

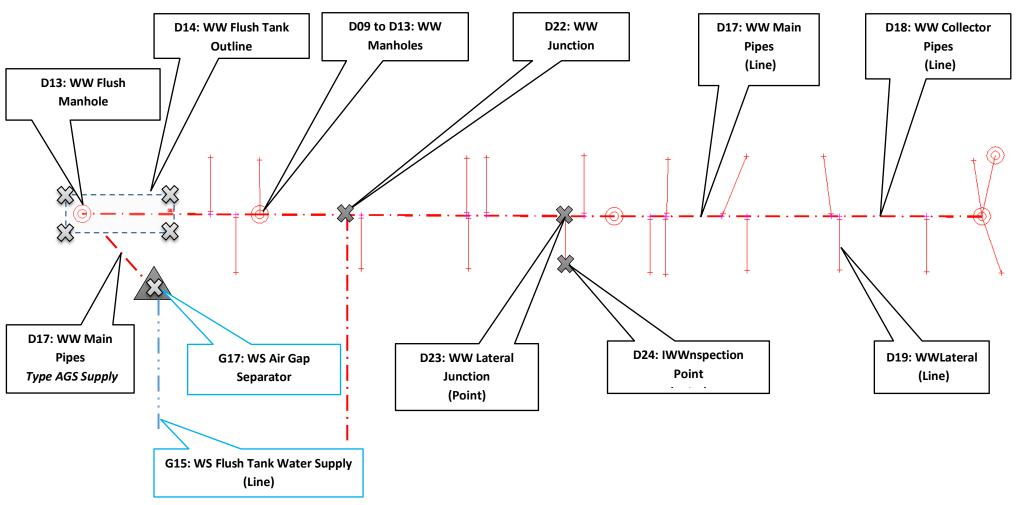
## **Appendix D As-built Requirements for Gravity Wastewater**

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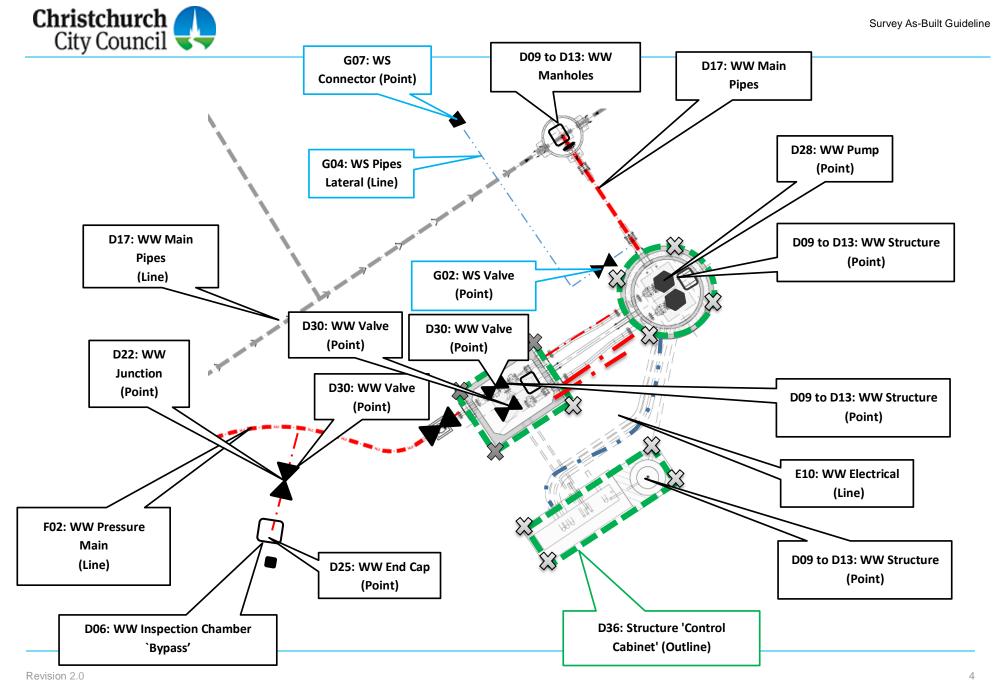


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Gravity Wastewater – Overview





Point Type D06 "Point Asset Inputs"			ХҮ
CAT Column	SAG Description	Valid Values	V
A	Type of Point Feature	D06	V
В	Type of Manhole or Access	Inspection Chamber	
С	Asset Record Capture Type	Select from pick list: domAssetRecordCaptureType	
D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign	
E	Asset Unique Identifier	data - Text (100 Characters)	
F	Centre of Structure in Easting coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
G	Centre of Structure in Northing coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
Н	RL on lowest corner of lid - (m)	data - Decimal Number (6 Chars, 3 Decimals)	
I	RL at base of pit (lowest point) - (m)	data - Decimal Number (6 Chars, 3 Decimals)	) Flow _
J	Width and length of pit (e.g. 600x800) or diameter of pit - (mm)	data - Number	<del>/</del>
K	Date of commission	data - Date (dd/mm/yyyy)	(     i V
L	Location certainty - accuracy of data	Select from pick list: domLocationCertainty	
М	Name of main contractor who installed the asset	Select from pick list: domInstallationCompany	
N	Date of 'survey start'	data - Date (dd/mm/yyyy)	The second second
0	Style of access lid	Select from pick list: domAccessLidStyle	
Р	Shape of access lid	Select from pick list: domAccessLidShape	
Q	Manufacturer of asset	Select from pick list: domManufacturer	
R	Construction material	Select from pick list: domAccessConstruction	
S	Type of security on access	Select from pick list: domAccessSecurity	
Т	Pit angle - orientation of inner structure to nearest 5 degrees (rectangular pits only) - (degrees)	data - Number	
U	Treatment material for refurbished manholes	Select from pick list: domAccessTreatmentType	
V	Type of Flood Protection	Select from pick list: domWwAccessFloodProtectionType	
W	Construction material of Vent Plug	Select from pick list: domWwAccessVentPlugConstruction	
*All oth Col T: le Col U: le	nal Information er columns must be left "blank" or hold the value eave blank/unchanged for circular chambers eave blank/unchanged if N/A pendix C.1.1 for a CAT example.	e "LEAVE BLANK" as default in CAT	Lowest Corner Lid Z



