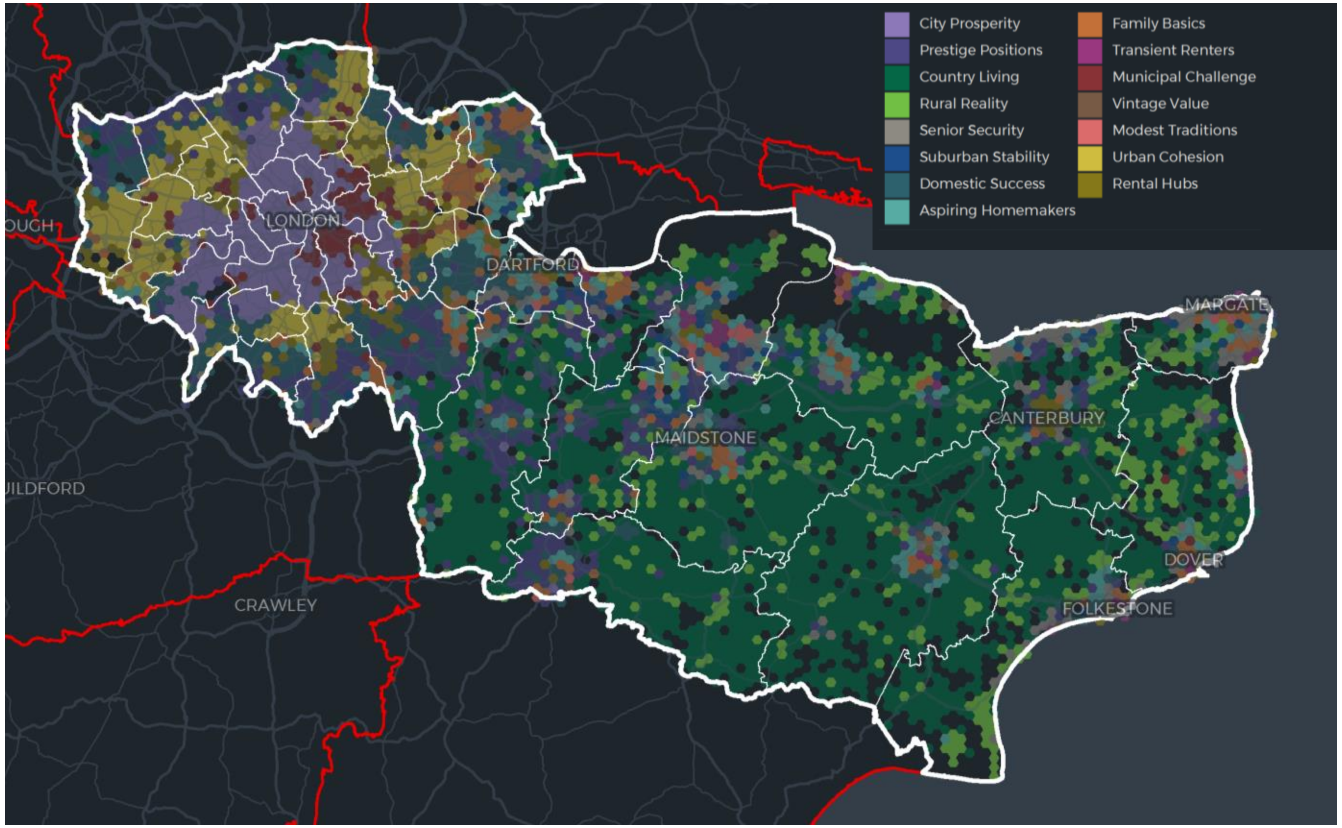
- Aspiring Homemakers (14%)
- Senior Security (11%)
- Domestic Success (10%)
- Family Basics (10%).

The proportion of each of these segments exceeds the national average.

Attaching mobility insights (derived from surveys) to each of these Mosaic segments allows us to consider the relative attractiveness of different mobility interventions (e.g. car clubs, e-bikes, demand responsive bus, measures that support working from home) for different users (e.g. City Prosperity or Suburban Stability).

The vision of Otterpool Park seeks to offer low carbon lifestyles. The acknowledgement that there are different propensities between different population segments suggests there is some flexibility within the market sale tenure to attract and support those segments with the highest potential for adopting low carbon lifestyles.

| | | Kent % | London % | UK % |
|---|---|---|---|---|
| A | City Prosperity | 0% | 27% | 4% |
| B | Prestige Positions | 8% | 4% | 7% |
| C | Country Living | 7% | 0% | 7% |
| D | Rural Reality | 7% | 0% | 7% |
| E | Senior Security | 11% | 2% | 7% |
| F | Suburban Stability | 7% | 1% | 5% |
| G | Domestic Success | 10% | 9% | 9% |
| H | Aspiring Homemakers | 14% | 2% | 10% |
| I | Family Basics | 10% | 4% | 8% |
| J | Transient Renters | 7% | 0% | 6% |
| K | Municipal Challenge | 1% | 16% | 6% |
| L | Vintage Value | 5% | 1% | 5% |
| M | Modest Traditions | 4% | 0% | 5% |
| N | Urban Cohesion | 2% | 19% | 5% |
| O | Rental Hubs | 8% | 15% | 8% |



# 2 User-Centric Methodology

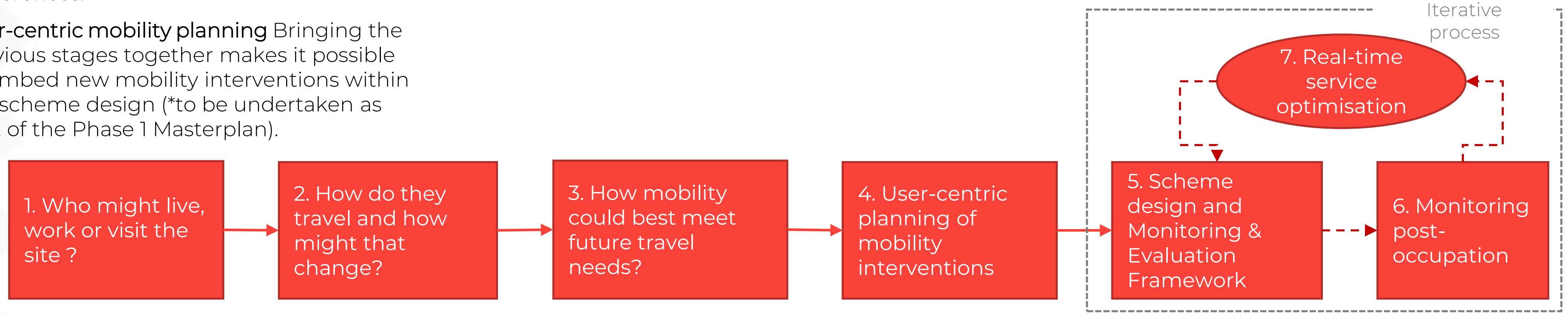
# User-Centric Analysis: Methodology

The user-centric analysis consists of the following steps:

