United Utilities Inspection Sheet
Development Remedial Work
(Manholes and gravity sewers)

Site name:	Winnington Phase 2	
Site address		
District Council:		
United Utilities Notification number	**42**	00010124
United Utilities Order number	**55**	

Accurate 'as built' drawing received?	No
Development achieved 50% occupancy?	Yes
Type of remedial list:	Manhole and sewers remedial list

Adoptions Engineer:		Telephone:	
		Email:	
Developer:		Telephone:	
Contact name:		Email:	
Contractor:		Telephone:	
Contact name:		Email:	

Please note a final inspection cannot be completed until the development is completed and has a minimum of 50% occupancy. Where the status 'observation feedback during construction' is used, this is not the final inspection. Additional actions may arise upon completion of the final inspection.

MANHOLE REMEDIAL WORK

MH reference:	Status:	No. formal inspections	Defect observed	Action(s)
F1				
F23	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Cover and frame damaged	Cover and frame to be replaced due to being damaged. Please ensure replacement is to the correct specification i.e. D400 cover and frame, 150mm deep, unless otherwise specified.
	See action(s)		Obstruction evident within channel	Please ensure that the channel invert is in good alignment and is free from restriction.
F43	Passed - Actions listed confirmed as completed		Other (see comments)	Cover slab to be replaced with correct opening size.
	Passed - Actions listed confirmed as completed		Ladder required	Ladder required as depth to benching greater than 3m. Step irons to be removed and a ladder is to be installed as per UU standard detail number STND/01/002. Please note if you wish to install a GRP ladder, this will need to be technically approved with the Adoptions Engineer. Contact details can be found at the top of this form.
	See action(s)		Other (see comments)	Top step of ladder too low, please raise this to achieve 675mm to top step ensuring top rung is useable.
F44	See action(s)		Cover and frame damaged	Cover and frame to be replaced due to being damaged. Please ensure replacement is to the correct specification i.e. D400 cover and frame, 150mm deep, unless otherwise specified.

	See action(s)		Unable to inspect	Unable to lift.
F45	Passed		None. Passed	None (further inspection will be carried out to assess condition upon completion of the 12 month maintenance period).
F46	Passed - Actions listed confirmed as completed		Other (see comments)	Cover slab to be replaced with correct opening size.
F47	Passed		None. Passed	None (further inspection will be carried out to assess condition upon completion of the 12 month maintenance period).
F48	See action(s)		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	See action(s)		Other (see comments)	Benching is holding water, this could be due to either debris but please check for appropiate fall across benching once clean.
F49	See action(s)		Top step inaccessible	Top double rung step to be lowered, and other step rungs to be adjusted with correct spacing leading down to manhole benching, in alignment with the cover slab opening.
	See action(s)		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
F50	Passed - Actions listed confirmed as completed		Other (see comments)	Cover slab to be replaced with correct opening size.
F51	See action(s)		Obstruction evident within channel	Please ensure that the channel invert is in good alignment and is free from restriction.
	See action(s)		Other (see comments)	Backdrop connection to be repaired and sealed.
	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
	See action(s)		Benching defective	Please repair as appropriate to make good area of defective benching.
F52	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.

	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
F53	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
F54	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
	See action(s)		Other (see comments)	Cut back and repair backdrop connection.
F55	See action(s)		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	See action(s)		Other (see comments)	Install risers and cover and frame suitable to opening in cover slab.
F56	See action(s)		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	See action(s)		Distance to first step outside of tolerance (max. distance 675mm)	Please raise the level of the cover slab and install new double rung step irons less than or equal to 675mm from ground level, permitting foot access (150mm approx. minimum) and installing new step irons below at the correct sequence.
	See action(s)		Channel defective	Lateral connections to connect to the main channel as half channels, swept with the direction of flow (at soffit level).
	See action(s)		Benching defective	Please repair as appropriate to make good area of defective benching.