				Lowest Corner Lid Z
	CAT Column	SAG Description	Valid Values	<del></del>
Ī	A	Type of Point Feature	D09	
p	В	Type of Manhole or Access	Select from pick list: domWwAccessType	
ente	С	Asset Record Capture Type	Select from pick list: domAssetRecordCaptureType	\
	D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign	
<u>o</u>	E	Asset Unique Identifier	data - Text (100 Characters)	44 74
>[	F	Centre of Structure in Easting coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
Φ	G	Centre of Structure in Northing coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
7	Н	RL on lowest corner of lid - (m)	data - Decimal Number (6 Chars, 3 Decimals)	<u> </u>
anhole		RL at base of pit (lowest point) - (m)	data - Decimal Number (6 Chars, 3 Decimals)	/
	J	Width and length of pit (e.g. 600x800) or diameter of pit - (mm)	data - Number	V
a	K	Date of commission	data - Date (dd/mm/yyyy)	Centre
$\mathbf{\Sigma}$	L	Location certainty - accuracy of data	Select from pick list: domLocationCertainty	struct
Ø	M	Name of main contractor who installed the asset	Select from pick list: domInstallationCompany	V x y
quare	N	Date of 'survey start'	data - Date (dd/mm/yyyy)	
ā	0	Style of access lid	Select from pick list: domAccessLidStyle	
$\exists$	Р	Shape of access lid	Select from pick list: domAccessLidShape	Committee of the Commit
S	Q	Manufacturer of asset	Select from pick list: domManufacturer	
	R	Construction material	Select from pick list: domAccessConstruction	
5	S	Type of security on access	Select from pick list: domAccessSecurity	
<b>X</b>	Т	Pit angle - orientation of inner structure to nearest 5 degrees (rectangular pits only) - (degrees)	data - Number	<del></del>
<u>.</u> .	U	Treatment material for refurbished manholes	Select from pick list: domAccessTreatmentType	
60	V	Type of Flood Protection	Select from pick list: domWwAccessFloodProtectionType	Manhole Base RL
	W	Construction material of Vent Plug	Select from pick list: domWwAccessVentPlugConstruction	7
				-
	Addition	nal Information		
	*All oth	er columns must be left "blank" or hold the value	"LEAVE BLANK" as default in CAT	



Point 1	ype   Die i emin lees inpale	D10 "Point Asset Inputs"	
CAT Columi	SAG Description	Valid Values	Lid Z
A B C D	Type of Point Feature	D10	
В	Type of Manhole or Access	Select from pick list: domWwAccessType	
С	Asset Record Capture Type	Select from pick list: domAssetRecordCaptureType	\
D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign	
∥ E	Asset Unique Identifier	data - Text (100 Characters)	
F	Centre of Structure in Easting coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
G	Centre of Structure in Northing coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	\ <b>     </b>
H	RL on lowest corner of lid - (m)	data - Decimal Number (6 Chars, 3 Decimals)	
1	RL at base of pit (lowest point) - (m)	data - Decimal Number (6 Chars, 3 Decimals)	
J	Width and length of pit (e.g. 600x800) or diameter of pit - (mm)	data - Number	
	Date of commission	data - Date (dd/mm/yyyy)	
L	Location certainty - accuracy of data	Select from pick list: domLocationCertainty	Cent
K L M	Name of main contractor who installed the asset	Select from pick list: domInstallationCompany	□ stru
N	Date of 'survey start'	data - Date (dd/mm/yyyy)	· · · · · · · · · · · · · · · · · · ·
0	Style of access lid	Select from pick list: domAccessLidStyle	v x
P	Shape of access lid	Select from pick list: domAccessLidShape	
PQ	Manufacturer of asset	Select from pick list: domManufacturer	
R	Construction material	Select from pick list: domAccessConstruction	
S	Type of security on access	Select from pick list: domAccessSecurity	
Т	Pit angle - orientation of inner structure to nearest 5 degree (rectangular pits only) - (degrees)	data - Number	
T U	Treatment material for refurbished manholes	Select from pick list: domAccessTreatmentType	
<b>■</b> ∨	Type of Flood Protection	Select from pick list: domWwAccessFloodProtectionType	
<b>2</b> w	Construction material of Vent Plug	Select from pick list: domWwAccessVentPlugConstruction	
Additi	onal Information ther columns must be left "blank" or hold the valu	NE SAVE DI ANIZII de defecile in CAT	Manhole Base RL Z



Point Typ	D11 "Point Asset Inputs	,	Lowest Corner Lid Z
CAT Column	SAG Description	Valid Values	
A	Type of Point Feature	D11	
В	Type of Manhole or Access	Select from pick list: domWwAccessType	
B C D E	Asset Record Capture Type	Select from pick list: domAssetRecordCaptureType	
D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign	
E	Asset Unique Identifier	data - Text (100 Characters)	
F	Centre of Structure in Easting coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
G H I J	Centre of Structure in Northing coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
2 н	RL on lowest corner of lid - (m)	data - Decimal Number (6 Chars, 3 Decimals)	
1	RL at base of pit (lowest point) - (m)	data - Decimal Number (6 Chars, 3 Decimals)	
J	Width and length of pit (e.g. 600x800) or diameter of pit - (r	nm) data - Number	
K	Date of commission	data - Date (dd/mm/yyyy)	Cer
L	Location certainty - accuracy of data	Select from pick list: domLocationCertainty	str
М	Name of main contractor who installed the asset	Select from pick list: domInstallationCompany	<u> </u>
N	Date of 'survey start'	data - Date (dd/mm/yyyy)	V
N O P	Style of access lid	Select from pick list: domAccessLidStyle	
P	Shape of access lid	Select from pick list: domAccessLidShape	
Q	Manufacturer of asset	Select from pick list: domManufacturer	
R	Construction material	Select from pick list: domAccessConstruction	
S T	Type of security on access	Select from pick list: domAccessSecurity	<b>審</b> 目
Т	Leave Blank	Leave Blank	
U	Treatment material for refurbished manholes	Select from pick list: domAccessTreatmentType	
<b>-</b> V	Type of Flood Protection	Select from pick list: domWwAccessFloodProtectionType	
W	Construction material of Vent Plug	Select from pick list: domWwAccessVentPlugConstruction	
•			Marshala Basa St
Additio	nal Information		Manhole Base RL Z
*All oth	er columns must be left "blank" or hold th	e value "LEAVE BLANK" as default in CAT	
Col U: I	eave blank/unchanged if N/A		