1. **Who might live at Otterpool ?** The starting point is informed by the Housing Strategy and proposed development mix for Otterpool Park. Whilst this captures who future residents might be, the future workers and visitors will be studied at a later stage as the scheme proposals become more fixed.
2. **How do they travel and how might that change?** Existing and future travel habits are captured through the design and dissemination of an extensive questionnaire survey.
3. **How mobility could best meet future travel needs ?** An analysis of which mobility services are suitable for different users, journeys and their resulting mobility preferences.
4. **User-centric mobility planning** Bringing the previous stages together makes it possible to embed new mobility interventions within the scheme design (*to be undertaken as part of the Phase 1 Masterplan).
5. **Scheme Design and Monitoring and Evaluation Framework**
6. **Monitoring Post-occupation**
7. **Real-time service optimisation**

Fundamental to the success of rolling out a progressive user-centric approach will be the need to develop a *monitoring and evaluation framework* that supports a validated learning proposition. Such a framework provides the evidence base to cascade user-centric approach across site-wide masterplan and potentially delay the early provision of unnecessary infrastructure.

The monitoring and evaluation framework document that adjoins this report outlines what data needs to be captured to measure how users are travelling (or not travelling).




Future Mobility

# Who might live at Otterpool?

## Housing Strategy and Tenure Mix

The draft Housing Strategy and tenure mix are used together with the Experian Mosaic dataset and user surveys to help inform the representative behaviours of future Otterpool Park residents.

The Housing Strategy also provides a reference point for the likely market value of different properties has also been used to link different population segments with different tenure types.

## Tenure Mix

Overall the site is expected to accommodate approximately 8,500 units of which 22% will be affordable and 78% will be for market sale.

The table below outlines the tenure types and gives an example of the different mobility indicators that could be derived from the user-centric analysis.

| Tenure | Type | Flats | | | Houses | | | | Total | Mobility indicators |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 bed | 2 bed | 3 bed | 2 bed | 3 bed | 4 bed | 5+ bed | | |
| Affordable Rent | Affordable | 7% | 16% | | | 39% | 34% | 4% | 8% | For each tenure type, the user-centric analysis will provide indicators on:<br>• Multi-modal transport asset ownership<br>• Expectations on car parking<br>• Key mobility requirements by different journey purpose<br>• Digital alternatives to making journeys<br>• The relative change between pre-Covid-19 and post-Covid-19 trip behaviour<br>• Preferences for freight and delivery services<br>• Individual level trip behaviour |
| Affordable Elderly | Affordable | 100% | | | | | | | 1% | |
| NHS Step Down | Affordable | 100% | | | | | | | 1% | |
| Intermediate Elderly | Intermediate | 100% | | | | | | | 1% | |
| Intermediate Rent | Intermediate | 23% | 17% | 13% | 7% | 37% | 3% | | 4% | |
| Shared Ownership | Intermediate | 19% | 13% | | 8% | 30% | 30% | | 4% | |
| First Homes | Intermediate | 17% | 17% | | 4% | 29% | 33% | | 2% | |
| Live / Work | Intermediate | | 70% | | | 15% | 15% | | 1% | |
| Market Elderly | Market | 47% | 23% | | 30% | | | | 4% | |
| CLT / Self Build | Market | | | | 17% | 35% | 40% | 8% | 4% | |
| Sharer Accommodation | Market | 100% | | | | | | | 1% | |
| Build to Rent | Market | 22% | 23% | | 7% | 35% | 10% | 3% | 13% | |
| Market Sale | Market | 5% | 3% | | 24% | 43% | 21% | 4% | 56% | |

# How do they travel and how might that change?

## Aim of the Survey

An online survey of approximately 2,600 respondents was commissioned to inform the planning of transport and mobility services at Otterpool Park. Specifically this sought to investigate how people travel today, how they use digital alternatives and what they value as being important factors that influence their mode choices.

The survey was pushed to an approved survey panel with full representation of the Experian Mosaic profiles across the Kent and London region, which in turn are filtered to those relevant to the Otterpool Park tenure type.

It was made clear to respondents that they should consider their travel behaviours prior to the Covid-19 crisis but equally recognise the 'new normal' of travel behaviour. This was made clear on each individual question.

## Types of Questions

The survey questions were written in a way to allow respondent's data to subsequently be fused to Experian Mosaic data. The question purposes included:

- Qualifying questions to link to Mosaic data
- High-level trip generation outputs
- Mobility & propensity
- Zero carbon lifestyles
- Freight & logistics
- Covid-19 Impacts

