

Attachment 2: The modes of delivery against the National Code of Practice (manual tasks)

RISK FACTORS FROM THE NATIONAL CODE OF PRACTICE (manual handling)	ESTIMATED POTENTIAL FOR THE OCCURRENCE OF WORK-RELATED STRAIN OR INJURY FOR EACH OF THE FOUR MODES OF DELIVERY								COMMENTS
	<p>The probable existence of RISK for each factor is derived from the criteria in the National Standard and Code of Practice. RISK is judged to exist when there is a greater than moderate likelihood of either acute (sudden) strain or injury, or gradual onset chronic injury. Estimates incl. <u>repetitive work</u> (> twice/min); <u>sustained work</u> (>30 secs at a time); <u>long duration</u> (> two hours per shift or > 60 minutes at a time). Ratings of estimated risk: ✓ = risk judged to exist. ✗ = risk judged not to exist. ? = uncertainty of risk.</p>								
	HONDA 110 MOTORCYCLE		POWERED & NON-POWERED BICYCLES		PEDAL-ASSISTED E-TRIKES		PUSH BUGGIES (walk along)		
<i>acute</i>	<i>chronic</i>	<i>acute</i>	<i>chronic</i>	<i>acute</i>	<i>chronic</i>	<i>acute</i>	<i>chronic</i>		

REPETITIVE or SUSTAINED POSTURE, MOVEMENTS, or FORCES									
Bending the spine forwards or sideways $\geq 20^\circ$	✓	✓	✓	✓	✓	✓	?	?	This is a problem with the seated conveyances because being seated constrains the range of available body movements. Working in standing (the buggy) allows more freedom of body posture except when posting the mail, as most letterboxes are low and the PDO will need to bend to many of them.
Twisting the spine $\geq 20^\circ$	✓	✓	✓	✓	✓	✓	✗	?	Less twisting with the bicycle and E-trike as PDO can stand and rotate from hips. Least twisting with the buggy as the body is not constrained by sitting.
Any visible backward bending	✓	✓	✓	✓	✓	✓	✗	✗	Caused by reaching back to panniers. Will occur with all conveyances except buggy.
Bending the head forwards or sideways $\geq 20^\circ$	✗	✓	✗	✓	✗	✓	✗	✓	A consequence of the low position of the mail carriers.
Any visible bending of the head backwards	✗	✗	✗	✗	✗	✗	✗	✗	Rare in mail delivery.
Twisting the neck $\geq 20^\circ$	✗	✓	✗	✓	✗	✓	✗	✗	Motorcycle is worst. Less twisting with bicycle and E-trike as PDO can stand and rotate from hips. Least with buggy.
Working with one or both hands above shoulder ht.	✗	✗	✗	✗	✗	✗	✗	✗	May occur if letterboxes are tall but generally not common in mail delivery.

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Reaching forwards or sideways ≥ 30 cm from the body	✓	✓	?	?	✓	✓	?	?	Most letterboxes are outside the 30 cm range when sitting on a motorcycle and a similar problem may exist with the E-trike. A bicycle is more manoeuvrable and will enable PDOs to get close to the drop point. The buggy does not constrain access by the PDO. Forward reach to mail in carriers may be an issue with all of the conveyances.
Reaching behind the body	✓	✓	✓	✓	?	?	✗	✗	Known to be a problem with the motorcycles and likely to be so with the bicycles also. Reaching to the rear bin on the trikes may be impractical and PDOs will have to dismount and walk around. Buggy OK.
Squatting, kneeling, crawling, lying, semi-lying,	✗	✗	✗	✗	✗	✗	✗	✗	Not known to occur in postal work although they may occur when carrying out maintenance. Not

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or jumping.									considered a significant issue.
Standing with most of the body weight on one leg.	✓	✓	✓	✓	✗	✗	✗	✗	Occurs at every stop for users of motorcycles and bicycles, although bicycle users have the option to dismount and straddle the cross bar, this standing evenly on two legs.
Working with the fingers close together or wide apart.	✗	✗	✗	✗	✗	✗	✗	✗	This does occur throughout the mail delivery process but not at levels thought to be hazardous. Bundle sizes are set by AP, but PDOs size their grasp to individual comfort levels.
Very fast movements.	✗	✗	✗	✗	✗	✗	✗	✗	Not considered an issue of concern.
Bending of the wrist:									
a. ≥ 15° flexion or extension where the wrist is fairly straight during work.	✗	✓	✗	✓	✗	✓	✗	✓	The same hand actions apply irrespective of the conveyance being used. They may be slightly more exaggerated with the motorcycle because of the cramped and constrained work posture caused by the configuration of that machine.
b. ≥ 15° flexion or 35° extension when gripping.	✗	✓	✗	✓	✗	✓	✗	✓	The hand actions may be less pronounced with the buggy because there are fewer constraints on the work posture.
c. ≥ 15° radial or 20° ulnar deviation.	✗	✓	✗	✓	✗	✓	✗	✓	
Lifting, lowering, or carrying.	✗	✗	✗	✗	✗	✗	✗	✗	No risk likely due to handling anything of substantial weight.