10	oint Typ	<b>D12</b> 1 01110	Asset Inputs"		Lid Z
	AT olumn	SAG Description		Valid Values	
n A		Type of Point Feature		D12	
( <b>a</b> ) B		Type of Manhole or Access		Select from pick list: domWwAccessType	
<b>&gt;</b> c		Asset Record Capture Type		Select from pick list: domAssetRecordCaptureType	
		Differs from design (yes/no)		Select from pick list: domDiffersFromDesign	
OE		Asset Unique Identifier		data - Text (100 Characters)	
Z		Centre of Structure in Easting coordinate - (n	n)	data - Decimal Number (12 Chars, 2 Decimals)	
G		Centre of Structure in Northing coordinate - (	m)	data - Decimal Number (12 Chars, 2 Decimals)	
0  -		RL on lowest corner of lid - (m)		data - Decimal Number (6 Chars, 3 Decimals)	Centre
0		RL at base of pit (lowest point) - (m)		data - Decimal Number (6 Chars, 3 Decimals)	struct
J		Width and length of pit (e.g. 600x800) or diar	neter of pit - (mm)	data - Number	X Y
e K		Date of commission		data - Date (dd/mm/yyyy)	V
<u> </u>		Location certainty - accuracy of data		Select from pick list: domLocationCertainty	V
<b>S</b> M		Name of main contractor who installed the as	sset	Select from pick list: domInstallationCompany	,
Z Z		Date of 'survey start'		data - Date (dd/mm/yyyy)	
L P		Style of access lid		Select from pick list: domAccessLidStyle	
) P		Shape of access lid		Select from pick list: domAccessLidShape	ii
<u>ဂ</u>		Manufacturer of asset		Select from pick list: domManufacturer	# # # # # # # # # # # # # # # # # # #
じ <sub>c</sub>		Construction material		Select from pick list: domAccessConstruction	
0		Type of security on access		Select from pick list: domAccessSecurity	
<b>⋜</b>		Leave Blank		Leave Blank	<b>■</b> ■
T U		Treatment material for refurbished manholes		Select from pick list: domAccessTreatmentType	H H
<b>&gt;</b>		Type of Flood Protection		Select from pick list: domWwAccessFloodProtectionType	H H
<b>%</b>		Construction material of Vent Plug		Select from pick list: domWwAccessVentPlugConstruction	
$\Xi$					Manhole Base RL
Δ Ac	ddition	al Information			Z
*/	ΔII oth	er columns must be left "blank"	or hold the valu	ue "LEAVE BLANK" as default in CAT	



#### As-Built requirements (WW) **WW Flush Manhole (Point)** Name D13 "Point Asset Inputs" **Point Type Lowest Corner Lid Z** CAT SAG Description Valid Values Column Type of Point Feature D13 Α В Type of Manhole or Access Select from pick list: domWwAccessType С Asset Record Capture Type Select from pick list: domAssetRecordCaptureType D Differs from design (yes/no) Select from pick list: domDiffersFromDesign Е Asset Unique Identifier data - Text (100 Characters) Centre of Structure in Easting coordinate - (m) data - Decimal Number (12 Chars, 2 Decimals) ₹ G Centre of Structure in Northing coordinate - (m) data - Decimal Number (12 Chars, 2 Decimals) RL on lowest corner of lid - (m) data - Decimal Number (6 Chars, 3 Decimals) data - Decimal Number (6 Chars, 3 Decimals) RL at base of pit (lowest point) - (m) Width and length of pit (e.g. 600x800) or diameter of pit - (mm) data - Number Ž Date of commission data - Date (dd/mm/yyyy) Select from pick list: domLocationCertainty Location certainty - accuracy of data S М Name of main contractor who installed the asset Select from pick list: domInstallationCompany Centre of structure FIL Date of 'survey start' data - Date (dd/mm/yyyy) XY Select from pick list: domAccessLidStyle 0 Style of access lid Shape of access lid Select from pick list: domAccessLidShape Q Manufacturer of asset Select from pick list: domManufacturer R Construction material Select from pick list: domAccessConstruction Type of security on access Select from pick list: domAccessSecurity S 3 Pit angle - orientation of inner structure to nearest 5 degrees data - Number (rectangular pits only) - (degrees) Treatment material for refurbished manholes Select from pick list: domAccessTreatmentType Select from pick list: domWwAccessFloodProtectionType Type of Flood Protection Select from pick list: domWwAccessVentPlugConstruction Construction material of Vent Plug Manhole Base RL Z Additional Information \*All other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT Col T: leave blank/unchanged for circular manholes Col U: leave blank/unchanged if N/A See Appendix C.1.1 for a CAT example.



Name		WW Flush Tank	(Outline)	
Polygon	Туре	<b>D14</b> "Polygon Asset Inp	uts"	Lowest Corner
				Lid Z
CAT	SAG Description		Valid Values	
Column	Towns of Delaware Frankins		D14	×-××
A	Type of Polygon Feature		1	4
С	Type of Flush Tank		Select from pick list: domWwFlushTankType	
D	Asset Record Capture Ty		Select from pick list: domAssetRecordCaptureType	
E	Differs from design (yes/n Asset Unique Identifier	10)	Select from pick list: domDiffersFromDesign  data - Text (100 Characters)	
	•		,	
¥ F	Polygon Vertex Easting c		data - Decimal Number (12 Chars, 2 Decimals)	
G H	Polygon Vertex Northing	. ,	data - Decimal Number (12 Chars, 2 Decimals)	-
<u>ख</u>	RL on lowest corner of lid	, ,	data - Decimal Number (6 Chars, 3 Decimals)	- 3
<b>_⊢</b> ⊹	Number of Vertex (point a	along outline)	data - Number	
K K	Construction material  Manufacturer of asset		Select from pick list: domAccessConstruction  Select from pick list: domManufacturer	
<u> </u>		ush a inatallad the agest	'	
	Name of main contractor  Date of commission	who installed the asset	Select from pick list: domInstallationCompany  data - Date (dd/mm/yyyy)	<b>-</b>
N	Location certainty - accur	acy of data	Select from pick list: domLocationCertainty	
<b>N</b> 0	Date of 'survey start'	acy of data	data - Date (dd/mm/yyyy)	
S P	Capacity of tank in litres -	(Litros)	data - Number	
<b>&gt;</b> Q	Shape of access lid	(Littes)	Select from pick list: domAccessLidShape	4
<b>4</b> R	Type of security on access	· c	Select from pick list: domAccessSecurity	-
S	Flushing interval of tank (		Select from pick list: dom/WwFlushTankFrequency	4
בּ⊢בּ	How is the tank operated	pick closest)	Select from pick list: dom/www.fushTank/requency	
	Tiow is the tank operated		Select from pick list, dollow wirds in ank Operation	
				i
A -1 -1:E:				!
	nal Information	1.6.111.1.	I WEALT DIANGE	Centre of
			e value "LEAVE BLANK" as default in CAT	structure
			ate one CAT row per surveyed point. This	ХҮ
feature	requires at least th	ree row entries.		
Col I: e	enter number of vert	ex along outline		
		onal capacity of the tan	k	
	pendix C.3.1 for a C		•	
JCC AP	penan Cion 101 a C	" tr exampler		