| Questions |
|---|
| Q1 - What is your home postcode? |
| Q2 - Which of the following is a general description for your household type? |
| Q3 - How many people are there within the following age groups in your household? |
| Q4 - What is your annual household income? |
| Q5 - Which of the following best describes your property type? |
| Q6 - Which of the following best describes your property ownership? |
| Q7 - How often do you access the internet or other online services? |
| Q8 - What is the postcode of your workplace? (if applicable) |
| Q9 - Before Covid-19, approximately, what distance did you travel to your workplace (one-way)? |
| Q10 - How many of these transport assets does your household own? |
| Q11 - Where do you currently park your vehicle(s) at home? |
| Q12 - Overall how many trips do you (INDIVIDUALLY) take per week for each journey purpose? |
| Q13 - Overall how many trips does your HOUSEHOLD take per week for each journey purpose? |
| Q14 - Before Covid-19, what was your main mode of travel for different journey purposes on a typical weekday (in terms of time spent travelling)? |
| Q15_ - Before Covid-19, please indicate the journey time and duration for your main mode of travel on a typical weekday. |
| Q16 - Please rank your top 5 considerations when choosing transport method for Commuting journeys? |
| Q17 - Please rank your top 5 considerations when choosing transport method for Work-related (not commuting) journeys? |
| Q18 - Please rank your top 5 considerations when choosing transport method for Education-related journeys? |
| Q19 - Please rank your top 5 considerations when choosing transport method for Leisure-related journeys? |
| Q20 - Please rank your top 5 considerations when choosing transport method for Shopping-related journeys? |
| Q21 - Before Covid-19, how frequently did you use the following journey planning websites / phone applications? |
| Q21 - Before Covid-19, How frequently did you use the following journey planning websites / phone applications? |
| Q22 - For the most frequently used application, why do you use this application? |
| Q23 - Before Covid-19, how many times a week would your household typically use a digital alternative to replace a physical journey? |
| Q23 - Before Covid-19, how many times a week would your household typically use a digital alternative to replace a physical journey? |
| Q24 - Before Covid-19, how often did you get the following deliveries? |
| Q25 - Before Covid-19, how often did you receive these deliveries at the following destinations? |
| Q25 - Before Covid-19, how often did you receive these deliveries at the following destinations? |
| Q26 - If you were moving to a new home, and if it saved you money and it gave you increased benefit, how willing would you be to share your energy and mobility data (usage) to your housing provider in the future? |
| Q27 - If it saved you money and gave you increased benefit, would you be open to an "all-in" rental payment that combined home, utility bills and access to vehicles or mobility services? |
| Q28 - If it saved you money, would you be happy if your vehicle was parked in a nearby (i.e. 5 mins away), central, secure and covered location, rather than directly attached to your home? |
| Q29 - Would you be prepared to pay a premium for driveway parking if you moved to a new home? |
| Q30 - When Coronavirus (Covid-19) social distancing measures are lifted in the future, how will your travel behaviour change compared to before Covid-19? |
| Q31 - When Coronavirus (Covid-19) social distancing measures are lifted in the future, how will your online purchasing behaviour (number of deliveries) change compared to before Covid-19? |

# 3 – Initial Survey Findings

# Initial Survey Findings



**Categorising the respondents to match the tenure groups**

In order to make the survey responses applicable to the potential residents of Otterpool Park, the data collected was divided into six groups determined by the following:

- **Age –** identifying residents who may classify as 'elderly' as survey respondents aged 66+;
- **Property type –** differentiating between those living in flats and houses;
- **Property ownership –** differentiating between properties that are owned and rented.

The adjacent figure illustrates which of the six groups each tenure type falls into. This has enabled the analysis in this section and was used to understand the potential within Otterpool park. User responses falling outside of these categories have been excluded and deemed out of scope for the Otterpool Park housing offer.

<table>
<tr><th rowspan="2">Tenure</th><th rowspan="2">Type</th><th colspan="3">Flats</th><th colspan="4">Houses</th></tr>
<tr><th>1 bed</th><th>2 bed</th><th>3 bed</th><th>2 bed</th><th>3 bed</th><th>4 bed</th><th>5+ bed</th></tr>
<tr><td>Affordable Elderly</td><td>Affordable</td><td colspan="3" rowspan="3">Elderly (Flat)<br>**41 respondents**<br>*2% of survey*</td><td colspan="4" rowspan="3">Elderly (House)<br>**256 respondents**<br>*10% of survey*</td></tr>
<tr><td>Intermediate Elderly</td><td>Intermediate</td></tr>
<tr><td>Market Elderly</td><td>Market</td></tr>
<tr><td>Affordable Rent</td><td>Affordable</td><td colspan="3" rowspan="3">Rent (Flat)<br>**598 respondents**<br>*23% of survey*</td><td colspan="4" rowspan="3">Rent (House)<br>**473 respondents**<br>*18% of survey*</td></tr>
<tr><td>NHS Step Down</td><td>Affordable</td></tr>
<tr><td>Intermediate Rent</td><td>Intermediate</td></tr>
<tr><td>Shared Ownership</td><td>Intermediate</td><td colspan="3" rowspan="7">Own (Flat)<br>**249 respondents**<br>*9% of survey*</td><td colspan="4" rowspan="7">Own (House)<br>**1,016 respondents**<br>*39% of survey*</td></tr>
<tr><td>First Homes</td><td>Intermediate</td></tr>
<tr><td>Market Sale</td><td>Market</td></tr>
<tr><td>Sharer Accommodation</td><td>Market</td></tr>
<tr><td>CLT / Self Build</td><td>Market</td></tr>
<tr><td>Build to Rent</td><td>Market</td></tr>
<tr><td>Live / Work</td><td>Intermediate</td></tr>
</table>

# Initial Survey Findings

## Multi-modal transport asset ownership

Our user survey aimed to understand how people travel today, how they use digital alternatives and what they value as being important factors that influence their mode choice.

Household car ownership is unsurprisingly seen to be lowest amongst those living in flats in comparison to those in houses, with those in rental properties characteristic of the lowest levels of car ownership in each of their respective housing categories. On average, 30% of survey respondents do not have a car in their household.

Car ownership is highest amongst respondents who own a house (88%), followed by those residing in an elderly house (81%).

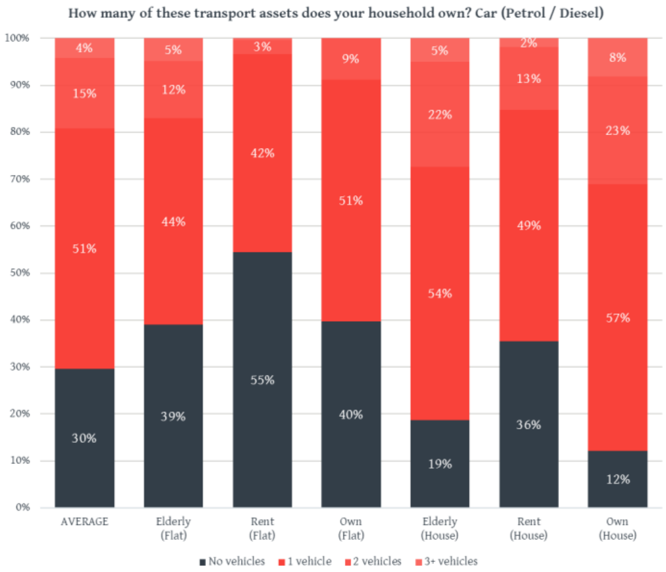
Household bicycle ownership is seen to be low on average (36% of respondents), particularly amongst elderly users (20% of those living in flats; 28% of those living in a house). House owners are seen to have the highest bicycle ownership at 43%, with 18% having one cycle in their household, 12% having two and 13% having three or more.

