

Attachment 3: The modes of delivery against the summary in the motorcycle/SBD report

Reviewing the OHS consequences of Motorcycle Separate Bundle Delivery

MOTORCYCLE	BICYCLE	E-TRIKE	PUSH BUGGY	Comments
Organisational Issues				
<p>1. The proposed work system increases the likelihood that PDOs will work for long periods without breaks in an uncontrolled environment.</p>	<p>Likely to be the same organisational issues as per the motorcycle.</p>	<p>Likely to be the same organisational issues as per the motorcycle.</p>	<p>Likely to be the same organisational issues as per the motorcycle.</p>	<p>It is assumed that the intended work system will be substantially the same as that used in the SBD trials. The report highlighted many deficiencies in this work system and judged it to be unacceptable. The SBD design process has focused solely on the equipment design and has attempted to make the Separate Bundle Delivery method fit the same work system as for single bundle delivery.</p>

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<p>2. The cognitive demands are self-evidently increased (over single bundle delivery) -two reading tasks to perform per delivery point -sighting points are separated and may be in different orientations, requiring addresses to be read upside down. -frequency of mis-sorts increases cognitive load.</p>	<p>Likely to be the same organisational issues as per the motorcycle.</p>	<p>Likely to be the same organisational issues as per the motorcycle.</p>	<p>Likely to be the same organisational issues as per the motorcycle.</p>	<p>As above (1).</p>
<p>3. AP has not identified any adequate risk controls to prevent 'reading and riding' other than administrative controls, enforced by surveillance of the PDOs.</p>	<p>Likely to be the same organisational issues as per the motorcycle but risks not likely to be as high as speed and other risk variables of vehicle type lower.</p>	<p>Likely to be the same organisational issues as per the motorcycle but risks not likely to be as high as speed and other risk variables of vehicle type lower.</p>	<p>Not applicable.</p>	<p>Reading and riding has not been adequately defined by AP and is often confused with the glancing that is normal driving behaviour when checking instruments, mirrors, etc. The surveillance of PDOs is impractical as a risk control.</p>
<p>4. No acceptable form of management or work design to prevent PDOs having to perform long spells of continuous delivery work with insufficient breaks in order to meet delivery time requirements.</p>	<p>Likely to be the same work system as that for motorcycles but with the additional physical loading of propelling the bicycle as well as merging the mail</p>	<p>Likely to be the same work system as that for motorcycles. The physical demands may be less than the bicycle but more than the motorcycle.</p>	<p>Likely to be the same work system as that for motorcycles but the PDO will not be constrained by being seated for the duration of the round (but will have to</p>	<p>Will remain unresolved as long as AP resists efforts to redesign the work system as a whole, rather than the piecemeal approach used at present where the emphasis</p>

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	(and posting it.)		walk the whole distance).	is on the equipment issues alone.
<p>5. The methods for determining the size, and therefore the duration, of rounds do not appear to be adaptable to the realities of the work demands. Previous recommendation that rounds be a maximum of five hours in duration is routinely exceeded.</p>	Likely to be the same issues as per the motorcycle.	Likely to be the same issues as per the motorcycle.	Likely to be the same issues as per the motorcycle.	As above (4).
<p>6. The design of the work system for SBD does not take account contemporary expectations for a compatible work-life balance, particularly when there is inconsistency in what part of the day is occupied by work, and what part of the day is non-work.</p>	Likely to be the same organisational issues as per the motorcycle.	Likely to be the same organisational issues as per the motorcycle.	Likely to be the same organisational issues as per the motorcycle.	Refer points (1) and (4) above.
<p>7. There does not appear to be a coherent job description for the duties of a PDO engaged in SBD, defining the allowances and requirements for a properly structured shift of work, including the periods of work for each activity, the breaks to be taken, and providing for the work to be performed in well-managed work circumstances.</p>	No information available so not able to assess.	No information available so not able to assess.	No information available so not able to assess.	As above.

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Environmental Issues				
1. Increased exposure peak hour traffic on roads, footpaths and across domestic driveways, in the mornings and, for some, in the afternoons also.	Much the same hazards but slightly less road exposure (but greater risk when on roads?)	As for bicycles.	Not as much of an issue for buggies as these tend to be used in high density areas such as commercial districts.	
2. Ergonomics analysis indicates that the task involves unacceptable work postures and upper limb actions that are identified as risk factors in the <i>National Code of Practice for the Prevention of Musculoskeletal Disorders from Performing Manual Tasks at Work</i> .	Risks documented in the Manual Handling Code assessment document (doc. 1). Many risks similar to motorcycle because of equipment layout and working repeatedly to left.	Many similar hazards and risks as for the bicycle but possibly (slightly) better manual handling depending on how the PDOs access the rear bin.	Risks documented in Manual Handling Code assessment document but generally the buggies are likely to be the less hazardous mode of the four.	Refer document 1.
3. The use of motorcycles in mail delivery has an elevated level of hazard particularly when delivering in terrain that is hilly, and on surfaces that are slippery and uneven.	Likely to be the same issues as for the motorcycle but the bicycle may be worse because there is little power (human strength only) and small tyre contact area. The bicycle may also be top heavy because of the large front carrier.	Similar to be the bicycle. The E-trike may be difficult to control on adverse lateral slopes and could tip over in some circumstances.	Generally not a problem. While the buggy might be awkward to control in some circumstances it is unlikely to present actual risk to PDOs.	There does not appear to have been enough clarification of the road-related hazards even though the problems are known, particularly for the motorcycles. The accident records for bicycles are not known but cyclists are always at high levels of risk on roads.

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Equipment issues				
1. The motorcycles or panniers are not sufficiently adjustable to suit riders and therefore do not accord with basic ergonomics principles for the design of work equipment.	Likely to be the same issues as per the motorcycle. Front letter container is a potential balance problem and may require extended forward reaching. NB The bicycle has not been examined in detail by the authors.	Similar issues to those of the motorcycle but potentially less hazardous if the rear bin causes the PDO to dismount in order to access it (rather than reach back from the seat). NB. Same caveat as for bicycles.	Would not expect this to be an issue for the buggies but this matter is somewhat unclear as the buggies have not been examined by the authors of this report.	Despite the emphasis on the design of the front letter carrier for SBD, the equipment design for mail-carrying is not very good.
2. The length of time spent on these motorcycles every day is judged to be unacceptable because the lack of adjustment will cause many PDOs to spend long periods in slumped and unsupported sitting while subject to whole body vibration, exacerbated by the weight of the helmet.	Some similar issues to those of the motorcycle. Hand/arm vibration risk still applies due to tight gripping. Cyclists' helmet is much lighter and there has been an option to not wear it (does this still apply?)	Similar to both motorcycle and bicycle.	Issue of prolonged unsupported standing and walking with unclear opportunities for rest breaks. The overall physical demands imposed by these buggies are unclear.	This can only be addressed by reviewing the design of the whole system of work, rather than just incrementally changing parts of it at a time.
3. The bundle sizes of 70 mm and 90 mm that are required by the design of the FLC are too large for many smaller sizes of hands.	Likely to be the same issues as per the motorcycle.	Likely to be the same issues as per the motorcycle.	Likely to be the same issues as per the motorcycle.	PDOs self-select smaller bundles which means there are more bundles. One manual handling problem is exchanged for another.
4. While the front letter carrier is simply an adaptation of the previous bag, the compartmental design imposes	Likely to be the same issues as per the motorcycle.	Likely to be the same issues as per the motorcycle.	– Difficult to tell from current pictorial information – appears two different	Refer comments in (1) and (2) above.

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additional physical demands on the PDOs using it in respect of neck movements and upper limb actions.			layouts available. Cannot be clearly assessed as the two buggies have not been sighted by us.	
5. The weight of and heat generated by the current helmet combine to undermine the comfort and increase fatigue of PDOs, compounded by the neck posture required for the task.	The cyclists use a lighter helmet which may cause temperature discomfort in some circumstances but is generally not a problem for biomechanical stress to the neck.	The cyclists use a lighter helmet which may cause temperature discomfort in some circumstances but is generally not a problem for biomechanical stress to the neck.	Not an issue for buggy users.	
6. The motorcycle and its attachments are not adequately developed as they should be for this type of work.	Likely to be the same issues as per the motorcycle.	Likely to be the same issues as per the motorcycle.	Need to view the buggy prototypes in action to assess. There are significant differences between the buggies in terms of wheel size and arrangements, and the configuration of the mail carrying and merging. We are not clear whether the buggies are of an adequate standard of design for SBD. The PT200 buggy appears to be a converted shopping trolley.	Refer all points above related to equipment design.