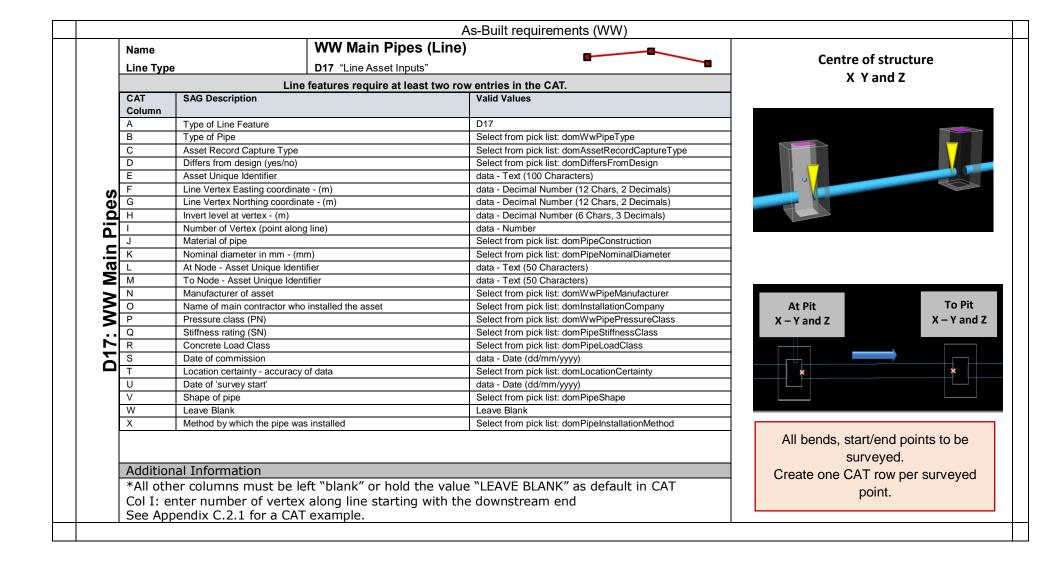


### As-Built requirements (WW) **WW Air Gap Separator (Point)** Name D16 "Point Asset Inputs" **Point Type** CAT SAG Description Valid Values Column D16 Type of Point Feature Separator В Type of Air Gap Separator Air Gap Separator С Asset Record Capture Type Select from pick list: domAssetRecordCaptureType D Differs from design (yes/no) Select from pick list: domDiffersFromDesign Е Asset Unique Identifier data - Text (100 Characters) Centre of structure in Easting coordinate - (m) data - Decimal Number (12 Chars, 2 Decimals) G Centre of structure in Northing coordinate - (m) data - Decimal Number (12 Chars, 2 Decimals) Leave Blank Leave Blank Leave Blank Leave Blank Nominal diameter in mm - (mm) Select from pick list: domAirGapSeparatorNominalDiameter Date of commission data - Date (dd/mm/yyyy) Location certainty - accuracy of data Select from pick list: domLocationCertainty М Name of main contractor who installed the asset Select from pick list: domInstallationCompany Date of 'survey start' data - Date (dd/mm/yyyy) ⋚ 0 Leave Blank Leave Blank Leave Blank Leave Blank Manufacturer of asset Q Select from pick list: domManufacturer R Leave Blank Leave Blank S Type of security on access Select from pick list: domAccessSecurity Additional Information \*All other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT

## Centre of structure X Y









#### As-Built requirements (WW) **WW Collector Pipes (Line)** Name Centre of structure D18 "Line Asset Inputs" Line Type X Y and Z Line features require at least two row entries in the CAT. CAT SAG Description Valid Values Column Type of Line Feature D18 В Type of Pipe Select from pick list: domWwPipeType С Asset Record Capture Type Select from pick list: domAssetRecordCaptureType D Differs from design (yes/no) Select from pick list: domDiffersFromDesign Е Asset Unique Identifier data - Text (100 Characters) Line Vertex Easting coordinate - (m) data - Decimal Number (12 Chars, 2 Decimals) Pip G Line Vertex Northing coordinate - (m) data - Decimal Number (12 Chars, 2 Decimals) Н Invert level at vertex - (m) data - Decimal Number (6 Chars, 3 Decimals) Number of Vertex (point along line) data - Number Material of pipe Select from pick list: domPipeConstruction Nominal diameter in mm - (mm) Select from pick list: domPipeNominalDiameter At Node - Asset Unique Identifier data - Text (50 Characters) М To Node - Asset Unique Identifier data - Text (50 Characters) Ν Manufacturer of asset Select from pick list: domWwPipeManufacturer Ü 0 Name of main contractor who installed the asset Select from pick list: domInstallationCompany Pressure class (PN) Select from pick list: domWwPipePressureClass Q Stiffness rating (SN) Select from pick list: domPipeStiffnessClass At Pit To Pit R Concrete Load Class Select from pick list: domPipeLoadClass X - Y and ZX - Y and ZS Date of commission data - Date (dd/mm/yyyy) Select from pick list: domLocationCertainty Location certainty - accuracy of data Date of 'survey start' data - Date (dd/mm/yyyy) V Shape of pipe Select from pick list: domPipeShape W Leave Blank Leave Blank Method by which the pipe was installed Select from pick list: domPipeInstallationMethod Additional Information All bends, start/end points to be \*All other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT surveyed. Create one CAT row per Col I: enter number of vertex along line starting with the downstream end surveyed point. See Appendix C.2.1 for a CAT example.