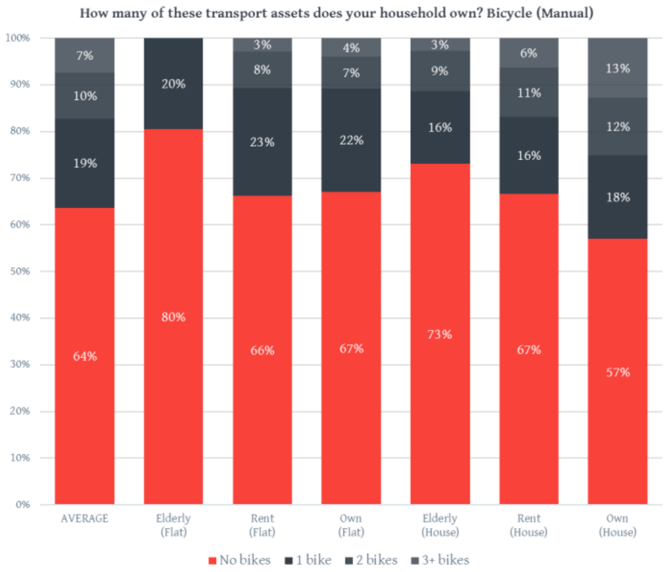
Our survey also asked participants about electric vehicles, vans and e-scooter ownership. This was seen to be minimal across all tenure groups.

Survey respondents ***living in houses*** are **more than 2x as likely** to have at least one car in their household ***than those living in a flat***

*(with the exception of renters, who are 1.5x more likely to have a car in their household if they live in a house)*

Source: CoMoUK Mobility Hub Guidance, 2019




Future Mobility

## Initial Survey Findings

### Expectations on car parking

As seen previously, car ownership amongst survey respondents is an average of 70%, with those living in a flat having lower rates of car ownership than those in houses. Hence, parking preferences are illustrated as a proportion of total survey respondents – including those that do not own a car who are shown as N/A in the adjacent figure.

As a single parking category, '*on the street near property'* is a consistently common place for vehicular parking across all tenure groups.

When comparing on-street to off-street parking, *off-street* parking, comprising private garage, driveway or car park, is seen to be most common parking across all tenure categories with the exception of those in rental properties. Of the 49% of flat renters who have access to a car, 30% currently park on-street, either on the street near the property (27%) or on a neighbouring street (3%). Similarly, 38% of the 68% of house renters who have a household car park on the street near the property (36%) or on a neighbouring street (2%).

Conversely, elderly and owner groups, of both flats and houses – are more inclined to park off-site. By way of comparison, of the 85% elderly living in a house 59% park off street, either in a private garage (12%), a driveway (46%) or a carpark (1%). Similarly, of the 92% house owners who have a household car, 10% park in a private garage, 40% in a driveway, and 3% in a carpark, amounting to 53% or respondents in this living category.

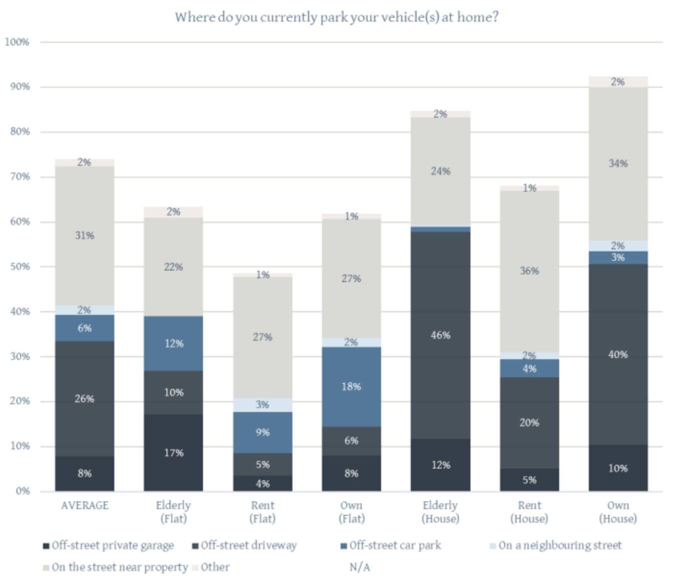
Of those that have access to a household motor vehicle,

**more than 50% of**

**property owners and those living in elderly homes**

– both flats and houses –

park their cars on ***off-street locations***




Of those that have access to a household motor vehicle,

**More than**

**1 in 2 renters**

– of both flats and houses –

park their vehicle on ***on-street locations***

Future Mobility

# Initial Survey Findings

## Key mobility requirements by journey purpose

The survey asked people about their method of travel for different journey purposes. Travel by car was the most commonly cited mode across all journey purposes, namely shopping & personal business (49%), leisure (40%), ‘other’ (36%), commuting (31%) and education (27%).

The use of public transport – comprising bus, train, underground and tram – is most common for commuting trips (50%), work-related trips (49%) and education-related trips (44%). Conversely, for leisure trips, other trips and shopping & personal business trips, respondents were seen to use public transport considerably less – 31%, 28% and 26%, respectively.

Active travel – comprising walking and cycling – is less frequently undertaken for commuting (16%) and work-related trips (12%), but more common for ‘other’ trips, educational trips and shopping & personal business trips. When identifying the opportunity for a shift to more active modes, **10km or less is seen to be optimum distance** for the majority of the population. Five kilometres is recognised as a comfortable 30 minutes cycle for most people, while a 10 kilometre distance could be covered by e-bikes.