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Carrying with one hand or on one side of the body.	✓	✗	✓	✗	✓	✗	?	?	Common to all means of transport because of the direction of rotation of rounds. Could be less with buggy users because the PDOs are not constrained by straddling and/or sitting on the conveyance.
Exerting force with one hand or on one side of the body.	✗	✓	✓	✗	✓	✗	✗	✗	Often occurs when forcing bundles into the RMC section of the FLC. May also occur with some mailboxes. It is aggravated by being constrained by the conveyance - motorcycle, bicycle, and E-trike. Should not be a problem with buggy users who are not constrained by being seated.
Pushing, pulling, or dragging.	✗	✗	✗	✗	✗	✗	✗	✗	Not usual in postal delivery as is more typically applied to heavier industrial work.
Gripping with the fingers pinched together or held wide apart.	✓	✓	✓	✓	✓	✓	✓	✓	All mail handling involves pinch gripping. It is often repetitive and sometimes forceful but not often sustained.
Using a finger grip, pinch grip, or an open handed grip to handle a load.	✓	✓	✓	✓	✓	✓	✓	✓	Typically applies when handling bundles from the panniers. Worse when the PDO is constrained by sitting, so worse on the motorcycle and bicycle. May be less with the E-trike if the bundles not handled from the seat. Should be OK with the buggy.
Exerting force while in an awkward posture including: Supporting items while	✓	✓	?	?	?	?	✗	✗	More intended for heavier manual handling but would apply when working in awkward postures such as being constrained by the seat of the motorcycle and trying to handle bundles from (say) the panniers. May be less significant with the

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arms or shoulders are in an awkward posture. Moving items while legs are in an awkward posture.									bicycle and E-trike where the PDO can dismount more easily to improve their body position. Should not be a problem with buggy users.
Holding, supporting or restraining any object, person, animal or tool.	✗	✗	✗	✗	✗	✗	✗	✗	Not applicable to postal work.
LONG DURATION									
More than two hours per shift or continually for more than 60 minutes at a time	✓	✓	✓	✓	✓	✓	✓	✓	The duration of the work - 4-5 hours or more are typical – together with insufficient break opportunities make this a significant issue irrespective of the mode of delivery employed.
HIGH FORCE									
None of the listed factors for high force are considered applicable to SBD work.									
	✗	✗	✗	✗	✗	✗	✗	✗	
THE WORK ENVIRONMENT or THE WAY THE WORK IS ORGANIZED									
Of those listed, the following are considered relevant									

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Hand-arm vibration	✗	✓ If at or above the crucial exposure level	✗	✗	✗	✗	✗	✗	✗	An unresolved issue with the motorcycles but believed to be a potential hazard. . Potential also on bicycles, the extent dependent on terrain. <i>(Carpal tunnel injuries are not uncommon due to sustained and forceful gripping of bicycle handgrips)</i>
Whole body vibration	✗	✓ If at or above the crucial exposure level	✗	✗	✗	✗	✗	✗	✗	An unresolved issue with the motorcycles but believed to be a potential hazard.
Low temperatures	✗	✗	✗	✗	✗	✗	✗	✗	✗	Uncomfortable at times but not considered a significant OHS issue. Same for all modes of delivery.

Wearing thick clothing that restricts movement while working in cold conditions, e.g. gloves.	✓	✗	✓	✗	✓	✗	✗	✗	✗	Could be more a factor for PDOs who are seated, and for those who are pedalling (leg movements, temperature increase, etc). Unlikely to affect users of buggies.
High air temperatures.	✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible			Same for all modes of delivery.

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Radiant heat.	✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible		Same for all modes of delivery.
Wearing heavy protective clothing while working in hot conditions.	✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible		Same for all modes of delivery.
High humidity.	✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible		✓ Not injury per se but other health consequences are possible		Same for all modes of delivery.
Windy conditions combined with hot or cold weather.	✓	✗	✓	✗	✓	✗	✓	✗	Similar potential for all modes of delivery.
Wind chill caused by exposure to wind in low temperatures.	✓	✗	✓	✗	✓	✗	✓	✗	Similar potential for all modes of delivery.
Systems of work...that encourage workers to skip breaks to finish early.	✓	✓	✓	✓	✓	✓	✓	✓	Same for all modes of delivery.

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Sustained high levels of attention and concentration.	✓	✓	✓	✓	✓	✓	✓	✓	Same for all modes of delivery.
Workers frequently needing to meet tight deadlines.	✓	✓	✓	✓	✓	✓	✓	✓	Same for all modes of delivery.
Sudden changes in workload, or seasonal changes in volume without any mechanisms for dealing with the change.	✓	✗	✓	✗	✓	✗	✓	✗	Same for all modes of delivery.
Levels of physical work demand that workers find difficult to maintain (pace).	✓	✗	✓	✗	✓	✗	✓	✗	Same for all modes of delivery.
REPORTS of MSD ASSOCIATED WITH THE WORK									
Reports are received or recorded.	✓	✓	✓	✓	✓	✓	✓	✓	Same for all modes of delivery.