	Line Type	D19 "Line Asset Inputs"		
		Line features require at least two row	v entries in the CAT.	Centre of structure
Ī	CAT Column	SAG Description	Valid Values	х ү
	Α	Type of Line Feature	D19	
	В	Type of Lateral	Select from pick list: domWwLateralType	
	С	Asset Record Capture Type	Select from pick list: domAssetRecordCaptureType	
	D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign	
	E	Asset Unique Identifier	data - Text (100 Characters)	At Start
f	F	Line Vertex Easting coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	X and Y
	G	Line Vertex Northing coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
	Н	Leave Blank	Leave Blank	
=「	I	Number of Vertex (point along line)	data - Number	
atera	J	Material of pipe	Select from pick list: domPipeConstruction	
9	K	Nominal diameter in mm - (mm)	Select from pick list: domPipeNominalDiameter	
at⊓	L	Leave Blank	Leave Blank	
	M	Leave Blank	Leave Blank	At End
>	N	Manufacturer of asset	Select from pick list: domManufacturer	X and Y
_	0	Name of main contractor who installed the asset	Select from pick list: domInstallationCompany	A and 1
SL	Р	Pressure class (PN)	Select from pick list: domPipePressureClass	
	Q	Stiffness rating (SN)	Select from pick list: domPipeStiffnessClass	
	R	Concrete Load Class	Select from pick list: domPipeLoadClass	
$\frown$	S	Date of commission	data - Date (dd/mm/yyyy)	
╙	T	Location certainty - accuracy of data	Select from pick list: domLocationCertainty	
	U	Date of 'survey start'	data - Date (dd/mm/yyyy)	
	V	Shape of pipe	Select from pick list: domPipeShape	
_	W	Leave Blank	Leave Blank	
	X	Method by which the pipe was installed	Select from pick list: domPipeInstallationMethod	
L	Υ	Leave Blank	Leave Blank	All bends, start/end points to be
	Z	Do several units share this lateral? (yes/no)	Select from pick list: domLateralSharedConnection	•
L	AA	Type of lateral junction	Select from pick list: domWwEyeType	surveyed.
	AB	Distance of IP from lateral start (from connection to existing private lateral) - (mm)	data - Decimal Number (9 Chars, 3 Decimals)	Create one CAT row per surveye
	Addition	nal Information		point.
	Col I: e	er columns must be left "blank" or hold the value nter number of vertex along line starting with the pendix C.2.2 for a CAT example.		



## As-Built requirements (WW)

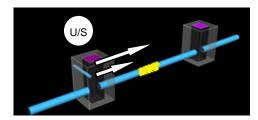
Name	WW Repair/Rela	y Dig (Line)					
Line Typ	Line Type D20 "Line Asset Inputs"						
	If entered without coordinates, this feature requires only one row per repair.						
CAT Column	SAG Description	Valid Values					
Α	Type of Line Feature	D20					
В	Type of Repair	Select from pick list: domRepairType					
С	Asset Record Capture Type	Select from pick list: domAssetRecordCaptureType					
O D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign					
. <u>≒</u>	Asset Unique Identifier	data - Text (100 Characters)					
□ <sub>F</sub>	Line Vertex Easting coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)					
<b>G</b>	Line Vertex Northing coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)					
<u>м</u>	Leave Blank	Leave Blank					
<b>a</b>	Number of Vertex (point along line)	data - Number					
<b>M</b>	Material used for repair	Select from pick list: domRepairConstruction					
K	Nominal diameter in mm - (mm)	Select from pick list: domPipeNominalDiameter					
<u>_</u>	At Node - Asset Unique Identifier	data - Text (50 Characters)					
<b>©</b> M	To Node - Asset Unique Identifier	data - Text (50 Characters)					
N	Manufacturer of asset	Select from pick list: domManufacturer					
<b>~</b> ○	Name of main contractor who installed the asset	Select from pick list: domInstallationCompany					
<b>&gt;</b> P	Leave Blank	Leave Blank					
<b>2</b> Q	Leave Blank	Leave Blank					
<b>S</b> R	Leave Blank	Leave Blank					
• • S	Date of commission	data - Date (dd/mm/yyyy)					
7 7	Location certainty - accuracy of data	Select from pick list: domLocationCertainty					
<u> </u>	Date of 'survey start'	data - Date (dd/mm/yyyy)					
<b>Ŭ</b> ∨	Distance from US MH to lining start (m) - (m)	data - Decimal Number (9 Chars, 3 Decimals)					
W	Distance from US MH to lining end (m) - (m)	data - Decimal Number (9 Chars, 3 Decimals)					

### Additional Information

\*All other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT Use this feature for dig repairs only (new pipe sections or pipe clamps) – pipe lining is to be entered into D21

Col V&W: Make sure to measure distances from the inner wall of the upstream manhole structure. See Appendix C.2.8 for a CAT example.

# Distance to start and end of repair from upstream MH









A3-Duilt requirements (VVVV)	As-Built	requirements	(WW)	
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Name Line Type	www Pipe L D21 "Line Asset				
If entered without coordinates, this feature requires only one row per patch.					
CAT Column	SAG Description	Valid Values			
Α	Type of Line Feature	D21			
В	Type of Repair	Select from pick list: domRepairType			
С	Asset Record Capture Type	Select from pick list: domAssetRecordCaptureType			
D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign			
E	Asset Unique Identifier	data - Text (100 Characters)			
F	Line Vertex Easting coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)			
G	Line Vertex Northing coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)			
Н	Leave Blank	Leave Blank			
I	Number of Vertex (point along line)	data - Number			
J	Material used for repair	Select from pick list: domRepairConstruction			
K	Nominal diameter in mm - (mm)	Select from pick list: domPipeNominalDiameter			
L	At Node - Asset Unique Identifier	data - Text (50 Characters)			
М	To Node - Asset Unique Identifier	data - Text (50 Characters)			
N	Manufacturer of asset	Select from pick list: domManufacturer			
0	Name of main contractor who installed the asset	Select from pick list: domInstallationCompany			
Р	Leave Blank	Leave Blank			
Q	Leave Blank	Leave Blank			
R	Leave Blank	Leave Blank			
S	Date of commission	data - Date (dd/mm/yyyy)			
Т	Location certainty - accuracy of data	Select from pick list: domLocationCertainty			
U	Date of 'survey start'	data - Date (dd/mm/yyyy)			
٧	Distance from US MH to lining start (m) - (m)	data - Decimal Number (9 Chars, 3 Decimals)			
	*				

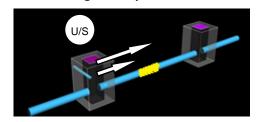
### Additional Information

Distance from US MH to lining end (m) - (m)

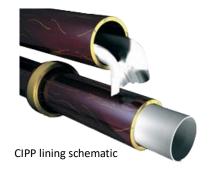
\*All other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT Use this feature for pipe lining only (lining patches or fully lined pipes) – pipe repairs are to be entered into D20

Col V&W: Make sure to measure distances from the inner wall of the upstream manhole structure. See Appendix C.2.5 up to C.2.7 for CAT examples.