Seemingly, when asked what distance participants travel to their work place, the elderly (both living in a flat or a house) are the groups with the most people who travel less than 10km to work, 70% and 74%, respectively. Of all groups, those who own their properties are seen to undertake the lowest levels of active travel. There is still an opportunity to make travel to further distances more sustainable, by implementing interventions such as on-demand transit.

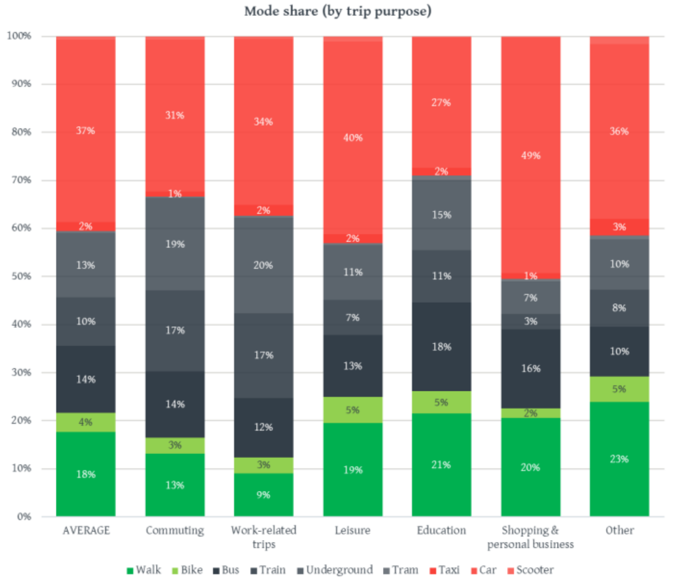
Survey responses show that

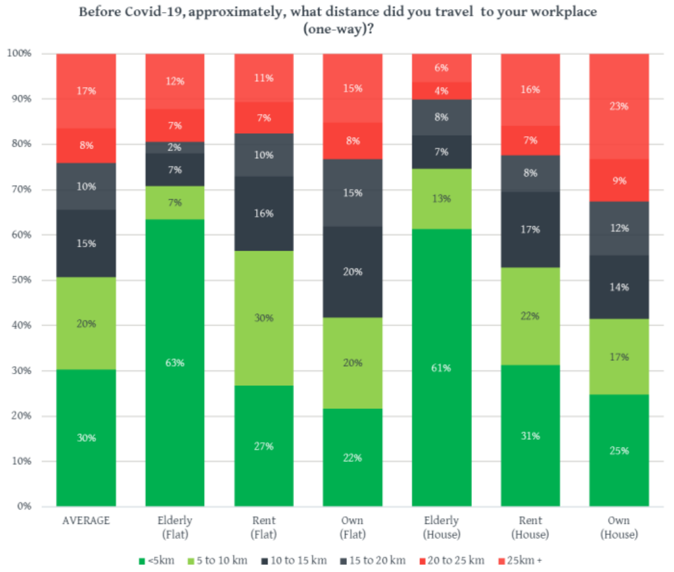
**active travel & public transport**

make up over 50% of trips for all journeys
(59% of trips on average)

On average,
**50% of survey respondents travel 10km** or less to work, each way

**Property owners** – *of both houses and flats* – are seen to commute the furthest, with **more than 58% travelling more than 10km**, each way to work



# Identifying the Otterpool Park opportunity to enable sustainable travel behaviour

Future Mobility

# Initial Survey Findings

## **The relative change between pre-Covid-19 and post-Covid-19 trip behaviour**

The survey considered the potential lasting effects of the Covid-19 crisis, with questions relating to time periods before and personal forecasts for after the government's social distancing measures are lifted.

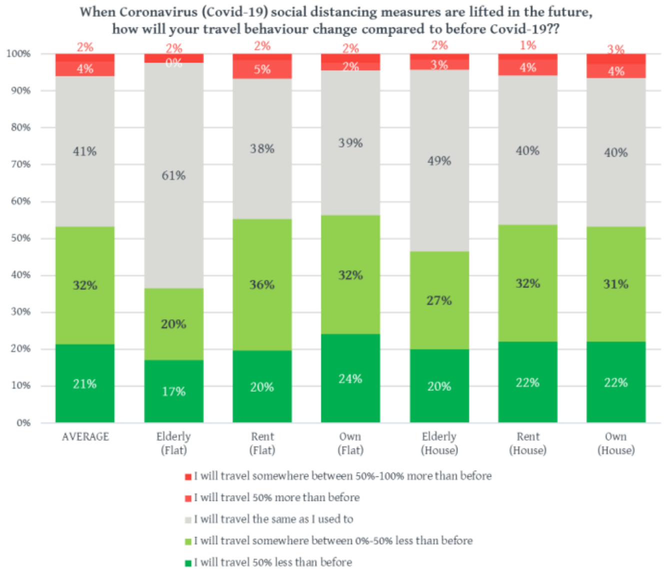
When asked about expected travel behaviour post Covid-19 restrictions, those who rent and own properties showed similar expectations - an average of 54% of respondents foresee an overall reduction in travel, an average of 39% of respondents expect no change in travel behaviour, and only 6% envision an increase in travel.

Those living in elderly homes expect less of a change post- Covid-19, with 61% living in a flat and 49% in a house foreseeing no change in their travel, and 37% living in a flat and 47% in a house expecting to travel less. An increase in travel is even less likely amongst these tenure groups, with an average of 4% envision an increase in travel.

This showcases the potential for less travel across all tenure groups, with the opportunity to reduce travel needs further through the implementation of digital alternatives and more mixed use destinations across the masterplan.

An average of **54% of property renters and owners expect to *travel less*** once Covid-19 restrictions are lifted than they did before the Pandemic

A further **39% expect to have to the *same travel behaviour*** as before Covid-19




Those living in **elderly homes** expect less of a change post- Covid-19, with an average of **55%** **foreseeing no change in travel behaviour**

On average, **only 5% of respondents expect to *travel more*** once Covid-19 restrictions are lifted than they did before the Pandemic

# Initial Survey Findings

## Digital alternatives to making journeys

Digital platforms are increasingly being developed to bring services and opportunities closer to the consumer, reducing the need for physical travel.

