

1.0 Introduction

This is challenging time in the bus industry. Post covid pressures, changing preferences in travel behaviour and rising operational costs are putting significant strain on local bus networks. Solutions are required that draw in new customers and create more efficient operations, whilst maintaining service coverage.

Demand Responsive Transport services are a potential part of the solution matrix, offering broader, more flexible access to transport. The challenges of operating independent DRT services are well documented, with many services struggling to balance the need for high vehicle concentrations (to make more journeys available) whilst aggregating enough customers to make operations commercially sustainable. In the West Midlands there are already several demand responsive style services operating in parallel, whether supported services like Ring & Ride, school services or open access, app centered services like West Midlands on Demand. Currently these are operated separately with independent funding streams. A realistic opportunity for operational efficiency and an improved customer experience is anticipated by pooling services together. This document outlines the way in which a co-mingled DRT (specifically Ring&Ride with West Midlands on Demand) service in Coventry could be delivered and monitored.

2.0 Executive Summary

This document explores the viability of co-mingling two DRT services operating in Coventry. Ring & Ride services are poorly utilised for the significant financial outlay, whereas the trial of West Midlands on Demand (WMoD) shows promising customer response but is unlikely to become economically sustainable before funding is exhausted in early 2024. Amalgamating the two services under one brand (WMoD) is an opportunity for both services to address their current weaknesses. There is limited reputational or financial risk to implementing the trial given the decision not to proceed leaves R&R in an already challenging sustainability position and WMoD searching for further funding opportunities.

Undertaking this trial has the added benefit of proving / disproving a key assumption held within many DRT strategies, namely that it's possible to amalgamate different DRT use cases together, achieving service / operational improvements. Evidence of this exists in some USA / Asian markets, but the principle is not well explored in the UK. The outcome from this trial will directly influence how TfWM will construct the outline business case for the CRSTS funding, and the role this funding will play in expanding DRT operations regionally.

3.0 Glossary

- “CAV” Connected Autonomous Vehicle
- “Co-mingling” An approach which enables different demographics, who traditionally have had their needs met with a bespoke transport offering, grouped together under a singular service.
- “DRT” Demand Responsive Transport
- “IoT” Internet of Things
- “ITS” Intelligent Transport Service
- “LTP” Local Transport Plan

“PT”	Public Transport
“R&R”	Ring & Ride (service)
“WMod”	West Midlands Bus on Demand (service)

4.0 Background to DRT activities.

Greater use of public transport is necessary in order to meet wider policy objectives, including reducing congestion and ensuring a more sustainable transport system. This is recognized in the emerging new Local Transport Plan, as well as national policy. The National Bus Strategy, published in 2021 recognises that DRT may have a role in growing public transport, providing access to areas that may be difficult or expensive to serve by fixed route bus, as well as providing a more diverse range of destinations than traditional services.

Presently DRT plays a limited role in the West Midlands, but with a likely significant shortfall in funding and a wider bus review on-going (due for implementation in Jan 2023) DRT has the potential to fit alongside, or indeed replace, some fixed line services where they become economically unviable. How such services perform financially or for the variety of potential customers / use cases needs further study.

Other reasons for understanding DRT opportunities include a recognition that:

TfWM need diversifying transport options – whether to attract people into Public Transport, for LTP targets (modal shift out of cars), or as part of a post Covid rebuild, utilising the same solutions is unlikely to transform behaviours.

TfWM needs affordable transport options – financial challenges to current business models and fleet operations mean current coverage/ways of operating can’t be maintained.

TfWM obligations will only increase – a social care crisis, mental health crisis, cuts to other public spending etc...access to transport is a key contributor to a functioning society. Providing solutions to a growing demand is necessary.

New technology enables new opportunities – advanced scheduling software, CAV, ITS, IoT etc. afford us strategies previously unavailable.

Current DRT operations need alignment – Regionally TfWM and Local Authorities are responsible for various DRT operations, namely:

- Ring and Ride. Operated by NEAT, now using a Liftango scheduling system.
- Adult Social Care, Special Educational Needs and Home to School travel, commissioned by District Councils and operated by various private sector transport providers
- WM On Demand – Trial in Coventry operated by Coachscanner using Via scheduling system.

These don’t currently benefit from any economies of scale, don’t share best practice and have overlapping operational windows. In 2020, TfWM led a study into the SEND transport between LAs and TfWM which identified that there are potential benefits and synergies to improved integration which could benefit financially and improve customer outcomes, so there are immediate opportunities to improve efficiencies and standardise customer experiences.

5.0 Identified Problems

An exercise was undertaken which identified the inherent barriers to determining the role DRT could/should play in our transport eco-system. This exercise also highlighted the existing problems we have with regional DRT deployments.

Recognising it wasn't possible to address all these barriers concurrently, a prioritisation was agreed to control the study variables and draw conclusions from activities.

A root cause analysis identified a requirement to understand the strategic issue of "what DRT solutions where?" By understanding the customer offer, the effective "purpose of the service", TfWM can then to make informed downstream decisions, e.g. pricing models, depot locations, fleet sizes and comms strategies.

"What DRT solutions where" was broken down still further. The first elements to consider were the opportunities and challenges related to co-mingling. It was already known that our separate DRT solutions offer a viable transport solution to some WM residents. These services represent one experimental bookend, singular services for different groups. What isn't understood is the opposite bookend, a singular service for all groups. A service of this type could be more operationally efficient and financially sustainable yet may deliver a poorer customer experience (one solution may compromise too much for too many). Identifying the operational "sweet-spot" for DRT, balancing customers and operators, is the desired outcome.

Beyond co-mingling, there is a necessity to understand the optimum vehicle size for the demand we are experiencing. In conventional services this parameter is set, affording all vehicles to do all roles. However, if particular patterns emerge that mean a smaller, more efficient vehicle can be used for certain times / roles it is important to understand that opportunity. Equally, a co-mingled fleet could mean the services require fewer vehicles.

A live, commercial trial is proposed as the only way to gather the necessary insights.

6.0 Trial Overview

Hypothesis

"A co-mingled DRT service (amalgamating R&R with WMoD) can be successfully operated. Such a service will expand the current customer base whilst provided a more efficient and economical fleet operation."

The trial will consist of three key phases, as outlined below.

Phase 1: Jan 23 for (max) 4 months

Understanding co-mingling parameters.