# Distance to start and end of lining from upstream MH



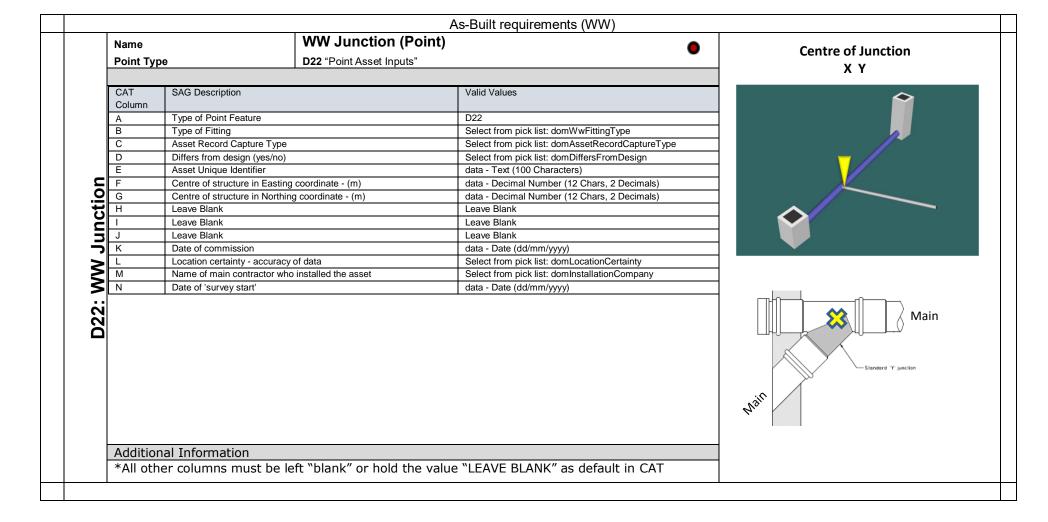




Revision 2.0

data - Decimal Number (9 Chars, 3 Decimals)





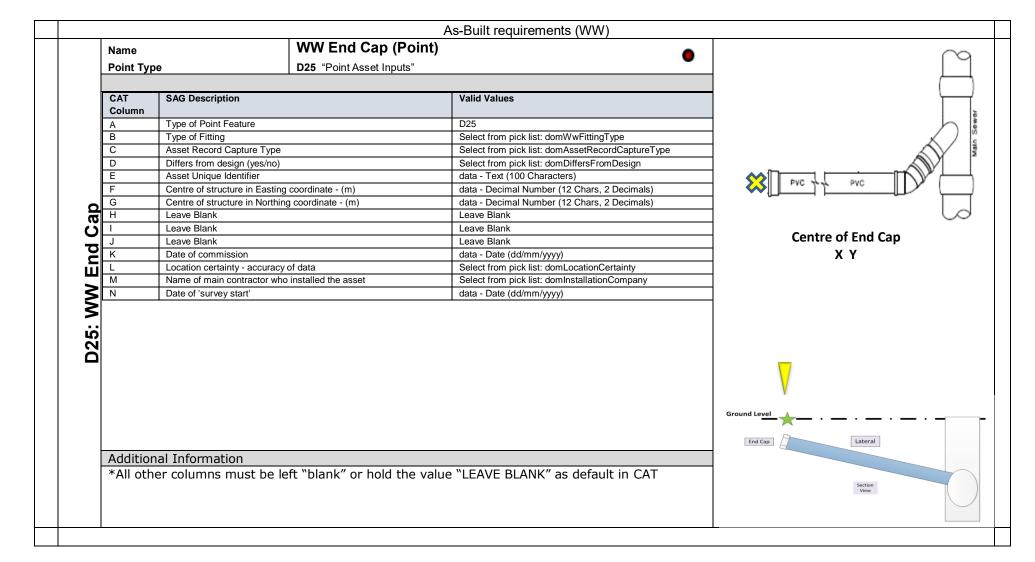


	ame		WW Lateral Jun	•	
Po	oint Typ	9	D23 "Point Asset Inputs	"	Centre of Lateral Junction
				1	
	AT olumn	SAG Description		Valid Values	ΧY
Α		Type of Point Feature		D23	
_ B		Type of Lateral Junction		Select from pick list: domWwEyeType	T <sup>4</sup> T
<b>&gt;</b> c		Asset Record Capture Ty	/pe	Select from pick list: domAssetRecordCaptureType	_
Inction		Differs from design (yes/i	no)	Select from pick list: domDiffersFromDesign	2004 Lateral
む゠		Asset Unique Identifier		data - Text (100 Characters)	ate a
F		Centre of structure in East	sting coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	"
<b>5</b> G	i	Centre of structure in No	rthing coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
Н		Leave Blank		Leave Blank	
_		Leave Blank		Leave Blank	
ateral □ × ⊂ -		Leave Blank		Leave Blank	<b>W</b>
a K		Date of commission		data - Date (dd/mm/yyyy)	
ר וֹשׁ		Location certainty - accur	racy of data	Select from pick list: domLocationCertainty	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
М		Name of main contractor	who installed the asset	Select from pick list: domInstallationCompany	Main Sewer
<b>N</b> N		Date of 'survey start'		data - Date (dd/mm/yyyy)	wall Sewer
D23: V					This asset is located at the junction between a lateral
*/	All othe	al Information er columns must b endix C.1.3 for a (		e value "LEAVE BLANK" as default in CAT	and a main



Point Typ	D24 "Point Asset	Inputs"	
			Centre of Inspection Point
CAT Column	SAG Description	Valid Values	X Y
Α	Type of Point Feature	D24	
В	Type of Manhole or Access	Inspection Point	7
С	Asset Record Capture Type	Select from pick list: domAssetRecordCaptureType	7
C	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign	T ~~
E	Asset Unique Identifier	data - Text (100 Characters)	
F	Centre of Structure in Easting coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	7  _
G H I	Centre of Structure in Northing coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	1000 45"
H	RL on lowest corner of lid - (m)	data - Decimal Number (6 Chars, 3 Decimals)	Inspection Bend
5 ·	RL at base of pit (lowest point) - (m)	data - Decimal Number (6 Chars, 3 Decimals)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
<b>D∥</b> J	Leave Blank	Leave Blank	
К	Date of commission	data - Date (dd/mm/yyyy)	
2	Location certainty - accuracy of data	Select from pick list: domLocationCertainty	
IVI	Name of main contractor who installed the asset	Select from pick list: domInstallationCompany	
N	Date of 'survey start'	data - Date (dd/mm/yyyy)	
N O P	Leave Blank	Leave Blank	
	Leave Blank	Leave Blank	—100¢ Inspection (
Q	Manufacturer of asset	Select from pick list: domManufacturer	
R	Construction material	Select from pick list: domAccessConstruction	
(د			
Addition	nal Information		
	10.1 2.1.1 0.1.1.1.0.0.0.1	old the value "LEAVE BLANK" as default in CAT	