F57	See action(s)		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	See action(s)		Lifting eyes not sealed	Please mortar point as appropriate.
	See action(s)		Other (see comments)	Install risers and cover and frame suitable to opening in cover slab.
F58	Passed		None. Passed	None (further inspection will be carried out to assess condition upon completion of the 12 month maintenance period).
F63	See action(s)		Distance to first step outside of tolerance (max. distance 675mm)	Please raise the level of the cover slab and install new double rung step irons less than or equal to 675mm from ground level, permitting foot access (150mm approx. minimum) and installing new step irons below at the correct sequence.
	Passed - Actions listed confirmed as completed		Other (see comments)	Incorrect opening size.
	Passed - Actions listed confirmed as completed		Other (see comments)	Swept connection required.
F64	Passed - Actions listed confirmed as completed		Other (see comments)	Incoming connection on 90 degrees to flow, connection to be rechannelled on a swept bend to the flow. Coverslab to be changed to one with the correct opening size.
F65	Passed - Actions listed confirmed as completed		Other (see comments)	700x700 coverslab to be replaced to the correct opening size.
F66	Passed - Actions listed confirmed as completed		Other (see comments)	Incoming connection on 90 degrees to flow, connection to be rechannelled on a swept bend to the flow.
F67	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
	See action(s)		Other (see comments)	Ladder to be installed on shortened brackets.
	See action(s)		Other (see comments)	Cut back and repair backdrop connection.
F68				
F71	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
	See action(s)		Benching defective	Bench out redundant tail.

F72	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
F73	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
F74	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
	See action(s)		Other (see comments)	Seal Toc strip
F93	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
	See action(s)		Other (see comments)	Tidy incoming connections.
F94	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
	See action(s)		Channel defective	Channel to be checked once clean.

F95	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
F96	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
	See action(s)		Other (see comments)	Sweep incoming connection and extend channeling.
F97				
F98	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
F113	See action(s)		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	See action(s)		Cover slab (minor damage)	Please use an epoxy resin to repair area of minor damage.
F114	Passed - Actions listed confirmed as completed		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	Passed - Actions listed confirmed as completed		Other (see comments)	Bend noted and to be checked on next visit.

S22	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
S23	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Cover and frame damaged	Cover and frame to be replaced due to being damaged. Please ensure replacement is to the correct specification i.e. D400 cover and frame, 150mm deep, unless otherwise specified.
	See action(s)		Cover slab (minor damage)	Please use an epoxy resin to repair area of minor damage.
S50	Passed		None. Passed	None (further inspection will be carried out to assess condition upon completion of the 12 month maintenance period).
S51	See action(s)		Unable to inspect	Manhole Buried.
S60				
S61				
S62				
S63				
S64	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Unable to inspect	Unable to lift
	See action(s)		Cover and frame damaged	Cover and frame to be replaced due to being damaged. Please ensure replacement is to the correct specification i.e. D400 cover and frame, 150mm deep, unless otherwise specified.

S64a	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Manhole hasn't been benched.	Manhole yet to be benched. Please note benching should be built up with a 1:10 - 1:30 gradient.
S65	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
S66	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Manhole hasn't been benched.	Manhole yet to be benched. Please note benching should be built up with a 1:10 - 1:30 gradient.
S67	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Mortar between brickwork/ raising pieces is not flush	Please remove any excess mortar 'snots' and mortar point as appropriate to flush and seal joints.
S68	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Other (see comments)	Tidy incoming connection
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.

S69	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
S71	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
S72	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
S72A	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
S73	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.

S74	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
S75	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Break down to coverslab and rebuild.
	See action(s)		Safety chain required on outlet pipe	Where pipe diameter is 525mm or greater, a safety chain is required. Please install the safety chain arrangement to the manhole outlet (with eyelets side adjacent to manhole access). Normal operation position, the chain position should be parked at the fixed end (to one side) out of the flow.
S76	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
	See action(s)		Safety chain required on outlet pipe	Where pipe diameter is 525mm or greater, a safety chain is required. Please install the safety chain arrangement to the manhole outlet (with eyelets side adjacent to manhole access). Normal operation position, the chain position should be parked at the fixed end (to one side) out of the flow.
S77	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.