All fleet operations would use the Via system, operating the same booking channels for all riders. Rules to be put in place to guarantee some* journeys (*more detail below). Utilise the parameters within the Via system to tune system attributes to different customer sets, understanding tolerances (e.g. wait time, walk time, proposal time). System used to highlight and drive service efficiency without changing number of vehicles.

Phase 2: May for (max) 3-4 months

Fleet Optimisation.

For all current and adopted fleets it is proposed there are no reductions during Phase 1. As part of Phase 2 the focus will be to optimize fleet numbers during the day and to optimize vehicle size. This will inform the true costs of service operation. As part of this exercise, simulation of fixed line substitution / cohabitation can also occur.

Phase 3. Aug for 3 months

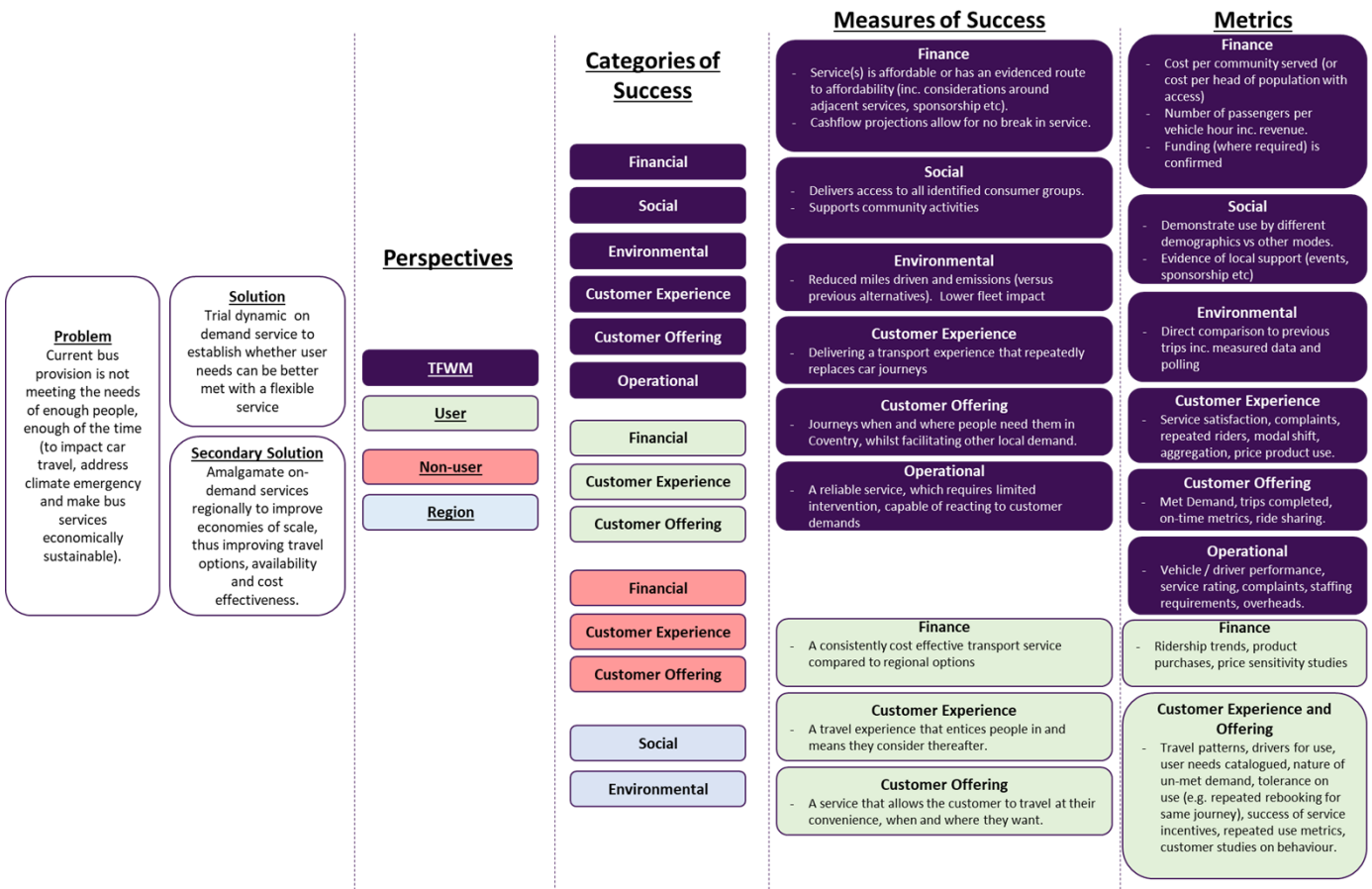
Planning ahead of further expansion

Insights delivered via Phase 1 and 2 can be used to agree the immediate concerns over R&R rollout in Coventry and the future of WM on Demand. Equally, decisions about depots, rolling out DRT opportunities elsewhere in the region can be simulated more robustly.

7.0 Trial Measures of Success

A specific M&E plan has been developed which highlights the relevant data points required to define the success outcomes. Success for DRT is not binary and cannot be measured by traditional metrics. For example: cost per passenger is always likely to be higher than traditional bus, but it's ability to reach different communities, satisfy different user needs is also far greater. It is necessary to assign equivalent value to the wider social advantages of DRT in balance with the commercial and operational considerations. In summary, service success can only be measured by considering various measures across FOUR main perspectives.

Within the Via (technology service provider) system there is already capability to segment customers, drivers and fleets to quantify behaviours and performance. Alongside that capability it is proposed we run inactive and active rider surveys to gather further qualitative information. This will likely be bolstered by in-person interviews. An extract of the logic map can be seen below with this element considering the TfWM and existing customer perspectives.



8.0 Trial Location

To incorporate a trial containing each of the customer types, a location is required where each of these is established. Ideally that location already has a developed customer base, ensuring trial results can be collected quickly. The only location where these conditions exist is Coventry. Additional justification for basing this trial in Coventry include;

- Previously geographically isolated Ring & Ride service ensures any changes to the service can be contained within the City. This has an added advantage in that any trial can be easily isolated from the wider Liftango rollout. Also, given WM on Demand covers the Meriden gap area, an amalgamated service for existing R&R customers opens up more destinations than previously accessible.
- Coventry CC are actively interested in the role of DRT and are supportive of measures to identify long term utilisation.
- DRT simulation activity already completed for over half the city.
- WM on Demand already using depots of strategic interest to TfWM.
- Coventry Councillors and officers have been briefed on the proposal and have offered their support to continue exploring this opportunity.