CAT Colur A B C	SAG Description		Valid Values	Thrust Block Outline <i>or</i>
Α	Type of Polygon Feature		D26	
В	Type of Thrust Block		Select from pick list: domWwPipeRestraintType	Centre of Structure
С	Asset Record Capture T	/pe	Select from pick list: domAssetRecordCaptureType	ХҮ
D	Differs from design (yes/	no)	Select from pick list: domDiffersFromDesign	
Е	Asset Unique Identifier		data - Text (100 Characters)	
F	Polygon Vertex Easting	coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
G	Polygon Vertex Northing	coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
Н	Leave Blank		Leave Blank	
I	Number of Vertex (point	along outline)	data - Number	4
J	Predominant material of	structure	Select from pick list: domWwStructureConstruction	<u> </u>
K	Leave Blank		Leave Blank	<b>↔</b>
L	Name of main contractor	who installed the asset	Select from pick list: domInstallationCompany	_
M	Date of commission		data - Date (dd/mm/yyyy)	
N	Location certainty - accu	racy of data	Select from pick list: domLocationCertainty	
0	Date of 'survey start'		data - Date (dd/mm/yyyy)	
Addi	tional Information			*
*All For i requ		ocks, all corner points a entries.	e value "LEAVE BLANK" as default in CAT long outline are to be surveyed. This feature	3



	Point Typ	•	D27 "Point Asset Inpu			
	CAT Column	SAG Description		Valid Values		
	A	Type of Point Feature		D27	Thrust Block Outline or	
	В	Type of Thrust Block		Select from pick list: domWwPipeRestraintType		
	С	Asset Record Capture Typ	oe e	Select from pick list: domAssetRecordCaptureType	Centre of Structure	
	D	Differs from design (yes/n	0)	Select from pick list: domDiffersFromDesign	ΧY	
ī	E	Asset Unique Identifier		data - Text (100 Characters)		
	F	Centre of structure in East	ing coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)		
Γ	G	Centre of structure in Nort	hing coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)		
	Н	Leave Blank		Leave Blank		
	I	Leave Blank		Leave Blank		
	J	Leave Blank		Leave Blank		
Ī	K	Date of commission		data - Date (dd/mm/yyyy)		
Γ	L	Location certainty - accura	acy of data	Select from pick list: domLocationCertainty		
	M	Name of main contractor	who installed the asset	Select from pick list: domInstallationCompany		
	N	Date of 'survey start'		data - Date (dd/mm/yyyy)		
	N	Date of 'survey start'		data - Date (dd/mm/yyyy)		
:	*All oth			he value "LEAVE BLANK" as default in CAT re of structure is to be surveyed		



#### As-Built requirements (WW) **WW Pump (Point)** Name D28 "Point Asset Inputs" **Point Type** CAT SAG Description Valid Values Column Type of Point Feature D28 Α Type of Pump В Select from pick list: domWwPumpType С Asset Record Capture Type Select from pick list: domAssetRecordCaptureType D Differs from design (yes/no) Select from pick list: domDiffersFromDesign Е Asset Unique Identifier data - Text (100 Characters) Centre of Structure in Easting coordinate - (m) data - Decimal Number (12 Chars, 2 Decimals) G Centre of Structure in Northing coordinate - (m) data - Decimal Number (12 Chars, 2 Decimals) Н Height above datum - (m) data - Decimal Number (6 Chars, 3 Decimals) Leave Blank Leave Blank Leave Blank Leave Blank ۵ Date of commission data - Date (dd/mm/yyyy) Select from pick list: domLocationCertainty Location certainty - accuracy of data М Name of main contractor who installed the asset Select from pick list: domInstallationCompany Date of 'survey start' data - Date (dd/mm/yyyy) 28: 0 Name and/or number of pump station data - Text (50 Characters) Leave Blank Leave Blank Q Manufacturer of asset Select from pick list: domManufacturer R Serial number of asset data - Text (50 Characters) S Backup energy source Select from pick list: domBackupEnergySource Situation of Pump Select from pick list: domPumpSituation Maximum capacity of pump in litres per hour data - Number U ٧ Manufacturer warranty reference data - Text (50 Characters) data - Number Manufacturer warranty term in years Additional Information \*All other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT

# Centre of Pump X Y and Z (on pump)





Point Ty		,		
CAT Column	SAG Description		Valid Values	Outlet/Outfall
Α	Type of Point Feature		D29	
В	Type of Outfall/Outlet		Select from pick list: domWwOutfallType	X Y and Z
C D E	Asset Record Capture Type		Select from pick list: domAssetRecordCaptureType	
D	Differs from design (yes/no)		Select from pick list: domDiffersFromDesign	
<b>₹</b>	Asset Unique Identifier		data - Text (100 Characters)	
₹ F	Centre of Structure in Easting of	coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
F G H	Centre of Structure in Northing	coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
Н	Height above datum - (m)		data - Decimal Number (6 Chars, 3 Decimals)	
-	Leave Blank		Leave Blank	
	Leave Blank		Leave Blank	
K	Date of commission		data - Date (dd/mm/yyyy)	V/7-1
L	Location certainty - accuracy of	data	Select from pick list: domLocationCertainty	
M	Name of main contractor who in	nstalled the asset	Select from pick list: domInstallationCompany	10 30-00 30-000
N	Date of 'survey start'		data - Date (dd/mm/yyyy)	
• 0	Leave Blank		Leave Blank	
S P	Leave Blank		Leave Blank	
Q	Manufacturer of asset		Select from pick list: domManufacturer	
R	Leave Blank		Leave Blank	
S	Type of security on outlet acces	SS	Select from pick list: domAccessSecurity	
	onal Information	t "blank" or hold th	e value "LEAVE BLANK" as default in CAT	



