

# 010254W01 Pits used in Telstra InfraCo Network



Author's name Ross, Murray	Business unit InfraCo	Sub-business unit/ Group Pit & Duct Asset Management
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### Summary

This document outlines the typical types of jointing pits used and the general requirements for their installation within the Telstra InfraCo Network.

**Note:**

Technical inquiries concerning this document should be directed to  
[Pit\\_Duct\\_and\\_Manhole\\_Management@team.telstra.com](mailto:Pit_Duct_and_Manhole_Management@team.telstra.com)

### General

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## 01 Purpose

The purpose of this document is to provide details on all the types of pits in the Telstra network including the current range.

## 02 Scope

This Work Instruction covers the types of pits existing within the external plant network and the types used for new construction or upgrading of existing pits.

Where more detailed information is required refer to the applicable Telstra InfraCo 010254 series Work Instruction.

This document supersedes and replaces all previous version of this document.

This document is subject to change. Before using it, please ensure you have the latest issue.

All material shall be approved by Telstra InfraCo Asset Management unless otherwise directed.

## 03 Audience

This work instruction applies to all constructors employed on pit installation in the Telstra network. The term constructor refers to both Telstra employees and contractors.

## 04 Safety and Environment

### 4.1. Standards

The following standards are applicable to this work instruction. All staff and contractors must be familiar with and adhere to these standards. The full list of standards can be accessed from [Safety Security and Wellbeing - Field & Infrastructure - Standards \(sharepoint.com\)](#).

Standard	Description
<a href="#">Asbestos</a>	Provides instruction to ensure that asbestos containing material (ACM) is managed in a consistent manner across the Telstra Group, and the risks are minimised so far as is reasonably practicable.
<a href="#">Confined Space</a>	The purpose of this document is to ensure that work activities conducted within a confined space are managed in a consistent manner across the Telstra Group and the risks are minimised so far as is reasonably practicable.
<a href="#">Lead Management</a>	Provides instruction to ensures that work activities that may disturb inorganic lead are managed in a consistent manner across the Telstra Group's operations and the risks are minimised so far as is reasonably practicable.
<a href="#">Soil Management</a>	Identifies controls that help mitigate or manage the risks associated with soil management.
<a href="#">Underground Services &amp; Excavation</a>	Identifies risks associated with underground services and excavation work and the controls that mitigate them.

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<a href="#">Waste Management</a>	Provides guidance on what waste streams can be generated by Telstra and its contractors as part of our normal activities and how they are to be minimised and managed.
<a href="#">Waterways and Pollution Control</a>	Provides instruction on managing wastewater to prevent waterway contamination. It includes instruction on dewatering pits and manholes and any permits/approvals required.
<a href="#">Working in Pits and Manholes</a>	Provides instruction on how to safely access and work in Telstra pits and manholes, including training and PPE.
<a href="#">Working Outdoors</a>	Identifies potential risks associated with working in the outdoors and the controls that mitigate them.

## 05 Pits

The size and type of pit to be installed at each location is dependent on type of cable and size, the joint, and equipment types.

Pits shall be installed with their long side parallel with the property boundary and the top flush with the ground level or pavement, conforming with the general slope of the ground level on all sides.

New pits shall not be installed in roadways or driveways or other locations likely to be used for driveways or property vehicular or pedestrian entrances.

For pits in direct buried optical fibre routes, refer to TM00044.

### 5.1. Typical Range of Pits Existing in Telstra InfraCo Network

Listed below is the range of typical pits that may be encountered within the Telstra InfraCo Network, including obsolete pit types which can continue to be used but are no longer allowed to be installed. Rationalisation has caused some changes of approved pit sizes and associated accessories.

#### Notes:



1. Nominal overall pit sizes given are in millimetres (mm).
2. Other non-standard pits not covered in table below (i.e. circular or construct on-site types) may occur in the network.
3. All (Cement, Concrete and Plastic) No.8 and No.9 pits use multiple P6 pit covers.
4. The No.6 and No.8 pits have 1 cross bar, and the No.9 pits have 2 cross bars installed between the ends of the covers where they meet.
5. C9 pits can be orders with and without a base. If ordered without a base, the base must be constructed on-site.
- 6.
7. If pit covers or accessories are no longer available, Telstra InfraCo will direct the appropriate course of action.

#### General










## 5.2. Obsolete Pits

Obsolete pits may remain in the network if they are in good condition, and their covers are in sound condition. The tables below can be used to identify pits, size and type, and the availability of replacement covers.

### 5.2.1. Cement Pits

#### 5.2.1.1. 1934 to 1960






These pits were manufactured from wire reinforced cement or asbestos cement.

Pit Name	Pit Status	Pit Dimensions (mm)			Cover	
		L	W	D	Configuration	Replacement Available
0	Obsolete	305	230	280		N
1	Obsolete	455	230	280		N
2	Obsolete	610	305	355		N
3	Obsolete	455	230	510		N
4	Obsolete	610	305	815		Y
5	Obsolete	1290	305	660		N
6	Obsolete	1290	455	660		Y
7	Obsolete	915	455	510		N
8	Obsolete	1290	455	890		Y

**Table 1 – Cement Pit sizes 1934 – 1960 (Approx. Overall Dimensions – illustrations not to scale)**

#### 5.2.1.2. 1960 to early 1980's

These pits were manufactured from reinforced asbestos cement. The "Vic D" pit was introduced in Victoria around 1970.

Pit Name	Status	Pit Dimensions (mm)			Covers	
		L	W	D	Configuration	Replacement Available
A	Obsolete	370	75	210		N
B	Obsolete	520	100	320		Y
C	Obsolete	675	125	475		Y
D	Obsolete	685	255	610		Y
Vic D	Obsolete	595	205	500		Y

**Table 2 – Cement Pit sizes 1960 – 1980's (Approx. Overall Dimensions – illustrations not to scale)**



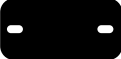
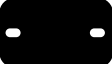



General

### 5.2.1.3. Early 1980 to Mid-1980's

Originally these pits were made of reinforced asbestos cement. Their construction was changed to cellulose reinforced cement in mid-1980s.

The “J” designates injection moulded pits.

Hand moulded pits were also made during this period, with the designation “H” in lieu of “J”.





Pit Name	Status	Pit Dimensions (mm)			Covers	
		L	W	D	Configuration	Replacement Available
J1 / H1	Obsolete	450	160	360		Y
J2/ H2	Obsolete	590	205	520		Y
J3/H3	Obsolete	700	260	600		Y
J4 /H4	Obsolete	620	305	895		Y
J6 /H6	Obsolete	1270	460	660		Y
J8/H8	Obsolete	1270	460	895		Y
J9 /H9	Obsolete	1930	460	895		Y

**Table 3 – Cement Pit sizes 1980 – Mid 1980's (Approx. Overall Dimensions – illustrations not to scale)**

### 5.2.2. Plastic pits

#### 5.2.2.1. Mid 1980's to Mid 1990's

These pits were moulded from black polyethylene. They are much lighter than the previous cement pits and are more robust.

Pit Name	Status	Pit Dimensions (mm)			Covers	
		L	W	D	Configuration	Replacement Available
P1	Obsolete	420	155	400		Y
P2	Current	555	180	570		Y
P3	Obsolete	665	245	630		Y
P4	Obsolete	585	280	820		Y

**Table 4 – Plastic pit sizes 1980's – Mid 1990's (Approx. Overall Dimensions – illustrations not to scale)**

General











### 5.3. Current Range of Pits

#### 5.3.1. Plastic Pits



##### 5.3.1.1. From Mid 1990's

These pits are moulded from black polyethylene. They are much lighter than the previous cement pits and are more robust.

Pit Name	Status	Pit Dimensions (mm)			Covers	
		L	W	D	Configuration	Replacement Available
<b>P2</b>	Current	655	290	575		Y
<b>P5</b>	Current	710	455	635		Y
<b>HS5</b>	Current	800	550	709/767		Y
<b>P6</b>	Current	1370	550	680		Y
<b>HS6/8</b>	Current	1465	740	890		Y
<b>P8</b>	Current	1370	550	900		Y
<b>P9</b>	Current	2040	550	900		Y
<b>HS9</b>	Current	2200	740	971		Y

**Table 5 – Plastic pit sizes From Mid 1990's (Approx. Overall Dimensions – illustrations not to scale)**

#### 5.3.2. Concrete pits (precast reinforced concrete)

Pit Name	Status	Pit Dimensions (mm)			Covers	
		L	W	D	Configuration	Replacement Available
<b>C8</b>	Current	1430	620	950		Y
<b>C9</b>	Current	2100	610	950		Y

**Table 6 – Concrete pit sizes (Approx. Overall Dimensions – illustrations not to scale)**

#### 5.4. Pipe / Conduit Pit Entries

Pits require a 50 mm silt trap from the base. This is achieved by ensuring the bottom of the conduit entering the pit is at least 50 mm above the base.

Key points are:

- Pipe entries should be at end of the pit.
- Minimum depth of cover for street conduit is 450 mm.
- Minimum depth of cover for lead-in conduit is 300 mm.

All new unoccupied conduits shall be appropriately sealed. Occupied conduits are to be sealed where there is a history of the following:

- Siltation
- Gas
- Water
- Vermin
- Debris

All lead-in conduits shall be sealed.

In brownfield areas the maximum installed conduit combinations at one end of pit may differ from Table 7. The table shows the maximum allowable under the current guidelines.

Any alteration to Telstra InfraCo network plant shall be recorded in the appropriate Telstra InfraCo systems. It is the responsibility of the constructor to submit the appropriate data to these systems prior to completion.

Cement ducts shall be fitted with a PVC conduit extension to enter new pits. Refer to work instruction 010260W02.

Pit Size	Maximum allowable Conduit combinations at one end of pit: including pit with collar / riser		
	P100	P50	P20
2	0	1	2
	0	0	2
5	1	2	0
	1	1	2
	1	0	4
	0	3	0
	0	2	2
	0	1	4
	2	0	0
6	1	2	0
	1	0	4
	0	4	0
	0	2	2
	0	1	4
	4	0	0
8	3	2	0
	3	0	4
	2	4	0
	2	2	4
	1	4	4
	4	0	0
9	3	2	0
	3	0	4
	2	4	0
	2	2	4
	1	4	4
	4	0	0

**Table 7 - Allowable Conduit Entries into Pit End wall for Current Pit Range**

General

## 5.5. Pit Covers, Crossbars and Gaskets

Telstra InfraCo uses composite, concrete & cast-iron covers in the network. Infill covers have been used in special circumstances.

Concrete covers have been traditionally used for the full range of pits and will still be encountered in the network.

Current approved covers being installed are:

- Composite covers are the standard for all 2, 4, 5, 6, 8 and 9 pits. This includes locations where cast-iron covers would have been installed.
- Concrete covers are still in use for the small obsolete pits.
- Cast-iron covers are only to be installed where approved by Telstra InfraCo.
- Telstra InfraCo only supplies or installs infill covers under contractual arrangements, see section 7.4.1.

Covers to suit obsolete pits are generally available for maintenance purposes. Where no covers are available, follow the Make Safe Solutions for Telstra infrastructure 018633.

Crossbars for multiple lid pits:

- 6 and 8 pits require 1 cross bar.
- 9 pits require 2 cross bars.

Thermoplastic gaskets should be installed under all pit covers.

## 5.6. Pit Collars and Risers

Plastic and concrete collars / risers can be fitted to pits to increase the depth of the pit or to raise the level of an existing pit. Only one collar / riser is allowed to be installed on a pit.

### 5.6.1. Plastic Collars / Riser

If a small plastic pit (P2) requires raising, cut the top of another same sized pit and use it as the riser.

Plastic risers are available for P5, P6 and P8 large size pits, see section 7.1.2.

P9 pits cannot be increased in depth. If extra depth is required, use a High Strength HS9 pit with a maximum of 1 additional wall ring. Depth greater than 1180mm requires the installation of a manhole.

The HS series of large pits are raised / levelled with surrounding surface by adding additional rings to the pit body in conjunction with adjusting the poured in-situ cover frame.

Plastic risers must be screwed to the existing pit using Stainless Steel screws.

For more information see sections 7.1.2 and 7.3.

### 5.6.2. Precast Concrete Collars

Concrete collars / risers can be fitted to pits, to increase the depth of the pit or to raise the level of an existing pit. Precast concrete collars shall not be installed on HS series pits.

**Note:**



Cement pits do not contain asbestos if:

- They are labelled “NON-ACM” or
- They have been confirmed by a [competent person](#) able to identify asbestos as defined by WorkSafe Australia as not containing asbestos.

Precast concrete collar may be used to raise cement pits if the following requirements can be met:

- The cement pit is structurally sound.
- If the cement pit is not disturbed during the installation process.
- The distance that the cement pit is to be raised falls between of 75 mm and 125 mm for single lidded pits and 100 mm and 150 mm for double lidded pits. This is determined by the thickness of the precast concrete collars and the maximum distance of 50 mm between the top of the cement pit and the bottom of the precast collar.

If these cannot be achieved, the pit shall be removed and replaced as soon as practicable by competent workers in accordance with approved ACM procedures & SWMS. Refer to 010254W07.

Collar Size	Material No.	Comments
P5	9900179	75 mm thick used for all single lid cement pits
P6 / 8	9900148	100 mm thick used for all double lidded cement pits.
P9	N/A	Use High Strength HS9 pit.

**Table 8 - Concrete Pit Collars**

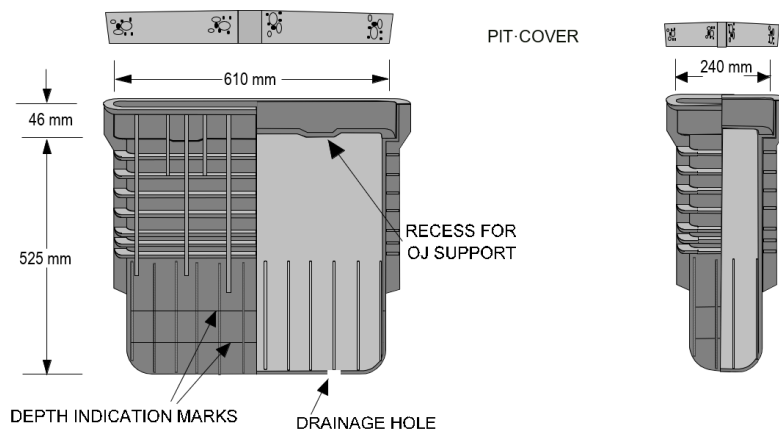
## 06 Small Size Pits

Small size pits are any that are smaller than a No.5 pit. The P2 pit is the only currently approved small pit for new installations and is typically installed within private property for house lead-in cables feeding residential properties.

Details for installation, repair or replacement of small pits see Work Instruction 010254W02.

### 6.1. P2 Plastic Pits

- Reinforcing ribs are moulded on the outside of the pit to support and maintain its shape.
- The pit can be cut and installed over existing cables and conduits.
- Composite covers are to be installed as standard and cast-iron covers are used only when directed by Telstra InfraCo.

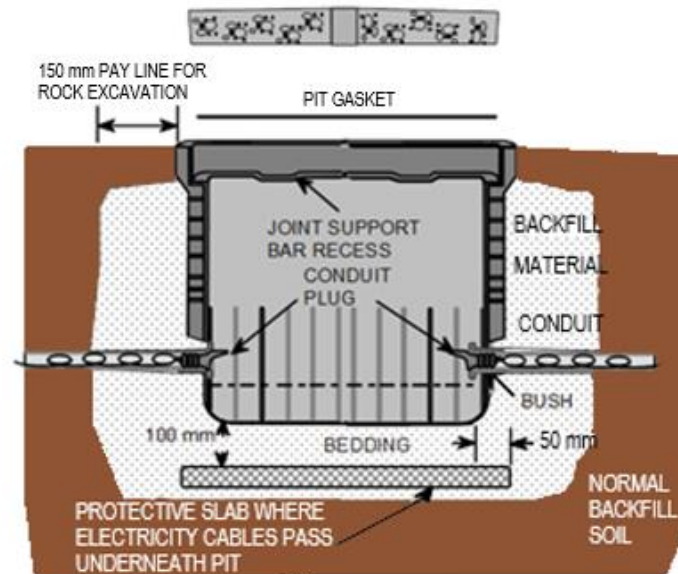


**Figure 1 - P2 Plastic Pit**

P2 Material Numbers	Max. Conduit Size	Composite Cover	Cast Iron Cover
CUBIS 09900098	50 mm	40009743	9900068
Viscount 09900211			

**Table 9 - Plastic Pit Information**

## 6.2. Typical Detail of a P2 Pit Installation



**Figure 2 - Typical P2 Pit Installation**

### 6.2.1. Plastic Collars / Riser

If a small plastic pit (P2) requires raising, to increase the depth of the pit or to raise the level of an existing pit, cut the top of another same sized pit and use it as the riser.

Concrete collars / risers can be fitted onto small pits. Refer to 010254W07 for details.

General

### 6.3. Accessories and Fittings for Small size pits

Unless directed otherwise the following accessories and fittings are required for the installation and maintenance for small pits:

- Thermoplastic gaskets must be fitted at the time of installation of any new pit.
- Composite or cast-iron covers.
- PVC bushes (provides smooth entry to conduits and seals between conduit and pit wall).
- Fibreglass joint support bar (to support all single ended joints housed within a pit).
- Polythene flashing or builders' film to AS2870-2011 (for sealing cuts and conduit entries where required).
- Pre-mix concrete (for sealing conduit entries where required).
- Lean mix concrete (for sealing cuts, extension collars etc., where required).

## 07 Large Size Pits

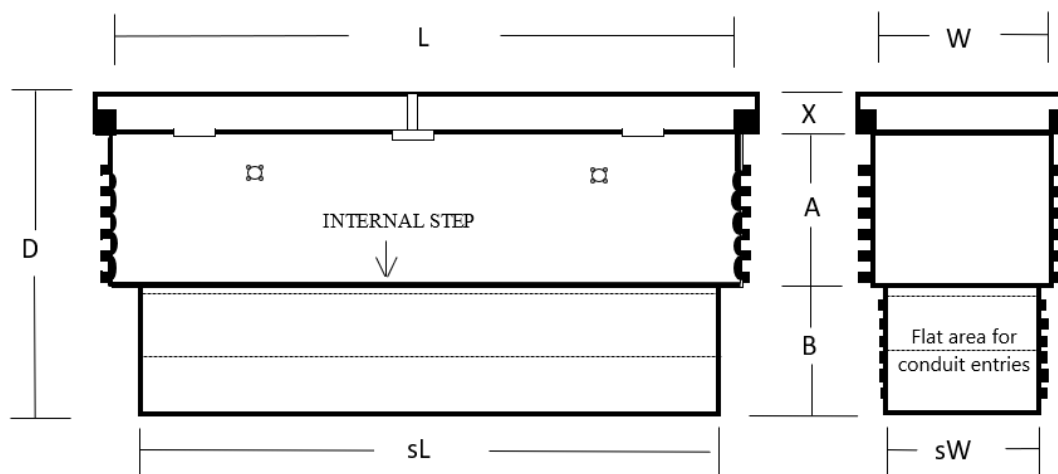
Large size pits (sizes 5, 6, 8 and 9) are available as either High Strength (HS) or Plastic (P). Sizes 8 & 9 are available in vibrated concrete (C) pit types. Typical uses are as below:

- Plastic (P) type pits are used in grassed nature strips.
- High Strength (HS) pits are used in commercial areas, formed paths and as replacements for large size pits that have failed.
- Vibrated concrete (C) pits are available in C8 and C9 pit sizes and are used on rural optical fibre routes.

### 7.1. Large Size Plastic (P) Pits

There are four large size P type pits available for new construction or upgrading/replacing of existing pits. These are manufactured by rotational or injection moulding polyethylene.

- These pits are made from polyethylene with moulded ribs to reinforce the pit walls.
- The lower end panels are flat (no ribs) to allow easier entry of conduit into the pit.
- There are moulded cutting guides to assist in cutting and re-attaching the base for installation over existing cables and conduit. See manufacturer's instructions for more detail.
- P5 is the standard pit used in grass areas/footpaths and at road crossings with a riser attached.
- P6 is used in grass areas/footpaths where extra length is required, or equipment is housed.
- P8 is used in grass areas/footpaths where extra depth is required for road crossings or equipment is housed.
- P9 is used in grass areas/footpaths where extra depth is required for road crossings or equipment is housed, or as an alternative to small manholes.
- P6, P8 & P9 pits are supplied with cable supports in the form of 2 or more lengths of PVC pipe which fit into recesses on each side of the pit.



**Figure 3 - Typical Large Plastic Pit**

Pit Type & Material Number	Dimensions (mm)							
	L	sL	W	sW	D	A	B	X
P5 - 09900165	590	550	330	300	635	355	230	50
P6 - 09900161	1250	1180	440	390	670	348	280	50
P8 - 09900162	1250	1180	440	390	880	410	420	50
P9 - 09900163	1930	1872	440	378	890	420	420	50

**Table 10 - Typical Internal Dimensions of large size plastic pits**

Pit Type	Covers	Cross bar	Cable Support
P5	1	None	None
P6	2	1	2
P8	2	1	2
P9	3	2	2

**Table 11 - Additional Components**

### 7.1.1. Typical Detail of an Installed Large Size Plastic Pit

The installation details for large size pits are similar to the small size pits. Refer to Figure 2 of this WI.

### 7.1.2. Plastic Riser and Concrete Collars

Plastic risers and concrete collars are available for P5, P6 and P8 large size pits and are to increase the depth of the pit or to raise the level of an existing pit.

Large size plastic pits shall only be fitted with a maximum of one plastic collar (excluding the P9 which does not allow risers).

P9 pits cannot be increased in depth. If extra depth is required, use a High Strength HS9 pit with a maximum of 1 additional wall ring. Depth greater than 1180mm requires the installation of a manhole. Refer to section 5.6.1.

## General

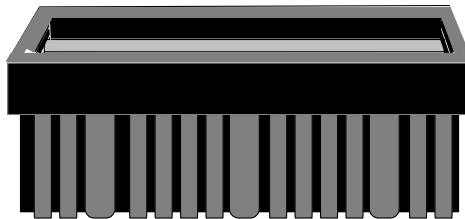


Concrete collars / risers can be fitted to P5, P6 and P8 pits.

The maximum depth from the pavement (footpath) level to the bottom of an installed pit fitted with a collar shall not exceed the following:

- The Maximum depth for a P5 pit is 950 mm.
- The Maximum depth for a P6 pit is 960 mm.
- The Maximum depth for a P8 pit is 1180 mm.

For installations greater than 1180 mm deep a manhole shall be installed.



**Figure 4 - Typical Collar Used to Raise Level of Pit**

Collar Size	Collar / Riser	Material No.	Comments
P5	Plastic Riser	9900219 – CUBIS 9900173 - Viscount	A P5 pit fitted with one full collar is the equivalent depth of a P4 pit.
P5	Concrete collar	9900180 - CUBIS	75 mm thick for all single lid cement pits
P6 / 8	Plastic Riser	9900220 – CUBIS 9900172 - Viscount	A P6 pit fitted with one full collar is the equivalent of an 8 pit
P6 / 8	Concrete collar	9900148 - CUBIS	100 mm thick for all double lidded cement pits.
P9	N/A	N/A	Use High Strength HS9 pit.

**Table 12 - Large plastic pit risers and collars**

## 7.2. High Strength (HS) Pits

These pits are available in the following kit sizes HS5, HS6 and HS9.



**Note:**

A HS8 is a HS6 with one HS6/8 riser kit.

High strength pits shall be used:

- where footways maybe exposed to occasional light vehicular traffic as defined in AS3996:2018 or as instructed by Telstra InfraCo when replacing a standard plastic pit.
- in trafficable areas as described in 018621 Pits in Trafficable Areas.

These pits can have additional wall rings (riser kit) added if a deeper pit is required i.e. if 8 pit depth is required, use a HS6 pit kit plus one HS6/8 riser kit.

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The maximum depth of these pits shall not exceed the following:

- HS5 pit with or without adjustable frame - 950 mm.
- HS6/8 pit - 1180 mm.
- HS9 pit - 1180 mm.

Pit Type	Covers	Cross bar	Cable Support
HS5	1	None	None
HS6/8	2	1	2
HS9	3	2	2

**Table 13 - Additional Components**



**Note:**

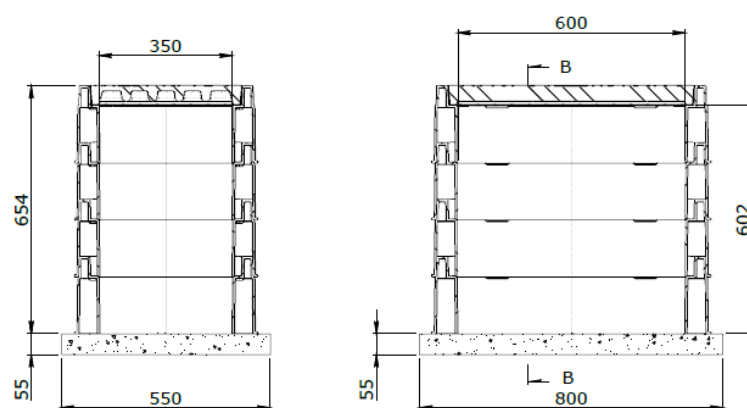
Covers and support bar are not included in the HS5 and HS9 kits and must be ordered separately.

### 7.2.1. HS5 Pit

HS5 pits can be constructed with or without a CUBIS concrete collar kit:

- no concrete collar is required when installed in non-sealed areas i.e. nature strips, gravel etc.
- where a pit is located partially or completely in a sealed path i.e. concrete or asphalt, a CUBIS concrete collar kit shall be used.
- the maximum allowable depth with or without adjustable frame is 950 mm i.e. 2 additional wall rings (riser kits).

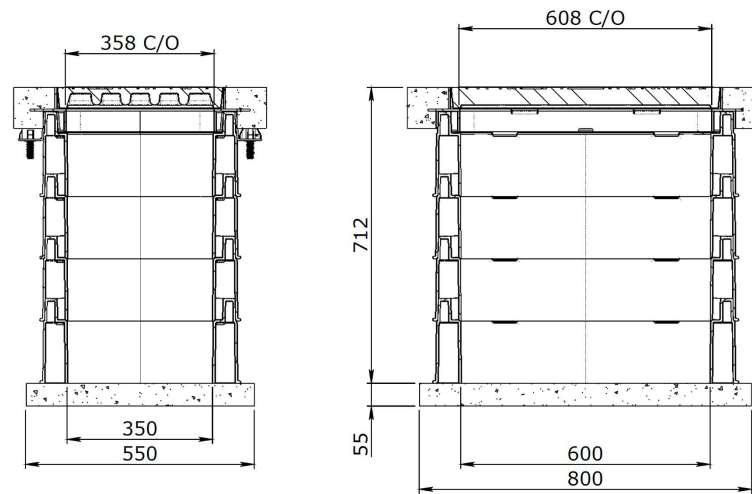
#### 7.2.1.1. Without Concrete Collar Dimensions



**Figure 5 - Typical HS5 pit without concrete collar.**

General

### 7.2.1.2. With Concrete Collar Dimensions



**Figure 6 - Typical HS5 pit with concrete adjustable collar.**

### 7.2.2. HS6 / 8 pit

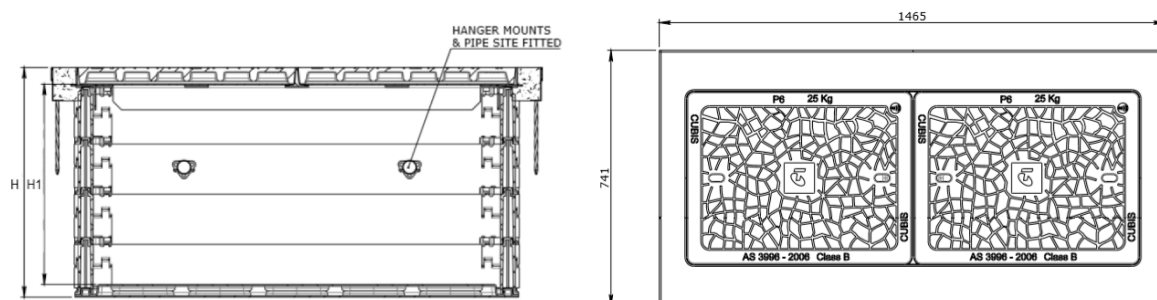
These pits are constructed with a concrete collar and frame, which is included in the HS6 pit kit.

If a HS8 pit is required, use a HS6 pit kit plus one HS6/8 riser kit.

- the maximum allowable internal depth is 1180 mm i.e. 2 additional wall rings (riser kits).

Pit type	Dimensions (mm)			
	L	W	H	H1
HS6	1465	741	668	600
HS8	1465	741	818	750

**Table 14 - Typical dimensions of HS 6 / 8 pit.**

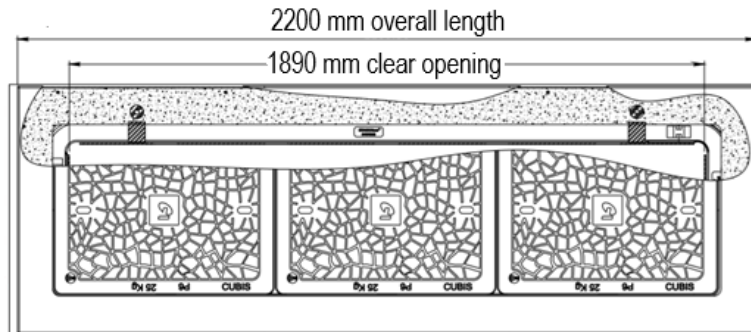


**Figure 7 - Typical HS 6 / 8 pit showing overall dimensions.**

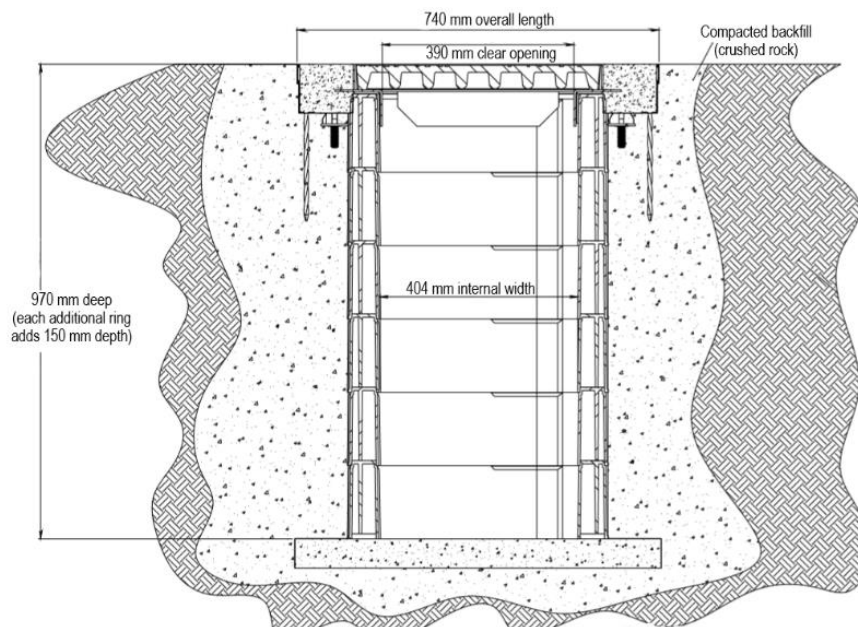
### 7.2.3. HS9 Pit

This pit is constructed with a concrete collar and frame, which is included in the kit.

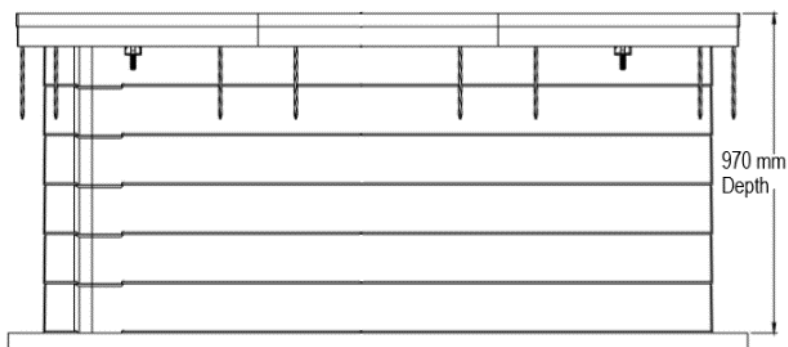
- the maximum allowable internal depth is 1180 mm i.e. 1 additional wall rings (riser kits).



**Figure 8 - HS9 pit top view.**



**Figure 9 - HS9 pit end view.**



**Figure 10 - HS9 pit side view.**

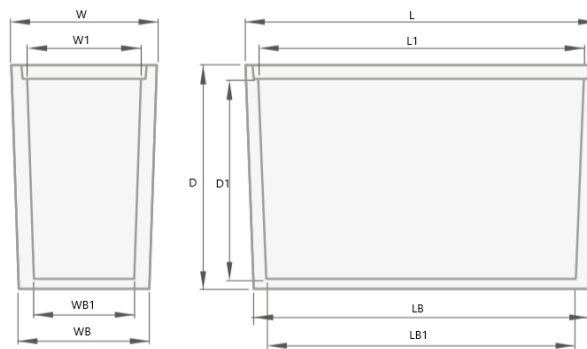
General

### 7.3. Vibrated Concrete (C) Pits

Vibrated concrete C8 and C9 pits are used for rural optical fibre cable routes.

These pits have knock outs for conduit entries and Unistrut rails cast into the walls for attaching brackets and equipment mounting.

The 9 pit is available with or without a floor.



**Figure 11 - Typical Vibrated Concrete Pit.**

Pit Type	Dimensions (mm)									
	External					Internal				
	L	LB	W	WB	D	L1	LB1	W1	WB1	D1
C8 - Vibrated concrete	1439	1250	619	443	948	1269	1149	479	339	849
C9 - Vibrated concrete	2075	2040	605	575	900	1925	1890	460	428	800

**Table 15 - Typical Dimensions of large size vibrated concrete pits.**

Pit Type & Material No.	Covers				Cross bar	Cable Support (cast in pit wall)
	Number	Composite	Cast iron	Infill		
C8 - Vibrated concrete 9900123	2	40003044	9900071	See Note in Section 7.4.1.	1 x 09900067	4 Unistruts
C9 - Vibrated concrete (With or without a base) 9900083 / 9900149	3	40003044	9900071		2 x 09900067	4 Unistruts

**Table 16 - Additional Components.**

General



**Figure 12 - Typical concrete C8 pit.**



**Figure 13 - Typical concrete C9 pit.**

## 7.4. Accessories and Fittings for Large Size Pits

For new installations, the constructor shall provide all pit accessories and fittings as required.

Common fittings for pits:

- Composite Covers standard for all new pits.
- Cast Iron Covers (only fitted when directed by Telstra InfraCo).
- Pit cover gaskets shall be fitted to all pits.
- PVC pipe bush fitted to all pipe entries.
- Cross Bars fitted to all multiple lidded pits.
- Tag, ID PVC White fitted to all new pits used for identifying constructor or where ACM duct labelling is required.
- Cable support bars for to all multiple lidded pits

### 7.4.1. Infill Covers

Infill Pit covers may be installed as part of Local Government Authority (LGA) beautification projects or similar. Only infill pit covers approved by Telstra InfraCo for use in approved locations may be installed. These locations are typically for projects managed by the Asset Protection and Relocation group that have a valid and signed contract requesting their use.

In the event infill covers have failed or are damaged, Telstra InfraCo will make-safe or replace these with standard covers, until such time that responsible party arranges replacement with new infill covers.

## 08 Documentation

Staff required to follow this work instruction should be familiar with the content of the following documents.

Document number	Title
015839	Breakout and Reinstatement of sealed Surfaces
017573 Series	Safe Work at Telstra InfraCo Manholes and Pits
018527	Dewatering Work Instruction
018621	Pits in Trafficable Areas
018633	Make Safe Solutions for Telstra infrastructure
010254W02	Installation of Pits
010254W03	Installation of Rotationally Moulded Plastic Pits
010254W04	Installation of Viscount Plastic Pits
010254W05	Installation of Concrete 8 Pits
010254W07	Pit Maintenance and Repair
010254W09	P5 Split Pit
010254W10	Installation of Concrete 9 Pits
010254W11	Earthing in Telstra InfraCo Pits and Manholes
010254W13	Installation of CUBIS Fortress HS 6-8 Pit
010254W15	Installation of CUBIS Fortress HS 5 Pit
010254W16	Installation of CUBIS Fortress HS 9 Pit
010260W01	Conduit Installation
010260W02	Pipe and Conduit Repair

**Table 17 - Associated Documents**

### General

## 09 Material

The following is a list of the main components that are referred to in this document. This list is specific to the currently contracted material and is subject to change:

Material Description	Material No
Bracket, cable support galvanised steel (suit J8, H8 & JC8 pits)	9900066
Bush, suit 100mm pipe pvc	7300102
Bush, suit 80mm pipe pvc	7300101
Bush, suit 50mm pipe pvc	7300070
Bush, suit 35mm pipe pvc	7300069
Bush, suit 20mm pipe pvc	7300100
Collar, concrete suit P2 pit CUBIS	9900136
Collar, concrete suit P3 pit CUBIS	9900137
Collar, concrete suit P4 pit CUBIS	9900138
Collar, concrete suit P5 pit CUBIS	9900180
Collar, concrete suit P6,8 pit CUBIS	9900148
Collar, extension for P5 pit, CUBIS / Viscount	9900219 / 9900173
Collar, extension for P6 & P8 pit, CUBIS / Viscount	9900220 / 9900172
Concrete, premixed 4:2:1 mixture 20kg bag	7600036
Cover, suits pits 1 & 3 (concrete cover for early rectangular cement pit),	9900006
Cover, suits pit B (concrete), CUBIS	9900020
Cover, suits pit C (concrete), CUBIS	9900021
Cover, suits pit H1, J1, JC1, P1 (concrete)	9900058
Cover, suits pit H2 J2 JC2 P2 (composite lightweight), CUBIS	40009743
Cover, suits pit P2 (concrete electricity), CUBIS	04200751
Cover, suits pit H2 J2 JC2 P2 (cast iron), CUBIS	9900068
Cover, suits pit P2, (cast iron locking)	9900151
Cover, suits pit H3 J3 JC3 P3 (concrete)	9900060
Cover, suits pit H3 J3 JC3 P3 (cast iron), CUBIS	9900069
Cover, suits pit H4 J4 JC4 P4 (composite lightweight), CUBIS	40009744
Cover, suits pit H4 J4 JC4 P4 (cast iron), CUBIS	9900070
Cover, suits pit P4, (cast iron locking)	9900153
Cover, suits pit HS5, P5, (composite lightweight), CUBIS	40003043
Cover, suits pit HS5, P5, (composite lightweight), Viscount	400114074
Cover, suits pit HS5, P5, (cast iron), CUBIS	9900198
Cover, suits pit HS5, P5, (cast iron locking)	9900179
Cover, suits pit HS5, P5, (concrete electricity)	9900181
Cover, suits pit HS6, HS8, HS9, P6, P8, P9, (composite lightweight), CUBIS	40003044
Cover, suits pit HS6, HS8, HS9, P6, P8, P9, (cast iron), CUBIS	9900071
Cover, suits pit HS6, HS8, HS9, P6, P8, P9, (cast iron locking)	9900154

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Material Description	Material No
Cover, suits Pit 7 (concrete)	9900010
Crossbar, cast iron, suit 6, 7, 8 pits, thick type (for early model pits), CUBIS	9900029
Crossbar, cast iron, suit 6, 8, 9 pits, thin type, (for late model pits), CUBIS	9900067
Crossbar, cast iron, suit 6, 8, 9 pits, thin type, Viscount (same as 09900067)	9900210
Gasket, thermoplastic pit 6 8 and 9	9900164
Gasket, thermoplastic pit P2	9900001
Gasket, thermoplastic pit P3	9900002
Gasket, thermoplastic pit P4	9900003
Gasket, thermoplastic pit P5, HS5	9900177
Gasket, thermoplastic pit P6/8/9, HS6/8/9	9900164
Locking Mechanism, for lockable pit cover for 6, 8 & 9 pits	9900160
Mortar, premixed 20kg sand + cement	7600015
Pit, P2, cable jointing plastic, CUBIS or Viscount	9900211 or 9900098
Pit, P5, cable jointing plastic, CUBIS or Viscount	9900214 or 9900165
Pit, P5 split pit, cable jointing plastic, Viscount	9900182
Pit, P6, cable jointing plastic CUBIS or Viscount	9900216 or 9900161
Pit, P8, cable jointing plastic, CUBIS or Viscount	9900217 or 9900162
Pit, P9, cable jointing plastic, CUBIS or Viscount	9900218 or 9900163
Pit, C8, vibrated concrete with Unistrut and knockouts, CUBIS	9900123
Pit, C9, vibrated concrete with floor, (for Optic Fibre), CUBIS	9900083
Pit, C9, vibrated concrete without floor, (for Optic Fibre), CUBIS	9900149
Pit, concrete collar suit P6	9900148
Plug, pit lid 50mm wide 30mm deep	9900132
Reinstatement Kit, Large Plastic Pits CUBIS or Viscount	40009467 or 9900174
Screw, sd type 17 ss hex 14-10g x 35mm p100	64202001
Support bar, fibre glass (cut to length, to support openable joint)	9900176
HS5 Stakkabox Fortress Wall Ring section 150mm (bulk order 48 rings shall be used and purchased with HS5 utility Base Mix 40010481)	40010480
HS5 Utility Base Mix (Bulk order for 12 HS5 pit bases)	40010481
HS5 Adjustable Frame Surround kit	40010482
HS5 Stakkabox Fortress Pit Complete Kit (without frame and cover)	40010483
HS5 Adjustable Frame surround Kit bulk supply (12 kits)	40010484
HS6 Stakkabox Fortress Pit complete kit	40009017
HS6/8 Stakkabox Fortress Pit Base Kit	40009018
HS6/8 Stakkabox Fortress Pit Riser Kit 150 mm	40009019
HS6/8 Stakkabox Fortress Adjustability Kit	40009020
HS6/8 Stakkabox Fortress Cable Support Kit	40009021
HS6/8 Stakkabox Fortress Cover Frame	40009022

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Material Description	Material No
HS6/8 Stakkabox Fortress Concrete Surround Kit	40009023
HS6/8 Concrete Base Kit	40009024
HS9 Stakkabox Ultima Complete Kit - Pit	40011657
HS9 Stakkabox Ultima Pit Base Kit	40011658
HS9 Stakkabox Ultima 150mm Riser Kit	40011659
HS9 Pit Adjustable Frame & Surround Kit	40011660
HS9 Pit Stakkabox Concrete Surround Kit	40011661
Concrete Collar Colour Black Stakkabox (Box of 6 containers)	40009484
Concrete Collar Colour Brown Stakkabox (Box of 6 containers)	40009485
Concrete Collar Colour Red Stakkabox (Box of 6 containers)	40009486
Tag, Id PVC White 65 X 35mm Box 100	9700104

**Table 18 - Material List.**

### 9.1. Non-Conforming Product

Any staff finding material that is defective on installation shall follow the DDDR process.

The Defective, Damaged, Returns Resource (DDRR) System ensures defective Product Sourcing Agreement (PSA) material is reported.

Access and information to the DDRR system is via the Telstra Intranet at the following link:

[Materials Supply Chain Support Services.](#)

Where access to the Telstra Intranet is not available, defect details should be submitted back to their contract manager to lodge the DDRR on behalf of the contractor.