9.0 Trial Variables

For an effective trial to be undertaken, identification of the fixed and monitored variables is necessary:

9.1 Monitored:

9.1.1 Key customer types: three customer types identified within the back-end system of Via to distinguish patterns of behaviour and reaction to variable changes. Three customer types include:

- o School age (below 18)
- o Those with physiological or psychological needs (Ring & Ride)
- o General population (WM On Demand). Specific commercial uses (e.g. business travel) is quantified within WM On Demand.

9.2 Fixed:

9.2.1 Fleet: for the first three months of the trial, vehicle sizes will remain as those supplied, namely 12 + 1 WC space. After this point a review will occur that seeks to improve efficiency and vehicle fleet cost. Other Phase 1 fleet assumptions:

- o From day 1, Phase 1 it is assumed we would have the following vehicles available from each fleet:

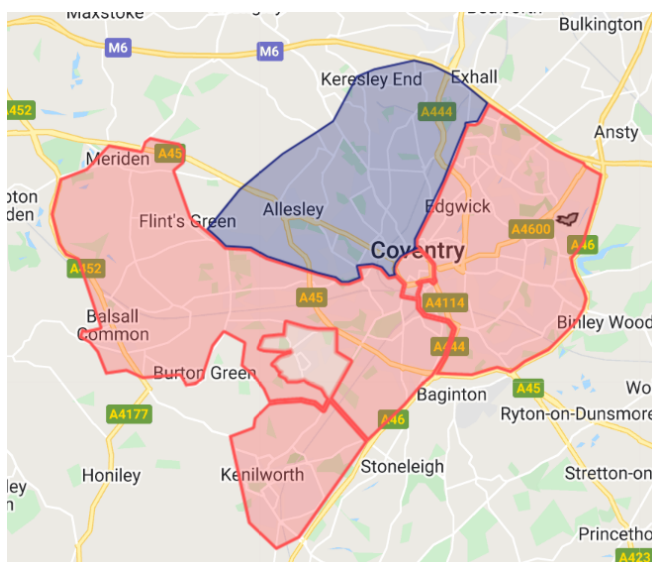
Fleet	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Weekly AM Shifts	Weekly PM Agreed	Weekly Total Vehicles Days.
	Vehicle Shifts		Vehicle Shifts		Vehicle Shifts		Vehicle Shifts		Vehicle Shifts		Vehicle Shifts		Vehicle Shifts				
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM			
R&R	8	8	8	8	8	8	8	8	8	8	5	5	2	2	47	47	47
WMoD	5	5	5	5	5	5	5	5	5	5	0	0	0	0	25	25	25

- o It is assumed that vehicles/drivers from the current R&R operation would port across for use in this service. Those vehicles are currently operated by National Express Accessible Transport (NEAT). Contract negotiations are already ongoing for the base R&R service, into which this project will be reflected.
- o This change wouldn't represent any incremental fleet costs beyond what is currently committed on each service. (This position would need to be reviewed weekly to ensure the number of unmet rides doesn't exceed a threshold of 20%. If the number of unmet rides is above this threshold then fleet numbers within WMoD would be under consideration for increase. Contingency planning is required within the budget forecasts.)

- Equally, R&R operations over 2022 have experienced numerous driver shortages and thus missed shifts. Going forward, the proposal would be to use any savings generated from missed R&R shifts and backfill those using the Coachscanner operation.
- Drivers remain allocated to existing fleet operators.
- Requirement for all drivers to have necessary training* carrying disabled and vulnerable passengers (*specifics to be defined). Existing R&R drivers would need training on Via system
- Recognising the demand for rides is currently underserved during the morning we propose a change in shift pattern.
 - Split shifts for WMoD are moved earlier with 3 vehicles starting at 6am and 2 vehicles at 6.30am. Currently 2 vehicles run 7-1pm and 3 run 8am-2pm. Afternoon shifts on WMoD run then from 12pm – 6pm or 12.30pm – 6.30pm. This maintains the necessary shift stagger, total numbers of hours utilised, but allows the complete service to cover more hours. The existing R&R fleet will maintain their original shifts.

Weekday (Mon - Fri)																		
	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm
WMoD x 3																		
WMoD x 2																		
R&R x 8																		
Weekend (Saturday)																		
	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm
R&R x 5																		
Weekend (Sunday)																		
	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm
R&R x 2																		

9.2.2 Operational Area: Fixed for the duration of the trial. Expanded from the current WM on Demand map to cover all Coventry. New area (blue) highlighted below as part of existing service cover (left). The existing coverage of R&R (right) is significantly improved with options to Kenilworth, Meriden and Balsall Common available.



The existing areas around Leamington Spa and Warwick Parkway will also remain, offering up a greater variety of available journeys.



9.2.3 Ticketing & Pricing: A consistent pricing model is required across the service. Currently R&R and WMoD don't run the same pricing strategy and they are both different compared to traditional bus. Alignment is also required on accepted methods of payment and what existing transport passes can be used across the service. It is proposed to revise the payment structure to encompass the following:

- As an on-demand service (akin to taxi, hired micromobility etc) there is a well-established and culturally accepted pricing structure based on DISTANCE travelled. This is recommended for adoption.
- A significant component of re-defining the pricing model is to make the service more financially sustainable and better adopted by consumers. Current hybrid models are not delivering necessary returns, albeit it is recognised the current pricing models aren't the only cause. Yet it is also recognised that current R&R prices are unsustainably cheap for the level of service. (Financial Performance review included from page 16).

Overview of current prices:

Service	Cost of a single journey (Concession)	Cost of a single journey (Fare paying adult)
Ring and Ride (Registered user)	£1.30 before 7pm £2.40 after 7pm	
National Express fixed route services	Free	£2.20 £4 day pass
WM On Demand (Journeys within Coventry)	£1.50	£3
	£1 each for up to 10 extra passengers	
Hackney carriage	£2.80 for first 0.922km, then 25p for every 0.162km No charges for extra passengers	

The trial scheme has been modelled on the basis of the following assumptions. These will be kept under continuous review during the trial:

- Initial proposal to operate radial distance pricing model, (per trip prices given as **examples** and measured as a straight-line distance, not based on routing):
 - 0-3 miles: £2
 - 3-4 miles: £3
 - 4-5 miles: £4
 - 5 – 10miles: £5
 - 10+ miles: £7
- Listed concessions ('ENCTS', '16-18' and 'under 16' are the only eligible criteria): 50% reduced fare across ALL journeys, with a £2 cap on journeys up to 10 miles.
- Maintain +1 on any booking (up to 10 people): £1 each (to continue the encouragement on sharing). (To qualify all +1's need to travel the same journey.)
- WMoD bulk options on passes to remain available and to be made available for R&R customers. The current passes include:
 - £25 for 12 rides (£20 introductory offers available)
 - £50 for 30 rides (£40 introductory offers available)
 - All rides, irrespective of distance, are currently considered as a single ride on either ride pass
 - Option (not currently implemented) would be to introduce a surcharge for journeys over a certain distance. For example a journey of +10 miles would cost: £2 + 1 ride off the pass.
 - Concession discounts are not currently planned on the bulk ride passes as these already offer a discounted journey pricing.
- **A key target within the new pricing structure is to ensure Ring & Ride customers pay an equivalent fare to an average ride today.** Rides which are outside the existing Ring & Ride zone or indeed beyond 5 miles are anticipated to pay slightly more on each journey. The average distance travelled by a R&R rider (August – Sept 2022) was 3.37miles equating to a ENCTS ride of £1.50 on the new service. Less than 20% of rides were 5 miles or above during this period – these will be capped at £2. It is not possible to travel more than 10 miles on the existing Ring & Ride service in Coventry.
- Key differences to existing R&R provision.
 - No evening or Sunday surcharging (albeit pricing for different times of day would be possible if desired, but not proposed)
 - Pricing is distance based, but greater variety of destinations offered as part of this service.
 - Opportunity to group bookings at lower incremental costs.
 - A full breakdown of service comparisons is available in **ANNEX I**

Sample test case. WMoD ONLY for increased fares

- Analysing only full fare paying rides which was 94 bookings out of a total weekly count of 446 for w/c 6th June, the current average fare for the 1st passenger (on the basis we're keeping +1 pricing the same in your proposal) is £3.14
- If all of these riders still made their trip under the proposed (trial) tariffs then the average fare for the 1st passenger would be £3.89 so an increase of ~24%. This would increase weekly revenue by ~£68 from the current level of £295 for all full fee paying riders (ignoring subscriptions, promotional discounts & referrals)
- The vast majority of riders experience a change in price from what they're paying today:
 - 64% of bookings had an average increase of £1.58 from an average base fare of £3.11 (increase of 50%)
 - 23% of bookings pay an average £1.29 less from the current average base fare of £3.19 (decrease of 40%)
 - 13% of bookings had no change in fare
- Average distance of full fare paying rides is 5.3 miles; for pass holders it is 7.0 miles (note: distance here is radial)
- There were 273 bookings by passholders, however, 58 of these (21%) were over 10 miles -> lots of these are between UoW and Wellesbourne
- Compared to the regular fare paying riders, only 8 bookings (8%) were over 10 miles

9.2.4 Eligibility: There is a recognised requirement to simplify the qualification criteria for the R&R service. Currently, individuals are self-assessed for access to the service, with limited policing of specific eligibility.

- It is proposed that the co-mingled service is available to **everyone**.
- Eligibility for a reduced fair is restricted to those with a qualifying ENCTS pass, individuals who are 16-18 and those of school age (under 16). Drivers will be briefed to request identification/passes when prompted by the in-app notification.
- All existing R&R customers will be informed of the intended change in eligibility. A TWO-month grace period will be assigned to all current riders, during which time qualifying riders must

apply for an ENCTS pass. During this period they will get 50% off all journeys without having to show a pass. After the grace period, riders who haven't received their ENCTS pass AND informed WMoD (via the call centre) will have their discount privilege removed.

- Any existing R&R customers who are not eligible for a ENCTS on the basis of age or disability will be considered on a case-by-case basis

9.2.5 Booking platform: All services to be run through the Via (technology) platform. This means existing customers of other services will need accounts creating in the Via system. Where possible TfWM will assist the transition of customers across into this system, but customers may be contacted to assist with providing relevant details. Customers are able to create their own accounts today by either using the app or calling customer services. Until cash payments are enabled (due January 2023) any new account will need a card registering.

9.2.6 Payment Processor: Using the Via system will also default to using the Braintree Payment Processing system. This is live and gives beneficial rates on transactions. It will mean that all transactional information for existing services goes into this system with all funds going to TfWM and the FTZ programme. If alternative mechanisms are required these need to be identified.

9.2.7 Payment Methods: Ring & Ride currently offers a 'pay with cash' option whereas WMoD is card only, (registered via the app). In order to offer a smooth integration, when registering an account customers will be encouraged to register a bank card. However, a 'pay with cash' option will be available for all journeys throughout the duration of the trial (starting January 2023). This will be exact change only to limit cash activity. Considerations requiring further action.

- Cash consolidation process needs developing and introducing (inc. protocols to protect drivers etc)
- System adjustment to inform drivers of relevant fare.

9.2.8 Branding: All vehicles used from Phase 1 onwards to be branded as WM on Demand. This will require the current R&R fleet to be rebranded. Namely all vehicles should only carry this livery:



Costs for this activity are estimated to be circa £10k for 8 vehicles

- All external comms in relation to any marketing, customer enquiry, demonstration, media event etc. must reflect WMoD brand guidelines.
- R&R website, comms and other media material needs to be updated to reflect the updated availability.

9.2.9 Marketing / Communications: All external communications to reflect WM on Demand. All customers to recognise only this service as a replacement for ones being integrated. The customer categorisation will happen on a case-by-case basis to guarantee individual requirements and levels of service are met (e.g. to identify a historically R&R customer). It is recognised how marcomms activity is both critical to the success of the project and how it's provision is currently underserved. A significant effort will be necessary to communicate with all existing R&R customers so they are familiar with the change and what it means. Equally an extensive and sustained campaign is necessary to raise general awareness of the service before and during the trial. Referenced in **APPENDIX II** is the draft comms and engagement for this project.

9.2.10 Customer Services: As per Marcomms, within qualifying Coventry postcodes all customer interactions will be dealt with in the Via system. This trial will be recognised as separate from the wider Liftango transfer until at least August 2023. Team changes to accommodate this are anticipated, where a dedicated sub team within Customer Services will likely look after Coventry activity. It is likely a new process will be required when dealing with customer booking enquiries, whereby a postcode will be requested earlier in the communications, such that the enquiry can be directed in the allocated team appropriately.

10.0 Other Considerations

10.1 Contracts: Separate contracts currently exist with Via, Coachscanner, NEAT and Liftango for services related to this region. A thorough review of these contracts will be undertaken in order to facilitate the changes necessary to run this trial.