Name		WW Valve (Point)		
Point Ty	De   1	D30 "Point Asset Inputs"	,	
CAT Column	SAG Description		Valid Values	Centre of Valve X Y and Z
Α	Type of Point Feature		D30	X Tallu Z
В	Type of Valve		Select from pick list: domWwValveType	
С	Asset Record Capture Type		Select from pick list: domAssetRecordCaptureType	
D	Differs from design (yes/no)		Select from pick list: domDiffersFromDesign	
E	Asset Unique Identifier		data - Text (100 Characters)	
F	Centre of Structure in Easting co	ordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
<b>O</b> G	Centre of Structure in Northing of	oordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
alve	RL on lowest corner of lid - (m)		data - Decimal Number (6 Chars, 3 Decimals)	
<u>ra                                     </u>	Leave Blank		Leave Blank	
<b>&gt;</b>	Nominal diameter in mm - (mm)		Select from pick list: domValveNominalDiameter	
<b>&gt;</b> K	Date of commission		data - Date (dd/mm/yyyy)	The state of the s
K L M	Location certainty - accuracy of	data	Select from pick list: domLocationCertainty	The state of the s
<b>M</b>	Name of main contractor who in:	stalled the asset	Select from pick list: domInstallationCompany	
N	Date of 'survey start'		data - Date (dd/mm/yyyy)	
<u>ဂ</u>	Valve normal operating position	- open or closed	Select from pick list: domValveNormalPosition	
P	Manual or motorised valve		Select from pick list: domValveActuation	
Q	Manufacturer of asset		Select from pick list: domManufacturer	
R	Valve closure rotation direction		Select from pick list: domValveClosureRotation	
S	Situation of Valve		Select from pick list: domValveSituation	
Т	Main function of valve		Select from pick list: domWwValveFunction	
U	Valve control point		Select from pick list: domValveControlPoint	
V	Manufacturer warranty reference	)	data - Text (50 Characters)	
W	Manufacturer warranty term in ye	ears	data - Number	
	nal Information er columns must be left	"blank" or hold the	e value "LEAVE BLANK" as default in CAT	



Line True		ctural Pipe Protection (Line)	
Line Typ			
		ire at least two row entries in the CAT.	_
CAT	SAG Description	Valid Values	Pipe Protection
Column	Type of Line Feature	D34	ΧY
A B	Type of Structural Pipe Protection	Select from pick list: domWwPipeProtectionType	_
В	Asset Record Capture Type	Select from pick list: dom/www.perrotection.ype	_
D	Differs from design (yes/no)	Select from pick list: dom/isset/recordcapturerype  Select from pick list: dom/isset/recordcapturerype	_
F	Asset Unique Identifier	data - Text (100 Characters)	
F	Line Vertex Easting coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
G	Line Vertex Lasting coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
Н	Leave Blank	Leave Blank	O NAMES OF THE OWNER, WHEN THE
i i	Number of Vertex (point along line)	data - Number	No. of the last of
J	Leave Blank	Leave Blank	
K	Leave Blank	Leave Blank	
L	Leave Blank	Leave Blank	
M	Leave Blank	Leave Blank	
N	Leave Blank	Leave Blank	
0	Name of main contractor who installed the as	et Select from pick list: domInstallationCompany	Part Control of the C
Р	Leave Blank	Leave Blank	
Q	Leave Blank	Leave Blank	
R	Leave Blank	Leave Blank	
S	Date of commission	data - Date (dd/mm/yyyy)	
Т	Location certainty - accuracy of data	Select from pick list: domLocationCertainty	
U	Date of 'survey start'	data - Date (dd/mm/yyyy)	
Additio	nal Information		
		r hold the value "LEAVE BLANK" as default in CAT	
		I HOW THE VALUE LEAVE DEATHY as delault III CAT	
Create	one CAT row per surveyed point		



Point Typ	ре	D35 "Point Asset Inputs	s"		
			Centre of Vent		
CAT	SAG Description		Valid Values	ΧΥ	
Column					
A	Type of Point Feature		D35	<u>_</u>	
В	Type of Vent		Select from pick list: domWwVentType		
С	Asset Record Capture Type		Select from pick list: domAssetRecordCaptureType	WAY WELL YOU	
D	Differs from design (yes/no)		Select from pick list: domDiffersFromDesign		
E	Asset Unique Identifier  Centre of Structure in Easting coordinate - (m)		data - Text (100 Characters)		
F			data - Decimal Number (12 Chars, 2 Decimals)		
G H	Centre of Structure in Nort	ning coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)		
П .			Leave Blank		
1	Leave Blank Leave Blank		Leave Blank		
J K			Leave Blank data - Date (dd/mm/yyyy)		
K	Date of commission		Select from pick list: domLocationCertainty		
M	Location certainty - accuracy of data				
	Name of main contractor who installed the asset		Select from pick list: domInstallationCompany  data - Date (dd/mm/yyyy)		
N O	Date of 'survey start' Type of Telemetry		Select from pick list: domTelemetryType		
Addition	nal Information				
		loft "blank" or hold th	e value "LEAVE BLANK" as default in CAT		
· All Oth	iei columnis must be	ופונ טומווא טו ווטוט נו	ie value LLAVE DLAINK as deladit iii CAT	without Different	
l				The state of the s	
l				and the same of th	



Name		WW Structure (C	Outline)	
Polygon	Туре	D36 "Polygon Asset Inp	outs"	Structure Outline
				ΧY
CAT Column	SAG Description		Valid Values	A
Α	Type of Polygon Feature		D36	WWW.000
В	Type of Structure		Select from pick list: domWwStructureType	TO GONSTRUCTION  1 CONSTRUCTION  1 CONSTRUCTION  2
С	Asset Record Capture T	уре	Select from pick list: domAssetRecordCaptureType	\$ <del>*</del>
D	Differs from design (yes.	no)	Select from pick list: domDiffersFromDesign	EXISTING CN/700 - 55 9 - 200 - 1
E	Asset Unique Identifier		data - Text (100 Characters)	SEWERAPE
F	Polygon Vertex Easting	coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
G	Polygon Vertex Northing	coordinate - (m)	data - Decimal Number (12 Chars, 2 Decimals)	
Н	Leave Blank		Leave Blank	PROVISION FOR FUTURE STOP PLATE APPRAINTING TO BE
	Number of Vertex (point	along outline)	data - Number	INSTALLED. CONSTRUCT STOP PLATE FRAME ONLY SIM 5
J	Predominant material of	structure	Select from pick list: domWwStructureConstruction	B
K	Leave Blank		Leave Blank	WANGES IN THE PARTY OF THE PART
L	Name of main contracto	r who installed the asset	Select from pick list: domInstallationCompany	5.5
M	Date of commission		data - Date (dd/mm/yyyy)	100x100 CHAMFERS 4
N	Location certainty - accu	racy of data	Select from pick list: domLocationCertainty	DN750 RCRRJ SEWER
0	Date of 'survey start'		data - Date (dd/mm/yyyy)	STARTER PIPE LAID TO BOM111
*All oth Use thi structu All corr require Col I: 6	ditional Information  Il other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT e this feature for all structures or other larger manholes which do not fit into any of the other ructure categories, populate Column B accordingly.  corner points along outline to be surveyed. Create one CAT row survey point. This feature quires at least three row entries.  I I: enter number of vertex along outline			
	pendix C.1.5 and C ation.	3.1 for a CAT example	and beginning of Appendix D for more	