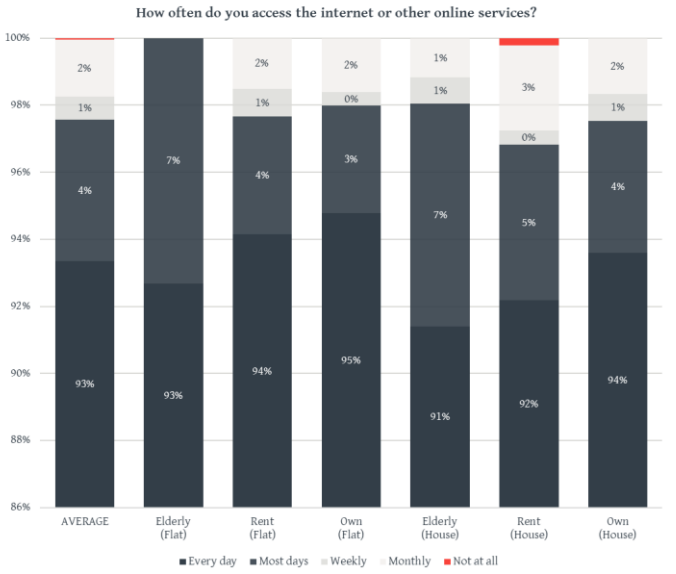
When asked about frequency of access to the internet and other online services, the house rental category was the only to state 'not at all' (2%). Given the high access to the internet across the board, the survey confirms that there is minimal digital discrimination and any further questions relating to digital usage are not based accessibility issues.

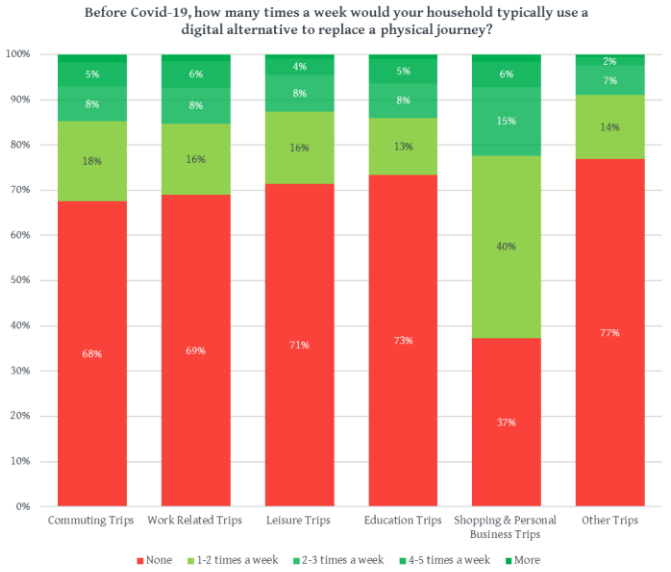
The survey indicates that before Covid-19 shopping and personal business trips are the journey type replaced by digital alternatives the most, with 63% of respondents using apps instead of a physical trip at least once a week. Other journey types are replaced less commonly, but still show some openness to the use of digital alternatives.

Survey respondents were asked to rank the highest reasons for the use of digital mobility applications, for which 44% selected "accurate and real-time information". Other high ranked answers included "suits my regular journey" (42%), "multi-modal" (6%) and "includes Payment"(5%).

Whilst access to online services is widespread, respondents do not commonly replace physical trips with a digital alternative,

with the exception of *shopping & personal business trips*, for which more than **6 out of 10 trips a week are replace by a digital alternative**




"Accurate and real-time information"

was quoted as the main reason for using a **digital mobility apps**

Future Mobility

# Initial Survey Findings

## Preferences for freight and delivery services

Understanding the disposition to delivery services will enable a more efficient freight and logistics strategy.

The survey shows that parcels are the most common delivery type, with 60% receiving a parcel delivery at least once a month. Only 3% of respondent stated they never receive parcel deliveries.

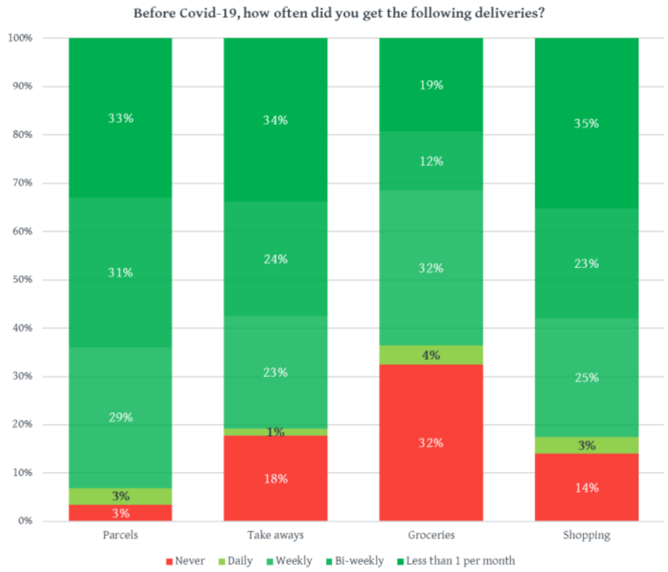
The least received deliveries are groceries (32% of participants never receive them), followed by takeaways (18% null value) and shopping (14%).

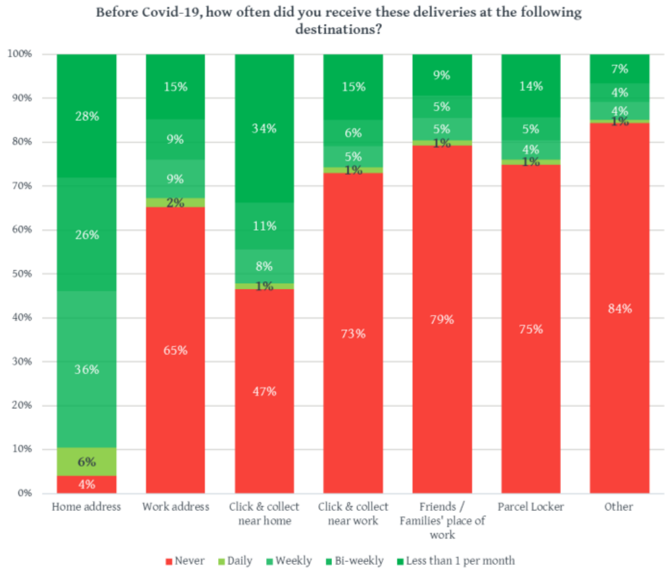
The vast majority of survey respondents (96%) receive their deliveries at a home address, and 42% of these are at least weekly. Other common delivery include Click & Collect points near home (53% of respondents use at least once), work address (35% of respondents use at least once), Click & Collect points near work (27%) and parcel lockers (25%). Click & Collect points and parcel lockers in particular showcase an openness to consolidated delivery initiatives.

