Sea (EA)  N mechanical failure  Drainage: sewer (UU, WW)  Y operational failure/ breach of defence  River: Ordinary  Y system 'tide locked' (ie drain can not discharge due to high river level)  Y blockage of bridge  N blockage in culvert/pipe	LOCATION: NGR Area/street name  Various location Boundary		ons within the Wirral		REFERENCE NO.	W24	.9.12/0	.12/01-36						
**Responsible Risk Management Authority United Utilities. **I Have RMA responded appropriately? Main contact (name& no) Various contacts were made appropriately? Main contact (name& no) Various contacts were made Maximum depth (m) 750mm History of flooding? An uniber of the reported locations had flooded before.  **SOURCE OF FLOODING**  SOURCE OF FLOODING**  Source (EA) N mechanical failure		t date 24/09/12 End dat			&	25/09/12	Data collectio	n date		2/10/12 – 1/11/12				
Management Authority (RMA)   Main contact (name& no)   Various contacts were made   Maximum depth (m)   750mm   History of flooding?   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported locations had flooded before.   A number of the reported had before.   A nu	& time			ume			Observer			J.H. Baker				
Maximum depth (m) 750mm History of flooding? An unber of the reported locations had flooded before.  SOURCE OF FLOODING River: Main (EA) Y drainage capacity exceeded Y Sea (EA) N mechanical failure Propertional Propertional Failure Propertional	Management Authority (RMA) United U					appropriately?								
River: Main (EA)  Sea (EA)  N mechanical failure  Drainage: sewer (UU, WW)  Y operational failure/ breach of defence  River: Ordinary  Y system 'tide locked' (ie drain can not discharge due to high river level)  Y system 'tide locked' (ie drain can not discharge due to high river level)  Y system' tide locked' (ie drain can not discharge due to high river level)  Y surface water  Y blockage of bridge  N blockage in culvert/pipe  Y surface water  Y unknown/other (give details)  Additional comments on the cause of flooding: An extreme storm event (1 in 20/25 yr event) hit the Wirral or saturated ground with many of the rivers/watercourses and sewers already. It was not possible at a number of locations to confirm the reported flooding.  Is level survey required? (mark high water level/wrack)  N Surveyed  N/A  EFFECT  Properties flooded (residential)  Properties flooded (residential)  Y internal  1 external  24  Properties flooded (commercial)  Infrastructure affected (list)  Public sewer system. Main rivers and ordinary watercourse culverts  Roads affected (list)  Y a number of roads were severely affected by flood water and were closed.  Reeds Lane/Reedville Grove, China Farm Lane, Spital Road, Raby Mere Road, Quarry Road Bromborough Road, Neston Road, Brimstage Lane, Brimstage, Brimstage Road, Brimstage Arrowe Brook Lane, Greasby, Saughall Massie Road, Newton Thornton Common Road, Thornton Hough, Clatterbridge Road (Claire House). Clatterbridge, Willaston Road, Raby and Birkenhead Road, Meols.  Other (list)  Many of the public sewers surcharged preventing the highway gullies from discharging and a number of culverts under the highway were unable to cope with the volume of water and flows across the highway were reported.				m		,		no)	A number of the reporter locations had flooded		rted			
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Sea (EA) N mechanical failure	River: Mai	in (EA)			Υ	drainage ca	pacity exceeded							Υ
Drainage: sewer (UU, WW)  River: Ordinary  Y system 'tide locked' (ie drain can not discharge due to high river level)  Y system 'tide locked' (ie drain can not discharge due to high river level)  Y blockage of bridge  N blockage in culvert/pipe  Y blockage in channel  N blockage of screen  N blockage in culvert/pipe  N blockage in culvert /pipe  N blockage		/			N									N
River: Ordinary  Y system 'tide locked' (ie drain can not discharge due to high river level)  Prainage: highway  Y blockage of bridge  N blockage in culvert/pipe  Y cunknown (give details)  Other/unknown (give details)  Additional comments on the cause of flooding: An extreme storm event (1 in 20/25 yr event) hit the Wirral or saturated ground with many of the rivers/watercourses and sewers already. It was not possible at a number or locations to confirm the reported flooding.  Is level survey required? (mark high water level/wrack)  N Surveyed  N/A  EFFECT  Properties flooded (residential)  Y internal  Infrastructure affected (list)  Public sewer system. Main rivers and ordinary watercourse culverts  Roads affected (list)  Y A number of roads were severely affected by flood water and were closed.  Reeds Lane/Reedville Grove, China Farm Lane, Spital Road, Raby Mere Road, Quarry Road Bromborough Road, Neston Road, Brimstage, Brimstage, Brimstage, Brimstage, Broad, Glaire House). Clatterbridge, Willaston Road, Raby and Birkenhead Road, Meols.  Other (list)  Many of the public sewers surcharged preventing the highway gullies from discharging and a number of culverts under the highway were unable to cope with the volume of water and flows across the highway were reported.	` ′	sewer (U	U, W\	<b>N</b> )				defence	<del></del>					N
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Surface water  Y blockage in channel N blockage of screen  Ground water  Y unknown/other (give details)  Additional comments on the cause of flooding: An extreme storm event (1 in 20/25 yr event) hit the Wirral or Monday 24 September 2012, following an extended period of intermittent heavy rain. The storm fell or saturated ground with many of the rivers/watercourses and sewers already. It was not possible at a number of locations to confirm the reported flooding.  Is level survey required? (mark high water level/wrack)  N Surveyed  N/A  EFFECT  Properties flooded (residential)  Properties flooded (commercial)  Y internal 1 external 24  Properties flooded (commercial)  Public sewer system. Main rivers and ordinary watercourse culverts  Roads affected (list)  Y A number of roads were severely affected by flood water and were closed.  Reeds Lane/Reedville Grove, China Farm Lane, Spital Road, Raby Mere Road, Quarry Road Bromborough Road, Neston Road, Brimstage Lane, Brimstage, Brimstage Road, Brimstage Arrowe Brook Lane, Greasby, Saughall Massie Road, Newton Thornton Common Road, Thornton Hough, Clatterbridge Road (Claire House). Clatterbridge, Willaston Road, Raby and Birkenhead Road, Meols.  Other (list)  Many of the public sewers surcharged preventing the highway gullies from discharging and a number of culverts under the highway were unable to cope with the volume of water and flows across the highway were reported.					+							1		Y
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Map/ sketch of flood	Additional Monday 2 saturated locations to the location to the locatio	commen 24 Septer ground w to confirm rvey requ s flooded ( s flooded ( ture affect	ts on mber ith ma the re ired? reside commed (lis	the cause 2012, for any of the eported (mark he ential)	gh was y Y Put culv Y A were Rate Roa Arro (Classical Colors of the colo	internal internal internal internal olic sewer system e closed. eds Lane/Reedroy Mere Road, ad, Brimstage Lowe Brook Lane ornton Commonaire House). Cla	d period of intes and sewers also and sewers also and sewers also and sewers also and also are. Main rivers are, Brimstage, a. Greasby, Saugary Road, Thorntor atterbridge, Willa	xternal xternal a Farm I bomborou Brimsta Hough,	Surve  24 1 rdinar d by f  Lane, gh Roge Rossie F Clatt	yed  yed  lood water Spital Re bad, Nesi bad, Brim Road, Ne erbridge	The sble at course er and coad, ton stage wton	torm a nun N/A	fell nber	on of
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ACTION TAKEN: All properties visited and details of flooding noted. Road gullies in vicinity of the properties checked and no problems identified. Residents advised to contact Water Company to report flooding.

ACTION REQUIRED: Water Companies to investigate public sewers in vicinity of flooded properties.

FURTHER INVESTIGATION: Investigations of locations were gullies are connected to a highway drain rather than a public sewer. However, the existing drainage systems as a whole were unable to deal with the amount of surface water generated by the storm event. Once storm had abated all flooding drained away.

OTHER INFO: It is unlikely that any improvements/additions to the highway drainage system would prevent future flooding from storm events of this magnitude. The Water Companies only design new sewers not to flood during this type of event they will however surcharge, which will prevent gullies connected to them from discharging.

PHOTOS						
Ref	Description	Direction of view				
1101	Boomption				Diroo	
PERSONS	AFFECTED - IN	DIVIDUAL FLOOD LEVELS				
Address		Contact Name	Contact Number	Flood		Threshold /
				(appro	x m)	Floor Level
Is there a re	esidents group?	YES / NO / PENDING				