	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
	See action(s)		Top step inaccessible	Top double rung step to be lowered, and other step rungs to be adjusted with correct spacing leading down to manhole benching, in alignment with the cover slab opening.
S78	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
	See action(s)		Other (see comments)	Seal between cover slab and ring.
S79	See action(s)		Cover and frame to be lifted to finished road level	When lifting frame to finished road level, please consider that cover and frame should be D400 with 150mm deep frame (unless specified as otherwise, i.e. E600 for heavy traffic on approved drawing) and have a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces with mortar beds no thicker than 12mm. Please note the maximum distance to first step of 675mm must be achieved.
	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.
	See action(s)		Safety chain required on outlet pipe	Where pipe diameter is 525mm or greater, a safety chain is required. Please install the safety chain arrangement to the manhole outlet (with eyelets side adjacent to manhole access). Normal operation position, the chain position should be parked at the fixed end (to one side) out of the flow.
	See action(s)		Channel defective	A more defined channel required.
	See action(s)		Benching to be re-configured due to insufficient landing area	Please re-configure manhole to achieve benching detail on the agreed manhole schedule as there is an insufficient landing area. Please note benching should be built up with a 1:10 - 1:30 gradient.
	See action(s)		Other (see comments)	Spin cover slab to new landing area
	See action(s)		Other (see comments)	Provide access into chamber to new landing area
S80				

S98	See action(s)		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	See action(s)		Other (see comments)	Raising works to be tidied up and then reinspected.
S99	See action(s)		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	See action(s)		Other (see comments)	Raising works to be tidied up and then reinspected.
S100	Passed - Actions listed confirmed as completed		Other (see comments)	Incorrect opening size in coverslab - to be replaced.
	See action(s)		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	See action(s)		Other (see comments)	Raising works to be tidied up and then reinspected.
S102	See action(s)		Other (see comments)	Recess required for step access to invert.
S103				
S104			Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
			Other (see comments)	Raising works to be tidied up and then reinspected.
S110	Passed - Actions listed confirmed as completed		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	Passed - Actions listed confirmed as completed		Mortar between brickwork/ raising pieces is not flush	Please remove any excess mortar 'snots' and mortar point as appropriate to flush and seal joints.
S111	Passed		None. Passed	None (further inspection will be carried out to assess condition upon completion of the 12 month maintenance period).
S112	Passed		None. Passed	None (further inspection will be carried out to assess condition upon completion of the 12 month maintenance period).
S113	Passed		None. Passed	None (further inspection will be carried out to assess condition upon completion of the 12 month maintenance period).
S121	Passed - Actions listed confirmed as completed		Debris	Manhole to be cleaned out. Please clean to ensure that no debris remains on the benching and that all debris is removed from the channel.
	Passed - Actions listed confirmed as completed		Obstruction evident within channel	Please ensure that the channel invert is in good alignment and is free from restriction.
	Passed - Actions listed confirmed as completed		Cover and frame damaged	Cover and frame to be replaced due to being damaged. Please ensure replacement is to the correct specification i.e. D400 cover and frame, 150mm deep, unless otherwise specified.
S190	See action(s)		Adjusting brickwork defective/ showing signs of deterioration	Manhole to be re-bed. When re-bedding please comply to UU asset standard as follows; Adjusting brickwork should be a minimum of 1 course, maximum of 3 class B engineering bricks or pre-cast concrete raising pieces, bedded on suitably strong mortar no thicker than 12mm between the manhole frame and top course of masonry. Please note maximum distance to first step of 675mm will need to be achieved.

	See action(s)		Channel defective	Lateral connections to connect to the main channel as half channels, swept with the direction of flow (at soffit level).