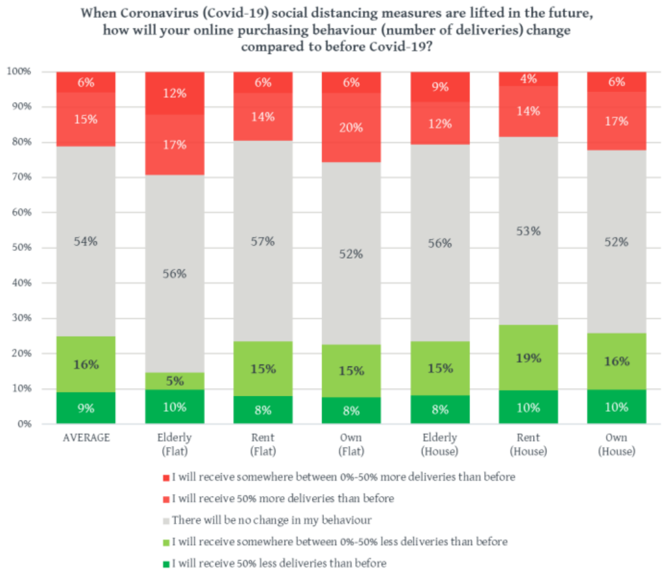
When asked to estimate change in behaviour, respondents across tenure types show similar expectations with an average of 54% predicting no change (ranging from 57% for flat renters to 52% for house owners), an average of 25% predicting a decrease in deliveries (ranging from 15% for elderly in a flat to 29% for house renters), and 15% expecting an increase (ranging from 18% for house renters and 29% for elderly in a flat). It should be noted that a significant increase has been observed from March to September, particularly in parcel and ecommerce deliveries.

**More than 50% survey respondents** expect ***no change*** in their delivery behaviour once Covid-19 restrictions are fully lifted

The largest forecasted change is amongst **elderly living in a flat, 29%** of whom expect ***an increase*** in their deliveries post- Covid-19




Future Mobility

# Initial Survey Findings

## Individual and household level trip behaviour

In order to determine individual and household trip behaviour, survey data was analysed further.

As a starting point, the proposed number of dwellings, 8,709, were applied to the tenure groups to showcase the indicative housing mix. As shown in the adjacent figure, Market Sale, of houses in particular, are the predominant dwelling type expected in Otterpool Park.

To understand the relativity of survey responses to future residents, the indicative housing mix was grouped into the six survey categories, and the average UK occupancy was applied to each dwelling type. Seemingly, the total number expected residents by survey group are shown in the figure in the adjacent column.

As part of the survey, participants were asked about the number of weekly trips made by trip purpose in their household. In applying this survey data to the number of future Otterpool Park residents, we can derive an indicative number of weekly total trips by survey group.

This showcases that commuter trips are the most common trip purpose for renters and property owners, with leisure, and shopping and personal business also presenting high numbers of trips per week.

## *Estimating the number of people based on the tenure mix and survey groups*

### Number of dwellings based on tenure mix

| Tenure | Type | Flats | | | Houses | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 bed | 2 bed | 3 bed | 2 bed | 3 bed | 4 bed | 5+ bed | |
| Affordable Rent | Affordable | 49 | 111 | 0 | 0 | 272 | 237 | 28 | 697 |
| Affordable Elderly | Affordable | 87 | 0 | 0 | 0 | 0 | 0 | 0 | 87 |
| NHS Step Down | Affordable | 87 | 0 | 0 | 0 | 0 | 0 | 0 | 87 |
| Intermediate Elderly | Intermediate | 87 | 0 | 0 | 0 | 0 | 0 | 0 | 87 |
| Intermediate Rent | Intermediate | 80 | 59 | 45 | 24 | 129 | 10 | 0 | 348 |
| Shared Ownership | Intermediate | 66 | 45 | 0 | 28 | 105 | 105 | 0 | 348 |
| First Homes | Intermediate | 30 | 30 | 0 | 7 | 51 | 57 | 0 | 174 |
| Live / Work | Intermediate | 0 | 61 | 0 | 0 | 13 | 13 | 0 | 87 |
| Market Elderly | Market | 164 | 80 | 0 | 105 | 0 | 0 | 0 | 348 |
| CLT / Self Build | Market | 0 | 0 | 0 | 59 | 122 | 139 | 28 | 348 |
| Sharer Accommodation | Market | 87 | 0 | 0 | 0 | 0 | 0 | 0 | 87 |
| Build to Rent | Market | 249 | 260 | 0 | 79 | 396 | 113 | 34 | 1,132 |
| Market Sale | Market | 244 | 146 | 0 | 1,170 | 2,097 | 1,024 | 195 | 4,877 |

### Number of dwellings based on survey groups

| Tenure | Type | Flats (1 bed, 2 bed, 3 bed) | Houses (2 bed, 3 bed, 4 bed, 5+ bed) |
|---|---|---|---|
| Affordable Elderly | Affordable | 418 | 105 |
| Intermediate Elderly | Intermediate | | |
| Market Elderly | Market | | |
| Affordable Rent | Affordable | 432 | 700 |
| NHS Step Down | Affordable | | |
| Intermediate Rent | Intermediate | | |
| Shared Ownership | Intermediate | 1,218 | 5,836 |
| First Homes | Intermediate | | |
| Live / Work | Intermediate | | |
| CLT / Self Build | Market | | |
| Sharer Accommodation | Market | | |
| Build to Rent | Market | | |
| Market Sale | Market | | |

### Average occupancy of dwellings

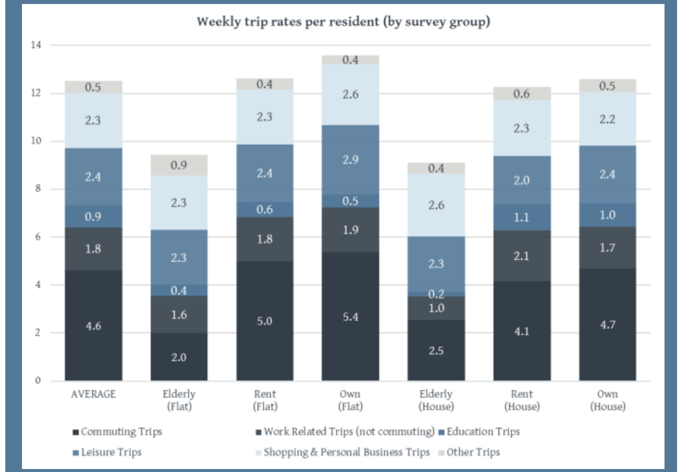
| Tenure | Flats | | | Houses | | | |
|---|---|---|---|---|---|---|---|
| | 1 bed | 2 bed | 3 bed | 2 bed | 3 bed | 4 bed | 5+ bed |
| Average occupancy | 1.36 | 1.93 | 2.55 | 1.93 | 2.55 | 3.03 | 3.44 |

### Number of people by survey group

| Tenure | Type | Flats (1 bed, 2 bed, 3 bed) | Houses (2 bed, 3 bed, 4 bed, 5+ bed) |
|---|---|---|---|
| Affordable Elderly | Affordable | 614 | 202 |
| Intermediate Elderly | Intermediate | | |
| Market Elderly | Market | | |
| Affordable Rent | Affordable | 739 | 1,914 |
| NHS Step Down | Affordable | | |
| Intermediate Rent | Intermediate | | |
| Shared Ownership | Intermediate | 1,966 | 14,974 |
| First Homes | Intermediate | | |
| Live / Work | Intermediate | | |
| CLT / Self Build | Market | | |
| Sharer Accommodation | Market | | |
| Build to Rent | Market | | |
| Market Sale | Market | | |

## *Estimating the trips rates and total trips by survey group (per week)*

### Trip rate by survey group (per week)




### Total trips by survey group (per week)

| Survey Group | Leisure Trips | Commuting Trips | Work Related Trips (not commuting) | Education Trips | Shopping & Personal Business Trips | Other Trips | Total |
|---|---|---|---|---|---|---|---|
| Elderly (Flat) | 1,408 | 1,213 | 974 | 270 | 1,408 | 524 | 5,797 |
| Rent (Flat) | 1,773 | 3,691 | 1,351 | 479 | 1,700 | 324 | 9,317 |
| Own (Flat) | 5,701 | 10,550 | 3,696 | 1,042 | 5,014 | 719 | 26,722 |
| Elderly (House) | 462 | 513 | 199 | 40 | 533 | 88 | 1,835 |
| Rent (House) | 3,897 | 7,935 | 4,099 | 2,043 | 4,439 | 1,076 | 23,489 |
| Own (House) | 35,740 | 70,271 | 26,086 | 14,841 | 33,544 | 7,973 | 188,456 |

**Across the six key future mobility changes, how might the masterplan design focus on behaviour change?**

# User-centric mobility planning

## What opportunities do the Six Key Changes bring?

**New Modes**

Implement e-scooter and e-bike sharing schemes for last mile trips, connecting major hubs and Westenhanger train station to residential areas.

**Changing Attitudes**

Drawing from the anticipated reduction in travel, people will be more open to new ways of accessing activates and services. Additionally, hygiene and safety concerns shaping the way people view shared mobility will need to be considered when implementing new travel options.

**Automation**

Opportunity to implement improved sensing technology, computing power and software engineering to provide more seamless freight and delivery options. For example, deploying pavement delivery by droid for food takeaways.

**Cleaner Transport**

Opportunity to encourage mode shift by offering users extensive choice of low carbon transport options other than private cars, whilst also providing electric vehicle infrastructure in support of EV uptake.

**Data & Connectivity**

Digital connectivity and the resulting movement of data is the golden thread linking all elements of Future Mobility. This includes the real-time alerts of journey disruption provided by smart mobility apps, which can inform users on how best to travel, and whether it is necessary to travel at all.

**New Business Models**

Providing new mobility business models, such as on-demand transit options, which offer the same level of convenience as a private car but don't have the same high fixed costs for the user or masterplan design requirements i.e. car parking.

| | | |
|---|---|---|
| **Household bicycle ownership** is seen to be *low* on average *(36% of respondents)* | ***Commuting*** is the main reason for travel, with property owners and renters making 2x as **many trips to work as leisure trips** | **Active travel & public transport** make up over 50% of trips for all journeys, yet **average car ownership is** 70% |
| On average, 53% of respondents ***expect to travel less*** post- Covid-19 than they did before the Pandemic | What does the survey tell us about how **Otterpool Park** residents may live? | ***Shopping and personal business trips*** are the most likely trip purpose to be replaced with a **digital alternative** |
| >50% survey respondents ***expect no change*** in their **delivery behaviour** once Covid-19 restrictions are fully lifted | **Renting tenants** are more likely to ***park on-street***, while **owners** and those in **elderly homes** tend to park their cars on ***off-street locations*** | Those *living in houses* are **>1.5x** as likely to have **at least one car** in their household than those *living in a flat* |

Future Mobility

# 4 – Conclusion

# Conclusion

**The user-centric analysis should be a considered a live process to realising the Otterpool Park mobility vision**

This document has set out:

- the future mobility policy context
- Why a user-centric approach adds value alongside the development of the Transport Assessment;
- the value of adopting a Vision and Validate approach that is agile and builds in flexibility to the scheme delivery;
- User personas and the socio-demographic segmentation (Experian Mosaic and the development schedule);
- A user-centric survey methodology and survey findings

The insights gathered here will help inform the masterplan scheme design and particularly will influence Phase 1 transport design related to:

- Active travel, walking and cycling routes (recognising different users needs);
- Micromobility (existing and emerging modes);
- Mobility hubs, freight consolidation centres and associated services;
- Parking provision and layout; and
- Interventions that reduce the need to travel

Let's change the way we think. *Let's create change.*

Future Mobility

Future Mobility