10.2 Funding: Where possible the trial will look to utilise resources already available. However, it is anticipated there will be additional costs accrued by this trial. It is anticipated these costs will be covered by FTZ. Indicative budgets:

- Vehicle re-branding - £15k (FTZ funded)
- Via system modification - £15k (FTZ funded)
- M&E activities - £30k (FTZ funded)
- Customer Service - Covered in existing headcount
- Marketing / Comms - £50k (BSIP)
- Contingency - £20k

Funding provisions don't currently consider officer time. In order to robustly plan and execute this trial it is anticipated that dedicated resource will be required. The TfWM bus team have now allocated a DRT lead who co-ordinate with other internal teams in operating the trial. Separate marcomms and M&E focused resource will be required to bolster trial activities, these are also now identified.

11.0 Wider Financial Considerations & Legacy

11.1 Context

The anticipated trial completion is targeted for October 2023. With a finite amount of funding within WMoD, an initial assessment of viability is required towards the end of Phase 1, namely **April 2023** to instruct wider bus strategy and determine how CRSTS funding is allocated. With no intervention WMoD will cease operating in early Jan 2024 (see 11.3). The Phase 3 period (August - October) will be used to detail out wider recommendations and action next steps, whether related to the extension or consolidation of services.

11.2 Current assessment of financial performance.

WMoD

WMoD Recent Performance								
	Revenue	Successful transactions	Average transaction cost	Rides Total	Average revenue per ride	Vehicle hours	TfWM cost per ride	Rides pvh
Jan-22	£2,433	533	£4.56	1262	£1.93	900	£15.62	1.4
Feb-22	£3,906	992	£3.94	2172	£1.80	1200	£11.69	1.8
Mar-22	£5,098	1055	£4.83	2627	£1.94	1542	£12.07	1.7
Apr-22	£2,826	566	£4.99	1493	£1.89	858	£12.27	1.7
May-22	£4,090	802	£5.10	2328	£1.76	1122	£10.73	2.1
Jun-22	£3,358	742	£4.52	2013	£1.67	1026	£10.43	2.0
Jul-22	£3,248	685	£4.74	1940	£1.67	1008	£11.03	1.9
Aug-22	£2,579	601	£4.29	1744	£1.48	1056	£13.24	1.7
Sep-22	£3,135	600	£5.23	1562	£2.01	1008	£13.71	1.5
Oct-22	£3,286	610	£5.39	1811	£1.81	1020	£11.94	1.8

Revenue: overall net revenue received in the service during stated period (post PSP costs).

Successful Transactions: number of financial transactions during stated period (inc PAYG, ride passes etc.)

Average Transaction Cost: Revenue / Transactions.

Rides Total: Total number of passengers during stated period.

Average Revenue per ride: Revenue / Rides. Note: more riders than transactions due to bulk pass products and multiple riders on single bookings.

Vehicle hours: total vehicle hours for stated period.

TfWM cost per ride: Total operation cost (vehicles, tech, operations etc) minus revenue / Rides. This metric highlights the cost of TfWM (and funding partners) for each ride.

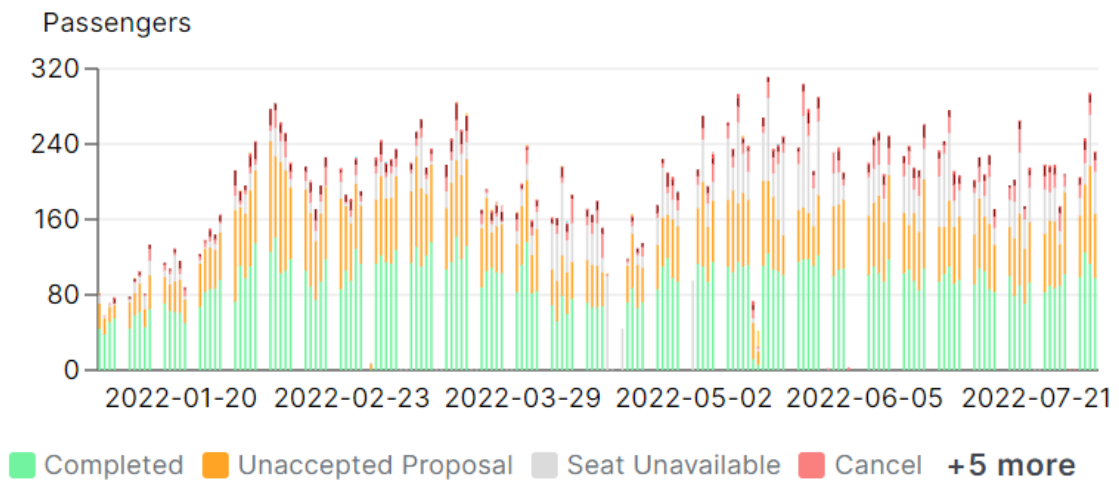
Rides pvh: This is a measure of how many riders we have on the service per average vehicle hour (of operation).

Summary of WMoD performance. The service popularity has generally stabilized since the recent area expansion (1st Feb). Fluctuations in demand, driven by University of Warwick term periods, have been met with corresponding numbers of vehicles. This has meant measures such as “riders per vehicle hour” and “cost per ride” have been consistent, with a slight improving trend. There are several ongoing actions to further improve these metrics, namely:

- Marketing efforts targeted at groups and local business. Working with CCC, marketing material focused at engaging local industry / community groups etc has been generated. These organisations are expected to take advantage of the service (e.g. staff travel, community trips). The service is now able to create corporate accounts and group bookings are common. Building up a consistent, repeated demand guarantees patronage that on-demand trips can bolster.
- Continue to actively manage vehicle utilisation, predicting likely demand. Our capability in this space has improved over time, where the service is wasting fewer vehicle hours when demand is low. September 2022 was a period of lower than anticipated demand, meaning efficiency was below targets, but this was adjusted for reversed in October 2022.
- Pursue wider and more consistent marketing campaign to Coventry residents. This in turn will likely incorporate the adoption of R&R services but generating a greater awareness of WMoD in necessary in either scenario.
- Pricing adjustments to disincentivise longer, less efficient trips to Wellesbourne, thus improving met ride demand metrics for the core Coventry region.

Detailed Ride Requests Status

Breakdown of all ride requests (passengers) by status.



*All ride requests from 4th Jan – 20th Jul 2022.

The above metric shows how demand over the summer has stayed consistent (with less service reliance on the UoW staff / student population). This is a real positive and in stark contrast to Summer 2021, demonstrating how demand is being generated across the city. The percentage of unmet requests (seat unavailable) has increased during 2022 to circa 20% average. This is a combination of lower vehicle numbers (since March), size of service area and service hours. There is an expectation that by incorporating the R&R fleet and extended hours, we would immediately see an increase in completed rides.

Analysis of ride data (May – July 2021)

Total ride requests	Met Demand	Met Demand Rate	Completed rides	Completed Rides Rate
12,997	10,677	82.1%	5,646	43.4%

Met Demand – a journey offer to the customer within specified metrics (e.g. time, location etc)

Completed ride rate – % of total requests that accept the ride and then successfully transact the journey.

Combining the fleets and operating hours we could conceivably achieve a 95% met demand rate and a completion rate of circa 55%. We evidence this based on March 2022 when WMoD ran a six-vehicle service achieving a 92% met demand rate and 52% completion rate. Conceivably with a 13 vehicle service a further proportional improvement would be expected. Based on the May – Jun data, an improvement in these two metrics alone would see completed rides increase by 20%.

11.3 WMoD Funding

At service inception WMoD targeted a commercially self-sustainable position before funding expired. Before the considerations of co-mingling were proposed, WMoD was seeking to gradually increase its fleet numbers to maximize availability to drive awareness and ridership. This approach carried the inherent risk of reducing the funding more quickly, but targeted service reach and value demonstrations as the priority. WMoD is funded through a combination of FTZ, University of Warwick contribution and S106 allocation. Although additional S106 pots may become available, for the purposes of forecasting

service life it is assumed there are no further funding guarantees. A breakdown of existing financial contributions (for vehicle operations is seen below):

- FTZ** £207,000 (an additional £50k has been used for Via system setup and operational coverage)
- UoW** £200,000
- S106** £450,000 (plus £31,500 for operating system costs)

Projecting forward from October-22 an assessment is included on when funding would expire based on the number of additional vehicles in the WMoD fleet. This assumption also includes a low revenue yield of £3,500 per month going forward (May-Oct 22 average is £3,283).

- 4 vehicles (current base) - June 2024
- 5 vehicles - Mar 2024
- 6 vehicles - Dec 2023
- 7 vehicles - Sept 2023
- 8 vehicles - June 2023

As part of this proposal, it is assumed WMoD will operate a **FIVE** vehicle fleet from October 2022. This is predicated on allowing some financial flexibility as part of Phase 2 (fleet optimization) in adding vehicles to the fleet for short trial periods, whilst still guaranteeing a service throughout 2023. As a working assumption we should assume funding until January 2024, maintaining a target of forming procurement strategy decisions in April 2023 (allowing 8 months of due process).

An assessment of financial sustainability must also consider what constitutes service success. Assuming a five-vehicle service it is possible to predict the necessary patronage to break even (analysing different average fares). A £2.44 subsidy is included as a comparator to a break-even target. £2.44 (per passenger) reflects the current TfWM limit for additional justification on subsidised bus routes.

		Target for Passengers per vehicle hour	
	Average Fare	Service Break even	£2.44 subsidy per passenger
Current (all ride) average	£1.80	12.2	5.2
Comparison	£2.00	11	4.9
Average pay as you go	£2.90	7.6	4.1
Predicted average (April 2021)	£3.50	6.3	3.7

At current average fares it is clear the service will never break even. The highest performing DRT services in the UK achieve circa 9 ppvh (fflecsi in Wales), with good services operating circa 6ppvh. WMoD initial estimates of break-even were based on an average fare of £3.50 with a target of circa 6ppvh.

The average ride revenue £1.80 reflects the high travel pass and +1 usage, both features that are very popular with passengers, but which reduce revenue per journey. When initial estimates were conducted the relative impact of these products wasn't known.

Rider breakdown case study Apr – Jun 2022

	How passengers use the service		
	PAYG	% pass holders	% multiple riders
April	33.1%	52.9%	14.0%
May	29.7%	56.2%	13.5%
June	32.7%	50.5%	16.4%

Analysing the previous quarter, consumer behaviour has a strong preference for ride passes with also a positive percentage of trips utilising the +1 feature (shared ride). Both features are proposed to remain within the pricing structure but may require an adjustment to maximize revenue.

PAYG breakdown case study Apr – Jun 2022

	PAYG breakdown				
	Full fare	ENCTS	50% rider discount	2 free rides promo	Referral promo
April	43.8%	19.7%	27.6%	6.5%	2.4%
May	52.7%	12.6%	23.7%	6.5%	4.5%
June	53.1%	14.4%	24.0%	4.3%	4.2%

Within the PAYG structure there are options for additional discounts. ENCTS rides are charged at 50% of the full fare with referrals also getting two free rides. This analysis demonstrates that of the TOTAL rides for each month only an average 16% (Apr – June) pay a FULL fare.

11.4 Pricing recommendations for WMoD:

- Adopt distance based pricing model, recognising impact on net revenue is marginal (but allows alignment with R&R activity should trial commence and installs a familiar customer pricing model).
- Explore price increases for ride pass products, including the option for a surcharge on journeys >10miles.
- Business account pricing incentives should be based on guaranteed numbers of riders.

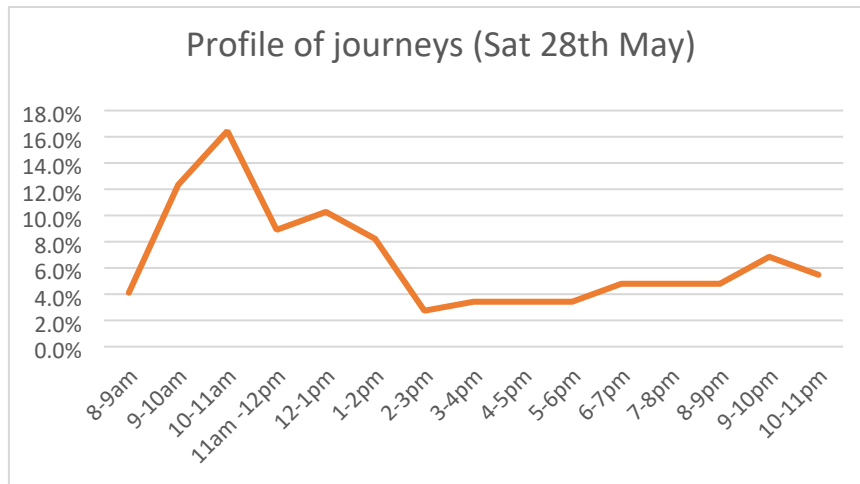
Even with these adoptions it is not expected the average fare will exceed far beyond £2. To continue the WMoD service beyond the current funding (and irrespective of the co-mingling trial) a service subsidy is highly likely (i.e. from Jan 2024).

The assessment of additional value (beyond purely the financial) delivered by the service should therefore be considered when assessing long term feasibility (note 7.0).

11.5 Ring & Ride

The existing Ride and Ride service receives an annual budget subsidy of ~£5million (at current suppressed number of users following Covid) to cover all 7 LA areas. Vehicles belonging to NEAT (National Express Accessible Transport) are used to provide an invaluable service to those individuals with various physical or psychological needs, where public transport cannot easily support. In Coventry, EIGHT vehicles are scheduled to work Monday – Friday, FIVE on Saturdays and TWO for a reduced shift on Sundays. Actual fleet numbers fluctuate based on vehicle and driver availability. It is noteworthy that due to unprecedented driver shortages, NEAT has not been able to fulfill its fleet obligations for several months. Although countermeasures are in place it is unlikely that the driver issues will improve until December 2022 at the earliest.

Limited data is available on how and who make up the profile of journeys occurs during the day. Sample data from the 28th May has been analysed:



More data analysis is ongoing. These insights will also help to highlight specific rider requirements that need to be considered as part of the co-mingling service. An equalities assessment has also been completed to ensure demands of existing R&R customers are met as part of this trial. This is available in **ANNEX III**

11.6 Combined Service

Using the actual figures from WMoD and estimates from R&R it is possible to model the service expectations and requirements of a co-mingled solution. Indicative figures for performance as listed below:

Co-Mingling Financial Predictions								
	Revenue	Successful transactions	Average transaction cost	Rides Total	Average revenue per ride	Vehicle hours	TfWM cost per ride	Rides pvh
June Combined	£4,740	-	-	3172	£1.49	3861	£24.38	0.82
inc. WMoD Efficiency increase	£5,412	-	-	3575	£1.51	3861	£21.44	0.93
inc. Price change	£6,182	-	-	3575	£1.73	3861	£21.22	0.93
2ppvh	£13,359	-	-	7722	£1.73	3861	£8.90	2
3ppvh	£20,038	-	-	11583	£1.73	3861	£5.35	3
4ppvh	£26,718	-	-	15444	£1.73	3861	£3.58	4
5ppvh	£33,398	-	-	19305	£1.73	3861	£2.52	5

Row 1: Represents the figures from WMoD and R&R summed together. Evident is the immediate impact on cost per ride and ppvh.

Row 2: Represents the predicted uplift in completed rides due to additional vehicle availability, namely 20% increased rides on WMoD. A similar improvement may exist for R&R, albeit data is not yet available. Here the total number of expected rides drives the other data columns.





Row 3: Represents the uplift in revenue expected as part of the price rises proposed in this paper (in addition to the efficiency gain from row 2). Price rises in this simulation also include a £5 increase in the cost of both ride-pass types. Here the total revenue drives the other data columns.

Rows 4 – 7: Data in these rows is driven by passengers per vehicle hour. This metric indicates (for the same average revenue per ride) the total number of rides we would need to achieve and the total revenue we would likely receive. As with the predictions on WMoD, with an average ride revenue of £1.73 we would need a ppvh >5 to be below the £2.44 subsidy threshold.

It is possible to draw some indicative conclusions from this analysis, namely:

- It is advantageous for R&R to co-mingle and quote WMoD passenger numbers as part of financial assessments, thus significantly improving revenue and cost per ride figures.
- WMoD existing customer would benefit significantly from greater area coverage, trip availability and service hours.
- R&R existing customers would have better guarantees on vehicle availability, greater area coverage and service efficiency.
- Fleet optimisation activities in Phase 2 have the potential to reduce R&R fleet overheads

An overview of how a combined service would operate for customers is shown below:

		
	<ul style="list-style-type: none"> - Better service reliability and routing, inc. dynamic comms. - More booking options (e.g. immediate journeys, +1's) - Longer operating window - More destinations / coverage 	<ul style="list-style-type: none"> - Much longer operating window. - More destinations / coverage. - More journey availability due to more vehicles.
	<ul style="list-style-type: none"> - Potentially less driver flexibility on additional tasks. - Fare differences (not necessary more due to ENCTS provision) - Education and comms programme (unfamiliarity for existing users) 	<ul style="list-style-type: none"> - Potentially longer journey times. - Slight increase in fares.

12.0 Outcomes from the Trial

In order to make a balanced judgment on commitment it is necessary to consider all likely outcomes from the trial, including a scenario whereby the trial does not start.

12.1 Trial doesn't start:

- o WMoD service would continue with actions highlighted in the paper around pricing, marketing etc. whilst seeking other avenues for investment. These may include alternative S106 opportunities, CRSTS or removal of fixed line services. Fleet operations would likely be held at 6 vehicles maximum to prolong the need for additional funding until December 2023. A revised set of service targets would be implemented with a progress check every 3 months. If by June 2023 the service was on track and funding opportunities have been identified a likely re-tendering exercise would be undertaken to renew existing contracts. If the service was not performing then it's likely the existing contracts would complete and service be withdrawn.
- o R&R service rollout with Liftango would continue in Coventry whereby WMoD and R&R would sit in parallel for the duration of the WMoD contract. It is anticipated that operational efficiencies would be sought to improve TfWM value for service (including revised performance targets).

12.2 Trial starts with co-mingling and fleet optimisation activity demonstrating hypothesised value. In this scenario there are subsequent questions/issues to detail, namely

- o **Strategy** – what does a success in Coventry mean for wider roll out of DRT in the context of bus reform? Do we scale DRT activities across the region, with Coventry as an example to

follow? Will this be possible using current booking systems and what does this mean for how we manage the various booking systems in place? *Note: If a procurement is required, in order to have a seamless transition a decision on WMoD is required by the end of Phase 2 (April 2023)*

- **Funding** – How are funds in CRSTS allocated, fleet and depot ownership decisions? How do we seek to cover the inevitable revenue costs?
- **Formalising R&R and DRT.** Wider rebranding required, contract negotiations, potentially more detailed MaaS integrations, wider education and awareness activities.
- **These questions are being considered in a separate workstream run by TfWM, looking at wider DRT strategy.**

12.3 Trial starts and co-mingling and fleet optimisation activity proves inconclusive. Assessments made in April 23 may be indicative where the trial is heading. By June, if this is no clearer then depending on the aspects of uncertainty then it may be necessary to rescope the later elements of phase 2 and /or phase 3. An inconclusive conclusion to this trial would be considered an unsuccessful trial due to the necessity to generate a definitive position.

12.4 Trial starts and co-mingling activity proves unsuccessful. In this scenario focus should be around how/if the independent services should be continued and how.

- Ring & Ride has a route for immediate re-instatement of the current service model in Coventry (if decision is approved). Branding of vehicles will require adjusting back to R&R and an effort will be required in delivering a concerted marcomms to communicate the change. If pricing models have been adopted there will be additional effort required to undo this integration. In this scenario it is anticipated the contingency budget will be required.
- WMoD will end if not funded further. A decision on how/if to facilitate this service will be required in April to leave options ahead of contract completion. In this scenario the WMoD team will need to reassess the impact of reducing to a 5-6 vehicle service and whether new riders (gained through this exercise) can be accommodated. This in turn may change the commercial sustainability equation of a reduced WMoD service. As per the scenario of the 'trial not starting' other factors may influence choices for the second half of 2023.

12.5 MaaS Integration: During the trial period TfWM will also be developing its MaaS application, through which all transport services are intended to be available. Integration with DRT is currently scheduled for circa Q2 2023. Supplier consultation (with Via and Liftango) is already ongoing to prepare the groundwork for integration, including studying API compatibility. Depending on the complexity of integration and the progress of the trial come January, the level of DRT capability (in the MaaS app) will be adjusted accordingly.

ANNEX I – Comparison on R&R, WMoD and Co-mingling service parameters.

Service Element Description	R&R (Coventry)	WMoD	Co-mingling Proposed Service
Service Operating Hours	Mon – Sat (8am – 11pm) Sun (8am – 3.30pm)	Mon – Fri (7am – 8pm)	Mon – Fri (6am – 11pm) Sat (8am – 11pm) Sun (8am – 3.30pm)
Telephone Booking available	Yes	Yes	Yes
Dedicated phone number	Yes	Yes (0345 034 8670)	TBD
App booking available	No* (not at this current time)	Yes	Yes
Customer Service Support (& Telephone booking)	Mon – Fri 8am – 6pm (Weds 10am) Sat 9am – 1pm	Mon – Fri 8am – 6pm (Weds 10am) Sat 9am – 1pm	Mon – Fri 8am – 6pm (Weds 10am) Sat 9am – 1pm
On demand (immediate) booking	No	Yes	Yes
Pre-booking	Yes* (mandated, 24 hrs in advance)	Yes* (up to 7 days in advance available)	Yes* (up to 7 days in advance plus option on preferential booking for selected users)
Payment types	Cash	Card only* (pre-registered and linked to account)	TBD – Proposal: Cash on-board. Card in advance
Account Required (pre-booking)	Yes* (name, address, (email for Liftango))	Yes* (name, email, telephone no, and payment card required)	Yes (as per WMoD)
Door to Door rides available	Yes (default)	Yes* (requires selection in VOC)	Yes* (requires selection in VOC)
Corner to Corner rides available	No	Yes (default)	Yes (default)
“Depart by” bookings	Yes	Yes	Yes
“Arrive by” bookings	Yes	Yes	Yes
Ride Passes available (discount bulk buy)	No	Yes (12 & 30 ride pass)	Yes (12 & 30 ride pass)
Discounted rides and promotions available through service	No	Yes (refer a friend, discount codes, company affiliations / corporate accounts)	Yes (refer a friend, discount codes, company affiliations / corporate accounts)
Geographic restrictions	Yes (Coventry only)	Yes (bigger Coventry footprint than R&R. Restrictions on where trips to Leamington can go from)	Yes (likely adjusted from current WMoD). All Coventry covered plus Leamington areas remain.
Group bookings	No	Yes (up to +10)	Yes (up to +10)
Booking modifications available	Requires re-booking.	Yes (cancel, move, add passengers etc can be done dynamically – in app or over phone)	Yes (as per WMoD)
Real-time journey alerts	Yes (Liftango only)	Yes (text messages 10, 5mins out and then on arrival)	Yes (as per WMoD)
Penalty for none payment	N/A	Immediate account suspension (until debt is cleared)	Immediate account suspension (until debt is cleared)
Penalty for no-show	No (although under review)	None (although likely to introduce 3 strikes policy, then timed suspension)	None (although likely to introduce 3 strikes policy, then timed suspension)
Eligibility	Self declared (no age limit, children must be accompanied)	None (access to all that can fulfil registration criteria.)	None (access to all that can fulfil registration criteria.)
Concessions / Discounts	None	ENCTS and school age 50% off all journeys	ENCTS and school age 50% off all journeys
Pricing	Registered user (Aged 16+) and Essential Escort/Carer Monday to Saturday daytime (before 7pm) - £1.30 single Monday to Saturday evening (after 7pm) - £2.40 single All day Sunday - £2.20 single Registered user (Aged 5-15) Monday to Saturday daytime (before 7pm) - £0.65 single Monday to Saturday evening (after 7pm) - £1.20 single All day Sunday - £1.10 single Non-registered users Adults - £2.40 single, Children under 16- £1.20, Children under 5 travel free.	Journeys in Coventry all £3 (one way) Journeys from Coventry to elsewhere (£4+)	TBD – likely distance based. 0-3 miles: £2 3-4 miles: £3 4-5 miles: £4 5 – 10miles: £5 10+ miles: £7
Dogs allowed	Guide / Assistance dogs only	Guide / Assistance dogs only	Guide / Assistance dogs only
Luggage	No policy	No (beyond hand-held and pushchairs)	No (beyond hand-held and pushchairs)
Wait time at location	No set timing, user specific, often drivers call depot on individual basis who then contact customer to check they are ok/ready	2 mins on station	TBD – likely to be customer tailored
Fleet size	8	5	13
Vehicle type / configuration	(12 + 1 WAV)	12 + 1 WAV	12+ 1 WAV
Branding	Ring & Ride	West Midlands on Demand	West Midlands on Demand
Website	Ring and Ride branded (hosted on TfWM site) New website in development	TfWM sub page (off main TfWM site)	TfWM sub page (off main TfWM site)

ANNEX II – Marketing and Communications Proposal

(See separate file)

ANNEX III – EqIA Assessment

(See separate file)