The DDRR Co-ordinator will contact the DDRR originator regarding remedial action, replacement or repair.

## 010 References

Document number	Title
TM00044	Optical Fibre Cable - Outside Plant

## 011 Definitions

Term	Definition
ACM	Asbestos Containing Material
C	Vibrated Concrete Pits
Conduit	Means a duct or pipe that physically accommodates cables and offers mechanical protection for cabling, allowing them to be drawn in and/or replaced.
HS	High Strength pit
LGA	Local Government Authority
Manhole	An underground roofed workspace, designed to house cables, joints and other equipment, typically entered through the opening in the roof.
P	Plastic pit
Pipe	Has the same meaning as Conduit
Pit	A pit is an underground chamber used for the housing of cables and joints. It is for hand and arm entry i.e. a person cannot physically work in a pit.
Rural	Rural locations and locations which may be deemed as rural by virtue of the lack of other development which clearly defines all property boundaries, vehicular and pedestrian carriageways, street lighting, drainage kerb & gutters.
SWMS	Safe Work Message Statement

## 012 Attachments

Document number	Title
Nil	

General

## 013 Document Control Sheet

This document has been formally approved by the person identified below:

<b>Approver Name</b>	<b>Leader, Warren</b>
Approver Position	Pit & Duct Asset Manager
Approver Email	<a href="mailto:Pit_Duct_and_Manhole_Management@team.telstra.com">Pit Duct and Manhole Management@team.telstra.com</a>
<b>Author Name</b>	<b>Ross, Murray</b>
Author Position	Senior Network Engineer
Author Email	<a href="mailto:Pit_Duct_and_Manhole_Management@team.telstra.com">Pit Duct and Manhole Management@team.telstra.com</a>

Technical inquiries concerning this document should be directed to  
[Pit Duct and Manhole Management@team.telstra.com](mailto:Pit_Duct_and_Manhole_Management@team.telstra.com)

## 014 Record of Issue

Issue number	Issue date	Details on the change
1	11 September, 1998	New appendix - formerly Appendix 3. Updated and format changed.
2	16 September, 1998	Updated issue amending pit dimensions
3	14 January, 1999	Accessories list changed to read the same as part 2
4	05 January, 2000	Para. 4.3 – Dot point 4 & 5 amended.
5	29 February, 2000	Table 2 – 4 x 100 mm conduit added to 8 pit. Note 1 added.
6	10 May, 2000	Reference to mastic sealant removed from accessories list in Section 4.3. Sect. 5.4 - The use of plastic sheeting and/or pre-mixed concrete. Updated and format changed. Figure 3 re-formatted.
7	12 December, 2000	Document Type name change to Technical Standard
8	01 July, 2002	Pre-mix lean mix (for sealing cuts, extension collars etc. where required)
9	03 March, 2003	New Telstra Document Number replaces App 3 part 1. New Template 8.6.8. Sect 2 – Scope new text.
10	08 March, 2004	Document reviewed and updated to new template Asbestos Containing Material added Precast concrete collars added Document Type name changed to Work Instruction Materials list included Inclusion of P8 pit
11	16 March, 2016	New appendix - formerly Appendix 3. Updated and format changed.

### General

Issue number	Issue date	Details on the change
12	17 August, 2017	Document reviewed and updated to new template Inclusion of ; Locating Underground Assets - Fire Ants & Earthing Remove old Earthing Kits References Add Earthing in References Defined maximum depth of pit installation before requiring a manhole solution. Updated Material reference No. for repair kits
13	17 May, 2018	Table 5 updated to include Material Numbers
14	02 November, 2020	Updated to Telstra InfraCo Template Updated - Title Updated - Purpose Updated - Table of pits found in Telstra InfraCo Network Updated - links Deleted - Typical Dimensions of Existing Large Size Cement Pits New Section - Pit Covers, Crossbars and Gaskets New Section – Pit Collars and Risers Updated – Small Size Plastic Pits P2 only Updated - Large Size Plastic (P) Pits Updated - Pit Collar large size pits (Riser): <ul style="list-style-type: none"> <li>• maximum only one collar fitted per P5, P6 &amp; P8 pit,</li> <li>• reduced maximum depth for P6 pit,</li> <li>• Riser not allowed on P9 pit, use HS9 pit</li> </ul> New Section - High Strength (HS) pits New Section - concrete C8 and C9 pit. Updated - Accessories and Fittings New Section - Infill Covers New section Non-Conforming product Updated - Document Control Sheet Updated - Material List Updated – References List
15	04 October, 2021	Removed old J8 and J9 label references from concrete pits and replaced with new label C8 and C9. Updated sections: Table 19 - Typical Pit sizes in the Network 10.3 Vibrated Concrete (C) Pits 10.6 Material list 12 Definitions
16	29 June 2022	Updated Sections: 10.3 Vibrated Concrete (C) Pits 14 Document control Sheet

## General

Issue number	Issue date	Details on the change
17	23 January 2024	<p>Section 3 Health and Safety – updated links and combined previous sections 4 &amp; 5.</p> <p>Section 5 SWL – Updated.</p> <p>Section 6 – Changed reference for pits used direct buried fibre optic network.</p> <p>Section 6.3 – Infill lids are only installed under contractual arrangements.</p> <p>Section 6.4.1 – Added risers must be screwed to existing pit.</p> <p>Section 6.4.2 – Clarified Asbestos in “cement” pits.</p> <p>Section 7.3 – Removed concrete covers as option for P2 replacements and removed requirement to plug keyholes.</p> <p>Section 8.1.2 – Clarified maximum number of risers.</p> <p>Section 8.4.1 – Infill lids are only installed under contractual arrangements.</p> <p>Section 10 – Added Viscount composite H5 cover.</p> <p>Fixed various typos and sentences.</p> <p>Renumbered headings</p>
18	January 2025	<p>Summary – Updated</p> <p>Section 2 - Scope – Updated</p> <p>Section 3 – Audience – New section</p> <p>Section 4 - Added/updated list of HSE standards that relate to this work instruction and corrected hyperlinks.</p> <p>Section 5.2 - Obsolete Pits – new section</p> <p>Section 5.3 - Current Pits – new section</p> <p>Section 7.2 – Updated Table 2.</p> <p>Removed sections that are not relevant to types of pits e.g. Land Access, Earthing, SWL.</p> <p>Minor wordsmithing for added clarity</p> <p>Included contact email for changes to or question about this document.</p>

## General