SEWER REMEDIAL WORK				
MH to MH length	Status	Approx. meterage	Defect observed	Action(s)
F1-F98				
F23-F69	Passed			
F43-F46	Passed			
F44-F46				
F46-F47	Passed			
F47-F48	Passed			
F48-F49	Passed			

F49-F50	Passed			
F50-F50a	Passed			
F50a-F51				
F51-F52	Passed			
F52-F53	Passed			
F53-F54	Passed			
F54-F67	Passed			
F55-F63	Passed			
F56-F57				
F57-F58	See action(s)	0m	Obstruction within pipe	Sewer length to be cleaned and post cleaning CCTV survey to be provided to determine whether or not there is any further remedial work required.
	See action(s)	11m	Obstruction within pipe	Sewer length to be cleaned and post cleaning CCTV survey to be provided to determine whether or not there is any further remedial work required.
F58-F63				
F63-F64	Passed			
F64-F65	Passed			
F65-F66	See action(s)	35m	Back fall observed within line of sewer	Please confirm levels within the upstream and downstream manhole and confirm gradient/ fall of sewer is as approved on the longitudinal section. Developer to confirm section to be re-layed and post-repair CCTV to be provided.
	See action(s)	40m	Back fall observed within line of sewer	Please confirm levels within the upstream and downstream manhole and confirm gradient/ fall of sewer is as approved on the longitudinal section. Developer to confirm section to be re-layed and post-repair CCTV to be provided.
		57m	Back fall observed within line of sewer	Please confirm levels within the upstream and downstream manhole and confirm gradient/ fall of sewer is as approved on the longitudinal section. Developer to confirm section to be re-layed and post-repair CCTV to be provided.
F66-F67	Passed			
F67-F68	Passed			
F68-F98	See action(s)	30m	Other (see comments)	Sewer length holding from 30m, then a jump in the footage and the level of holding is reduced. Please provide continious footage of the length for review.
F69-F70	Passed			
F70-F96	Passed			
F71-F72	Passed			
F72-F74	Passed			
F73-F74	Passed			
F74-F94	Passed - Actions listed confirmed as completed	7m	Deformation within pipe	Affected section of the pipe to be replaced and post repair CCTV survey to be provided.
F93-F94	Passed			
F94-F95	Passed			
F95-F96				
F96-F97				
F97-F98				
F98-Wet Well				
F190-F104	Passed			
F113-F114	See action(s)	13m	Deformation within pipe	Affected section of the pipe to be replaced and post repair CCTV survey to be provided.
F114-F115	Passed			
S22-S23	Passed			
S23-S60	See action(s)		Other (see comments)	Recorded as 225mm whereas 300mm on design, diameter to be checked on MH inspection.
S50-S51	Passed			
S51-S52	Passed			
S60-S102	Passed			
S61-S62				
S62-S63				
S63-S71				
S64-S66	Passed			

S65-S66	Passed			
S66-S67	Passed			
S67-S68	Passed			
S68-S69	Passed			
S69-S71	Passed			
S71-S75	Passed			
S72A-S72	Passed			
S74-S72	Passed - Actions listed confirmed as completed	17m	Deformation within pipe	Affected section of the pipe to be replaced and post repair CCTV survey to be provided.
	Passed - Actions listed confirmed as completed	30m	Deformation within pipe	Affected section of the pipe to be replaced and post repair CCTV survey to be provided.
	Passed - Actions listed confirmed as completed	39m	Deformation within pipe	Affected section of the pipe to be replaced and post repair CCTV survey to be provided.
S73-S74	Passed			
S74-S75	Passed			
S75-S76	Passed			
S76-S77	Passed			
S77-S78	See action(s)	6m	Seeping infiltration	Affected section of the pipe to be replaced and post repair CCTV survey to be provided.
S78-S79	Passed			
S79-S80	Passed			
S80-S106	Passed			
S98-S99	Passed			
S99-S100	Passed			
S100-S101	Passed			
S102-S77	Passed			
S103-S104	Passed			
S104-S105	Passed			
S110-S111	Passed			
S111-S112	Passed			
S112-S113	Passed			
S113-S114	Passed			
S121-S110	Passed			

You may wish to refer to United Utilities website for Developer Services. This can be found using the following link:
http://www.unitedutilities.com/builder-developer-wastewater.aspx

Additional comments: