Digital Version 1.67
January 2025

Supercharge your New Development with

New Build Handbook

Technical Information to support our network build on your site.

This guide is intended to support your on site teams in the deployment of our minimum requirements for civils infrastructure and wiring required in each property. All information within this guide is supplied for information purposes only and does not constitute a change in terms of your agreed contract with Virgin Media.

This is a living document and if printed then all information should be treated as subject to change. If you are unsure of any aspect of this document then please refer to your Virgin Media site contact in the first instance for support.

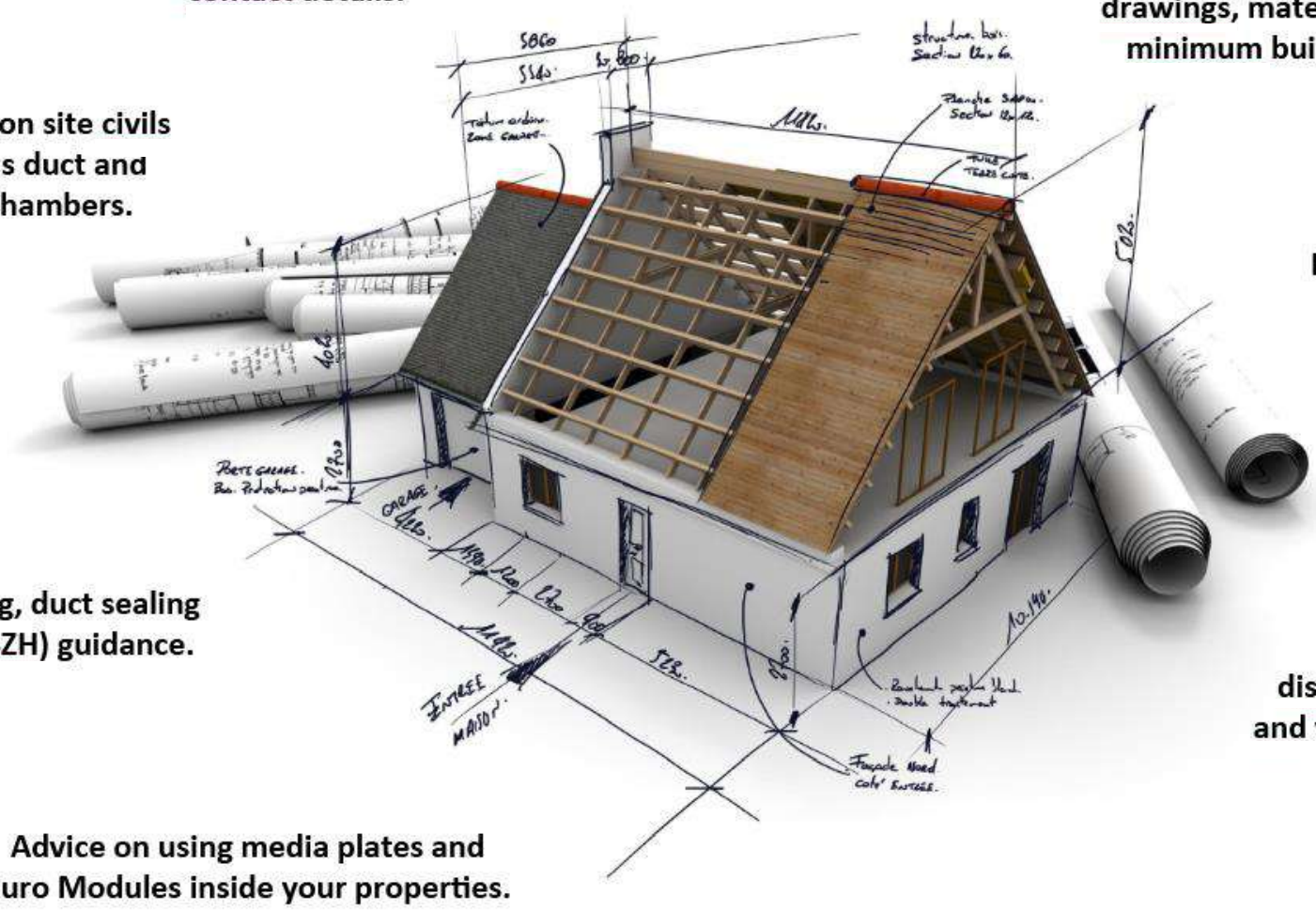
Stay in touch, upload your new site requests and find our latest technical documentation at...

www.virginmedia.com/developer

Regional site contact details.

Guidance on our site feasibility drawings, materials provided and minimum build requirements.

How to install on site civils items, such as duct and inspection chambers.



Internal wiring guides for all build types.

Fire stopping, duct sealing and CPR (LSZH) guidance.

Details on our distribution cabinets and what they look like.

Advice on using media plates and Euro Modules inside your properties.

Members of...

HBF HOME BUILDERS FEDERATION

improving living in scotland
HOMES FOR SCOTLAND

SPF SCOTTISH PROPERTY FEDERATION

BPF BRITISH PROPERTY FEDERATION

Street Works UK
Connecting communities, enabling growth

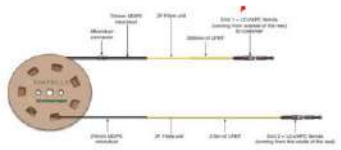
Supercharge your New Development with

Contents:

Chambers

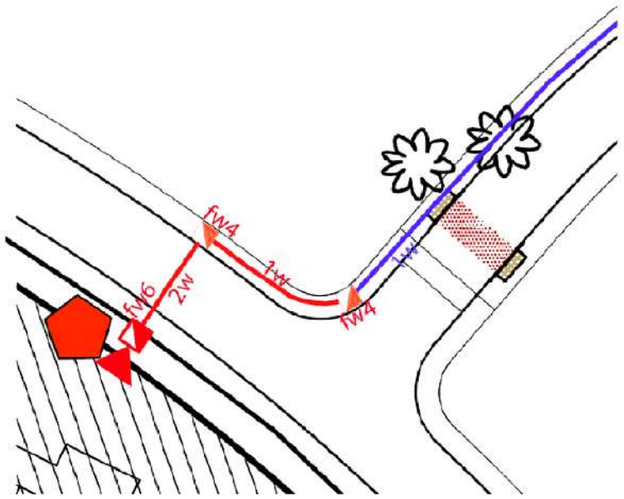
Duct and Street Cabinets

Pre Wiring Guidance



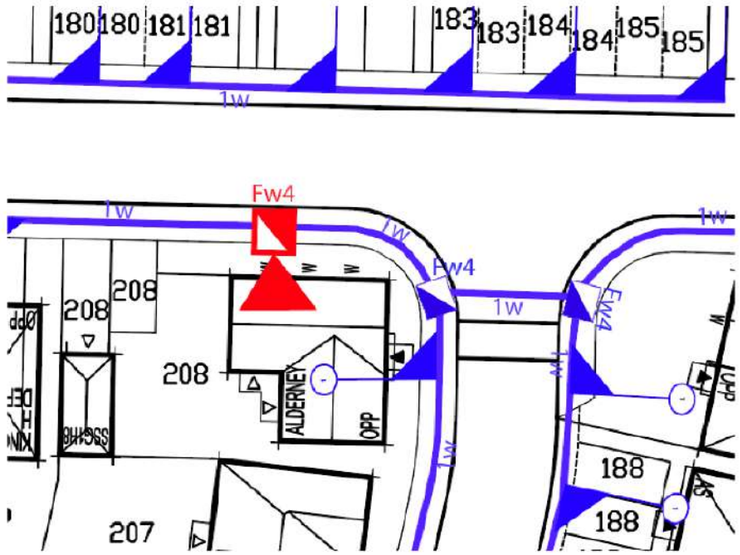
User Guides and Information

Contact - how to register



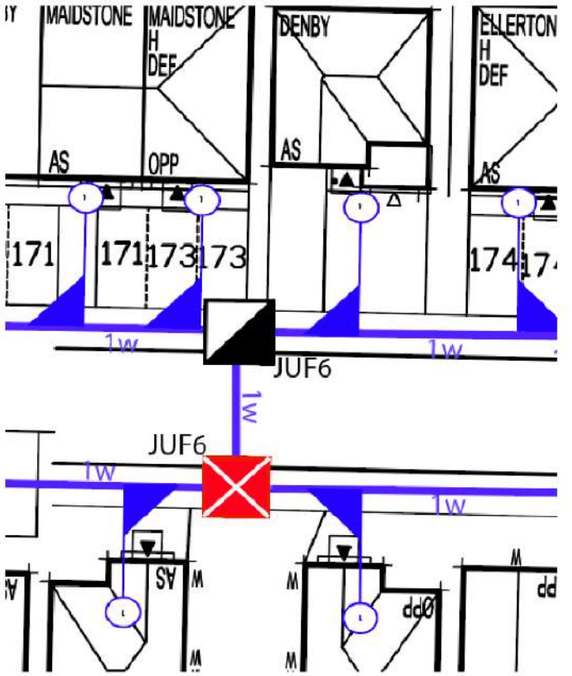
Off Site (Virgin Media) Works

Works to be completed by Virgin Media will be highlighted in red and will encompass all works external to a developers site allowing the Virgin Media network to reach the development.

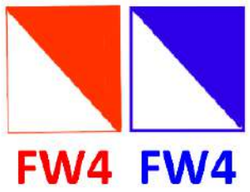


On Site (Developers) Works

On Site works to be completed by developer will be highlighted in blue to show the variation to Virgin Media works. This includes on site chamber construction as part of cabinet deployment. Tri Party Sites on-site Chambers JUF6, defer to BT Openreach for latest dimensions.



Drawing Symbols



Footway/Carriageway Chamber

Designation of chamber to be specified as per Virgin Media standards. Works for developer will be highlighted blue and works for Virgin Media contractor will be red.

Direction of sweep

Swept Tee (Lateral Connection)

Tee's will be shown "sweeping" in the direction of the serving distribution cabinet as shown in the examples above.

2W

Duct Arrangements

Duct routes are all shown as a single line, the number of ducts in the route will be signified by a way count... for example a 2 way duct is signified as 2W but will still show as a single line. For full details on duct arrangements please see drawing VMTD0017d.

Cabinets and DP's

- L2.5 / Pop A / V Hub
- Existing Cabinet
- L4 Cabinet and Equipment
- L3 Cabinet and Equipment
- Pole mounted DP
- Underground DP

Chamber Dimensions

FW2 – 730 x 460 x 465
FW3 – 750 x 600 x 600
FW4 – 915 x 445 x 600
FW6 – 1310 x 610 x 750
FW10 – 2320 x 740 x 750
CW1 – 600 x 600 x 900
CW2 – 1200 x 675 x 900
CW3 – 1800 x 675 x 900
CW4 – 915 x 445 x 900

Approx. chamber dimensions. L x W x D. All dimensions in millimetres. For full details on individual chamber specifications please refer to the individual drawing suitable for the chamber size you require in the Developers Guide. Please note that pre fabricated chamber opening sizes will vary but will still work with the matching sized frame/cover.

Note: All CW chambers **MUST** be constructed of reinforced concrete.

VMTD0001

Version 1.6 Revised 04/10/2024

Updated by Andrew Coles, created by Stephen Scott

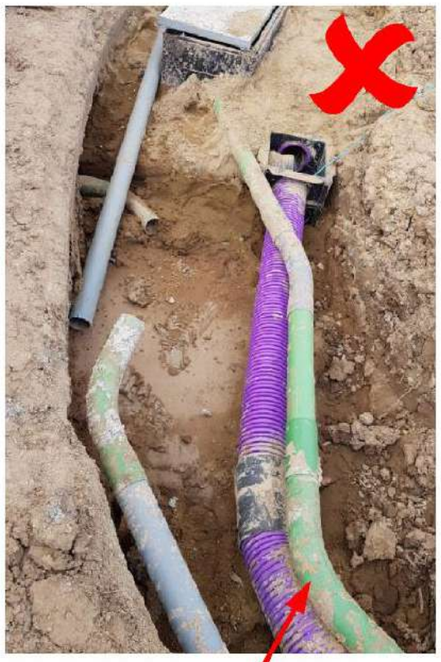
Authorised by Mark Forster, Fixed Access Network Engineering

Drawing owned and maintained by

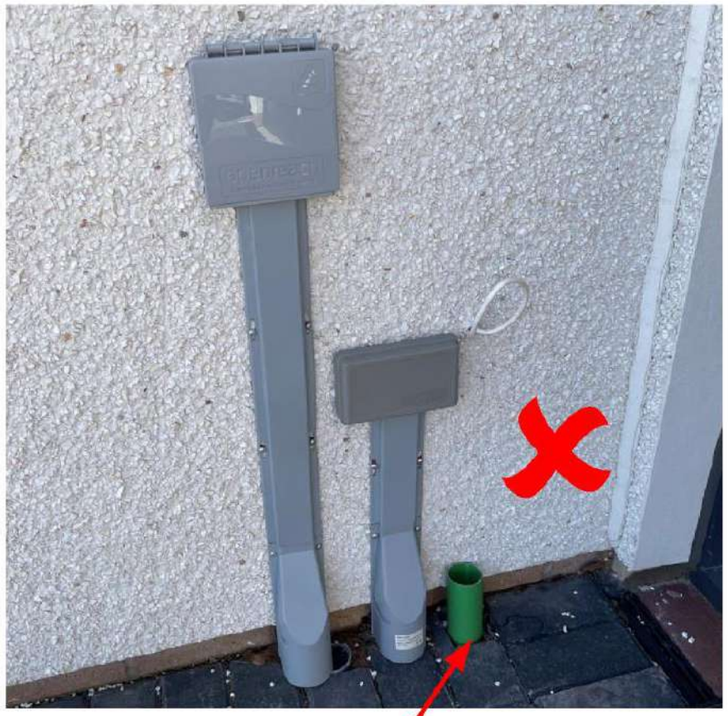
VMO2 Fixed Access Network Engineering

New Build Site Drawing Guidelines

On Site Materials Storage
Please keep all duct items stored in a secure area to prevent damage/theft. Virgin Media supplies materials free issue but if replacements are required we may levy a charge.



Duct Formation
Do not mix and match our duct with another operator (Openreach duct on VM and vice versa). Our site liaison will work with your teams to ensure you have enough material to complete any duct routes required by us on site. <u>Please also ensure that correct chamber lids are used for each operator</u>. Its worth noting that Openreach frame and covers are lockable, our covers do not fit so please ensure the correct frames are used in all instances.



Finishing Ducts
Ducts that terminate at the property should be topped with a termination box or end cap (supplied by Virgin Media). Ducts need to be cut flush or below ground level before any final ground works are completed.

External Presentation
At second fix, Omni boxes must be fitted to tidy external cable looms. Termination boxes to be fitted over duct ends and levelled with the ground. If consideration is given at first fix to ingress points for ourselves and other operators then you can achieve a tidy external finish. If possible, have your telecoms ingress point to the side of your property rather than the front to reduce the impact of external boxes.
<u>Remember the minimum distance between core locations should be 350mm.</u>

Site Security
Please ensure your compound is secure, cable drums left out in the open will attract metal thieves.

	VMTD0001a	
	Version 1.6 Revised 04/10/2024	Drawing owned and maintained by
	Updated by Andrew Coles, created by Stephen Scott	**VMO2 Fixed Access Network Engineering**
	Authorised by Mark Forster, Fixed Access Network Engineering	

New Build Best Practice Guidelines

Access Chamber Sizes			Access Cover Options		
			B125		D400
VMO2 Reference	Chamber Dimensions (mm)	Application	Concrete Infill	Recessed	Ductile Iron
FW1	550 x 315	Footway	■	■	
FW2	730 x 460	Footway	■	■	
FW3	750 x 600	Footway	■	■	
FW4	915 x 445	Footway	■	■	
FW6	1310 x 610	Footway	■	■	
FW10	2320 x 740	Footway	■	■	
CW1	600 x 600	Carriageway			■
CW2	1200 x 675	Carriageway			■
CW3	1800 x 675	Carriageway			■
CW4	915 x 445	Carriageway			■

Please see approved supplier document for full list of approved suppliers for various chamber related items.

Recessed Covers

FW3

Recessed covers are tested (unfilled) to the B125 load classification and can be filled with any material to suit the surrounding area.

In line with industry specification, individual recessed covers will not weigh more than 78Kg even when filled. This is to allow a single person to lift out the cover using the lift and slide design.

FW4

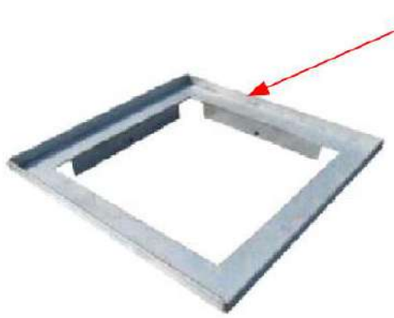
B125 Concrete Infill Covers

FW4

FW3

Concrete Infill raising frame, recommended for use with the Cubis Monobox Chamber Assembly (FW1 & FW2 sizes)

Radius Chambers do not require a rising frame.



Concrete Infill covers from Radius and Cubis are both approved for use on the VMO2 network.

Concrete Infill covers are rated to B125 load classification and meets the requirements of BS EN124: 1994 (B125). All concrete infill lids are slip resistant and have no inherent scrap value.

D400 Ductile Iron Covers

Skid resistant D400 class/Group 4 carriageway frame and covers. Suitable for use in carriageway environments only.

CW1

CW2

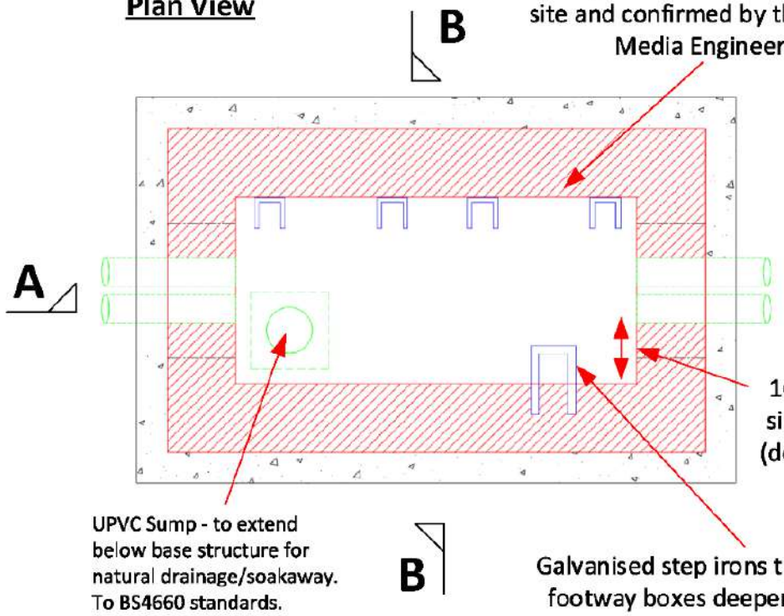
Please discuss your chamber requirements with your local Virgin Media site contact before site works begin. Standard chamber lids can be sourced quickly but there may be a lead time on specialist covers/recessed covers.

	VMTD0008	
	Version 1.5 Revised 01/08/2024	
	Updated by Andrew Coles, created By Stephen Scott	Drawing owned and maintained by **VMO2 Fixed Access Network Engineering**
	Authorised by Mark Forster, Fixed Access Network Engineering	

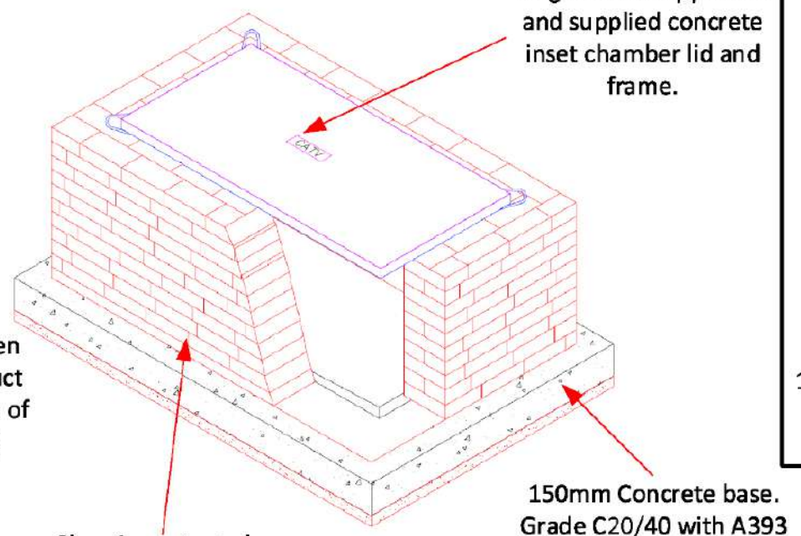
Chamber Sizes and Approved Lids

Classification: Internal

Plan View



Isometric



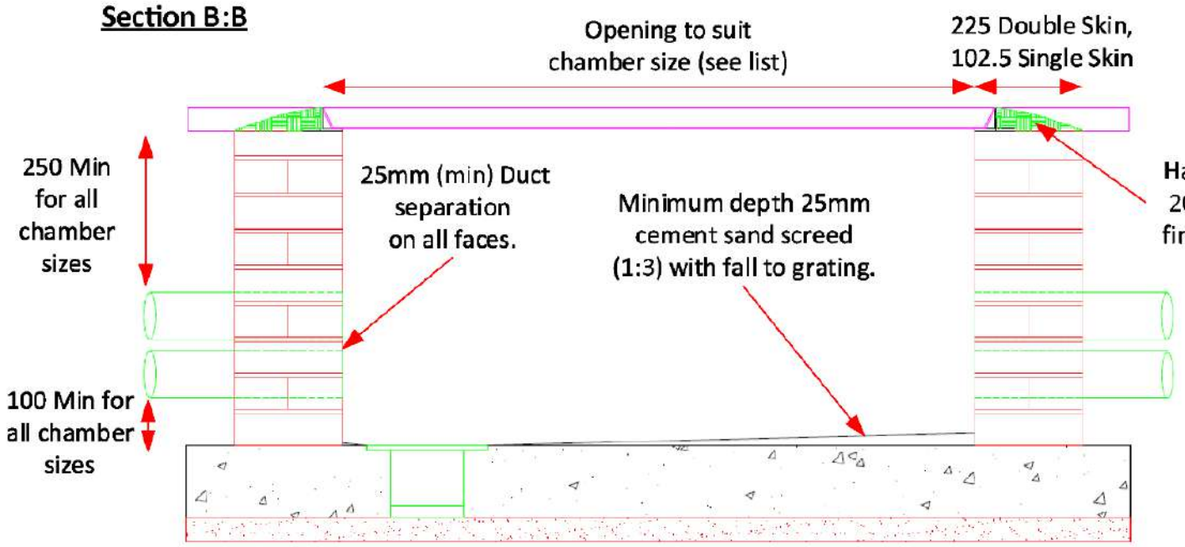
1. All dimensions in millimetres unless otherwise stated.
2. All concrete to be BS8110 (EN1992) grade C20/40.
3. Concrete to be fully compacted.
4. Trim ducts flush with inside face of wall and seal with mortar.
5. Cover and frame approved for B125 duty in Footway Scenarios and D400 in Carriageway.
6. Frame to have bolting lugs and be bolted down on bedding with cover in place, to ensure there is no rocking.
7. Capped lead outs to be provided as directed by the Virgin Media Delivery Engineer.
8. Chamber depth to be increased with 450 cover at road crossings and decreased for 1 no. duct layer.
9. Bricks to be class B Engineering bricks to BSEN771-1.
10. Chamber for 2 no. to 4 no. ducts in any direction and for 1 no. duct layer on straight through main cable route.

Chamber Openings and Build Types

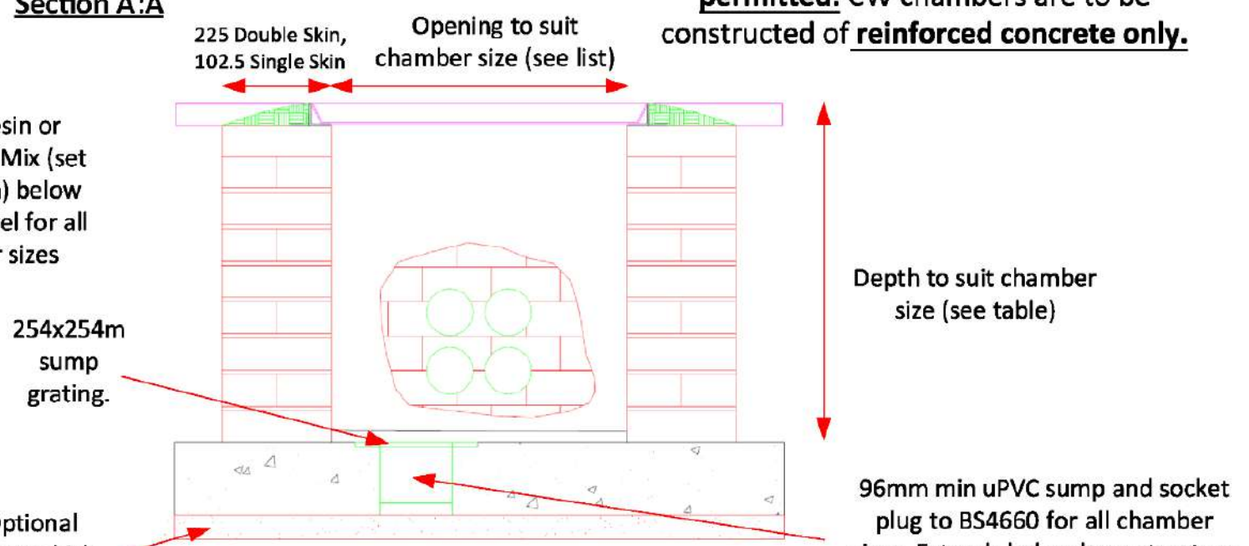
FW1 - 550 x 315 x 465 - Single Skin
FW2 – 730 x 460 x 465 - Single Skin
FW3 – 750 x 600 x 600 - Single Skin
FW4 – 915 x 445 x 600 - Double Skin
FW6 – 1310 x 610 x 750 - Double Skin
FW8/10 – 2320 x 740 x 750 - Double Skin

Brick-Built Carriageway Chambers are **not permitted.** CW chambers are to be constructed of **reinforced concrete only.**

Section B:B



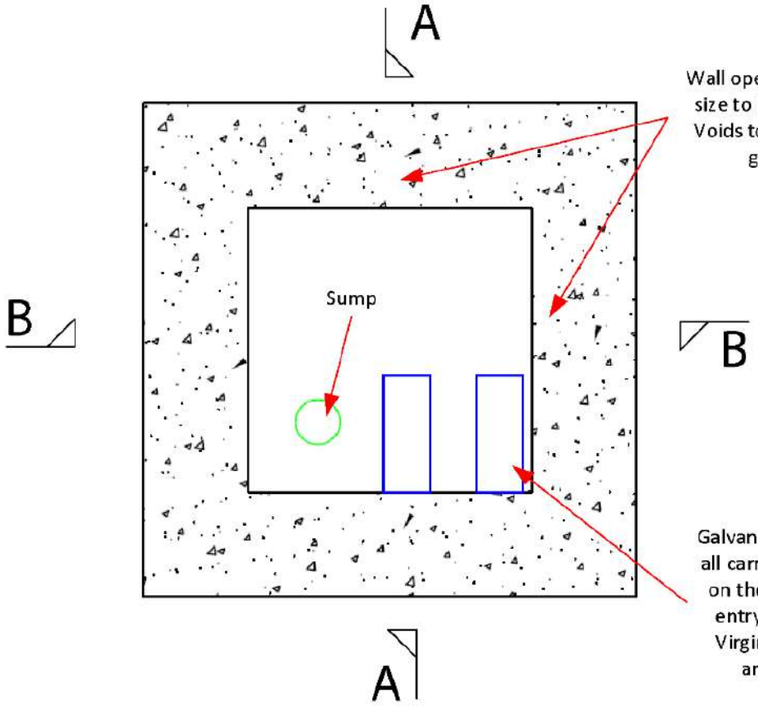
Section A:A



	VMTD0002	
	Version 2.2 Revised 17/09/2024	Drawing owned and maintained by **VMO2 Fixed Access Network Engineering**
	Updated by Andrew Coles, created By Stephen Scott	
	Authorised by Mark Forster, Fixed Access Network Engineering	

Brick Built Chambers

Plan View (Ducts Omitted for Clarity)

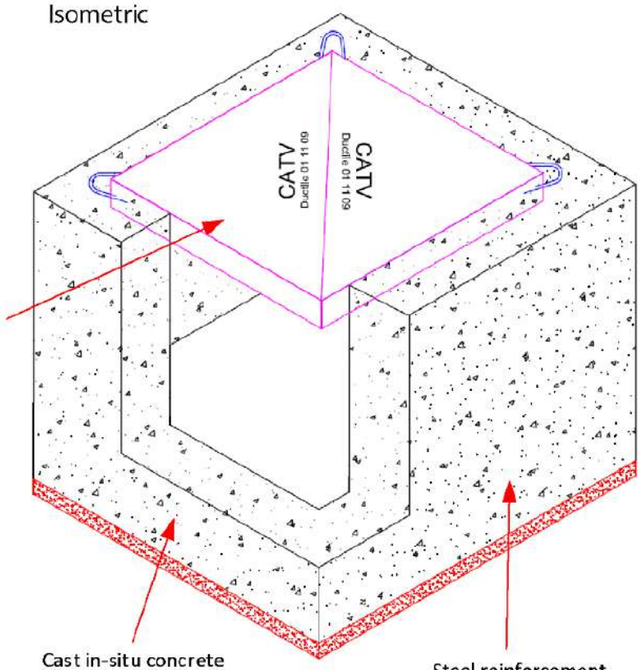


Wall openings 325x325mm Max, actual size to be formed to suit duct entries. Voids to be sealed and surfaces made good with class 1 mortar.

CW1 ductile iron frame and cover approved and supplied by Virgin Media.

Galvanised step irons to be fitted in all carriageway chambers, position on the end remote from any side entry duct or as directed by the Virgin Media Delivery Engineer, and away from the sump.

Isometric



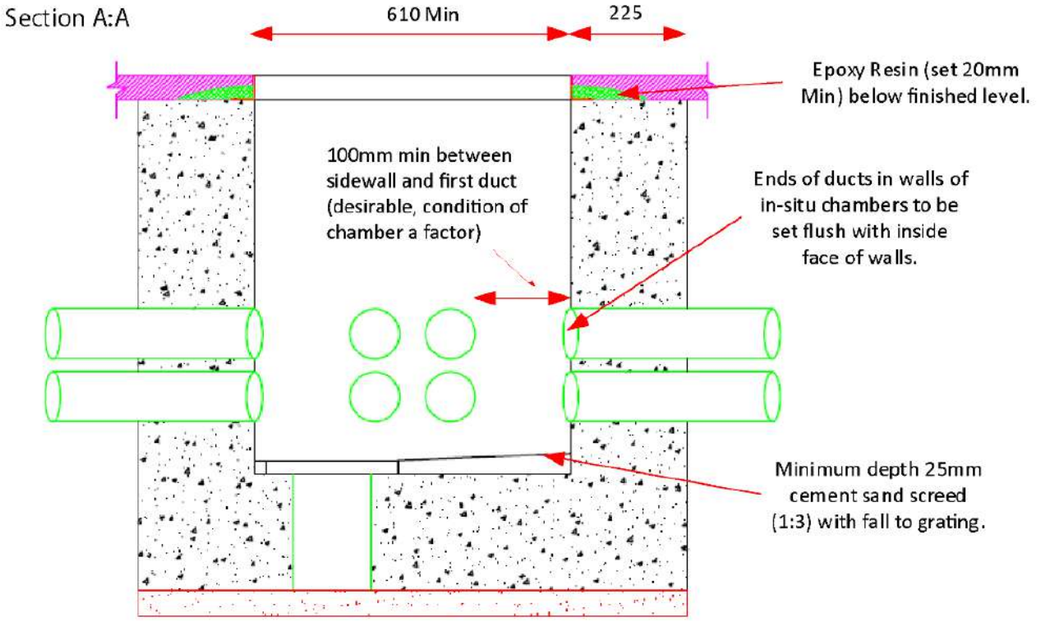
Cast in-situ concrete chambers to be constructed of class C32/40 concrete.

Steel reinforcement omitted for clarity.

1. All dimensions in millimetres unless otherwise stated.
2. Reinstatement to comply with the requirements of the NRSWA (subject to category).
3. All covers shall have an approved BS standard kite mark to the approval of the Virgin Media Delivery Engineer.
4. All duct ends to be flush with concrete and in line.
5. The maximum number of duct entries into any single wall is 8 No.
6. All materials and workmanship to be in accordance with specification.
7. All concrete to be in accordance with BS8110 (EN1992). Reinforced concrete to be minimum grade C40 and subject to the minimum requirements of BS8110 (EN1992). Concrete mix to chambers to be C32/40 with S.R.C used only as directed by the Virgin Media Delivery Engineer.
8. Carriageway frames and covers to be class D400 to BSEN124.

Important – All carriageway chambers must be constructed of reinforced concrete. Please refer to **VMTD0010 and VMTD0012** for full details of bar arrangement and shape codes, respectively. The requirements of the chamber build must be agreed on site by the Virgin Media Delivery Engineer prior to any construction.

Section A:A



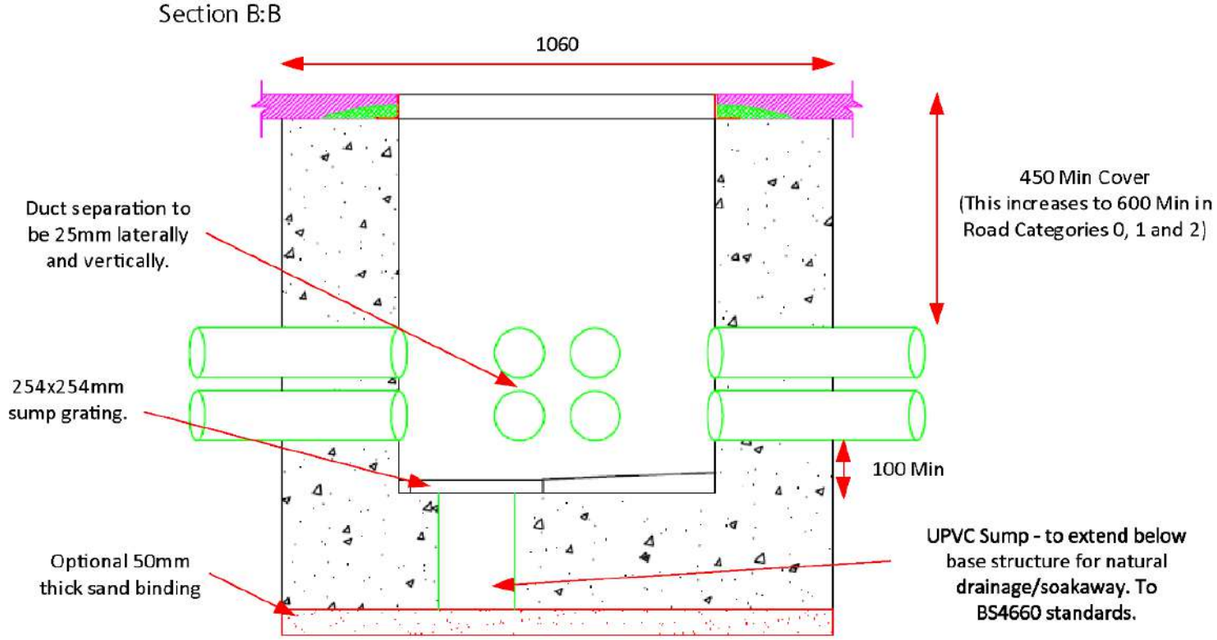
Epoxy Resin (set 20mm Min) below finished level.

100mm min between sidewall and first duct (desirable, condition of chamber a factor)

Ends of ducts in walls of in-situ chambers to be set flush with inside face of walls.

Minimum depth 25mm cement sand screed (1:3) with fall to grating.

Section B:B



Duct separation to be 25mm laterally and vertically.

254x254mm sump grating.

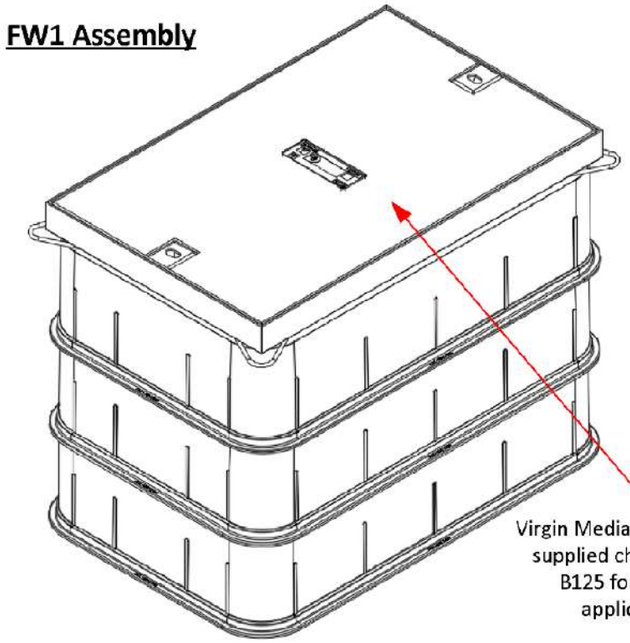
Optional 50mm thick sand binding

UPVC Sump - to extend below base structure for natural drainage/soakaway. To BS4660 standards.

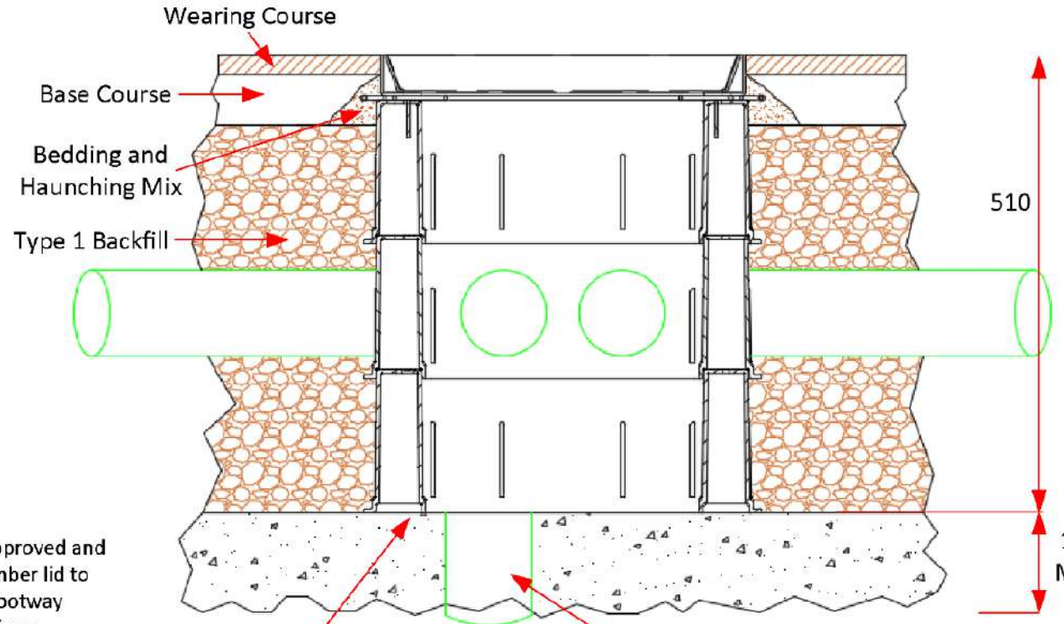
	VMTD0003a	
	Version 1.7 Revised 17/09/2024	Drawing owned and maintained by
	Updated by Andrew Coles, created by Stephen Scott	VMO2 Fixed Access Network Engineering
	Authorised by **Mark Forster, Fixed Access Network Engineering**	

CW1 Carriageway Chamber

FW1 Assembly



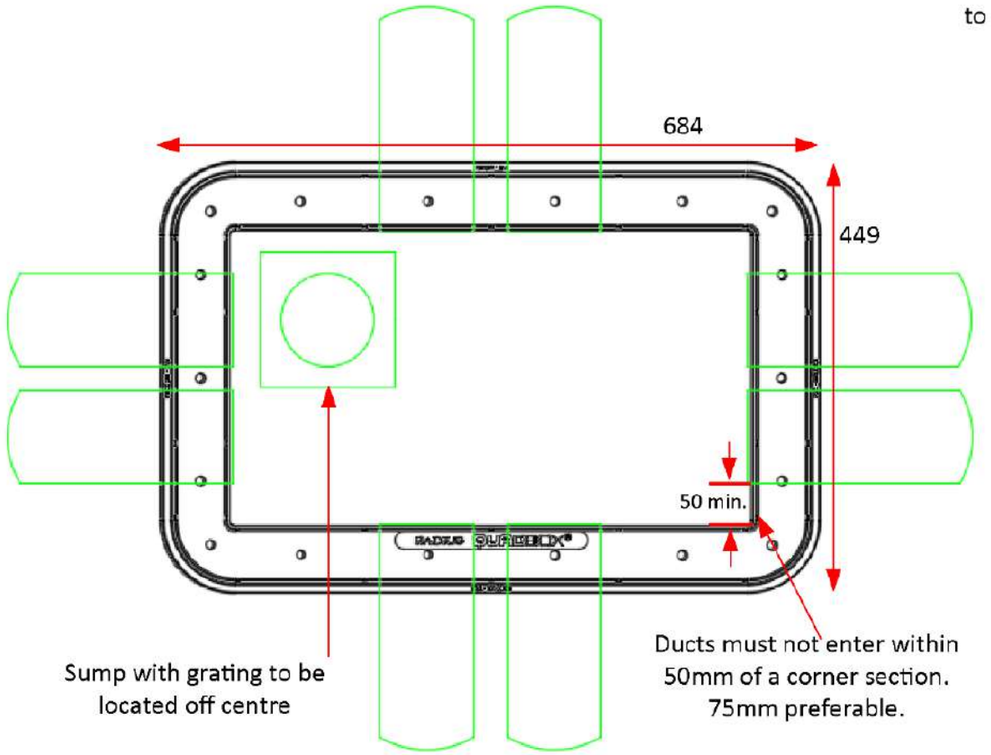
Virgin Media approved and supplied chamber lid to B125 for Footway applications.



Float finished concrete floor at base of chamber with fall to grating.

UPVC Sump - to extend below base structure for natural drainage/soakaway. To BS4660 standards.

1. All dimensions in millimetres unless otherwise stated.
2. Reinstatement to comply with the requirements of the NRSWA (subject to category).
3. All ducts to be cut flushed and sealed with mastic, with a min. clearance of 50mm from chamber corners.
4. All materials and workmanship to be in accordance with the specification.
5. Virgin Media supplied Radius Footway covers and frames are class B125 to BSEN124.
6. Concrete base slab to be placed, tamped and surface finished. Radius chamber rings to be installed and levelled to suit.
7. Duct entries vary in number, grouping and orientation. Duct entry positions should be agreed with the Virgin Media Build Engineer prior to construction..
8. Draw lines shall be secured inside chambers by tying off to a suitable fixture or by tying to an approved batten.
9. Standard backfill requirements for an FW1 chamber shall be type 1 in all circumstances unless further support is required then concrete backfill is recommended.
10. For full build guidelines please refer to the Radius Installation guide found on their VM landing page.



Sump with grating to be located off centre

Ducts must not enter within 50mm of a corner section. 75mm preferable.

Ducts to be cut flush and sealed with mastic

Duct entry holes in Quadbox assemblies must be core drilled using suitable equipment. Where possible, holes should be drilled at marked locations.

Please Note – Ducts should never enter through the bottom section or the top section without prior approval from your Virgin Media site contact.

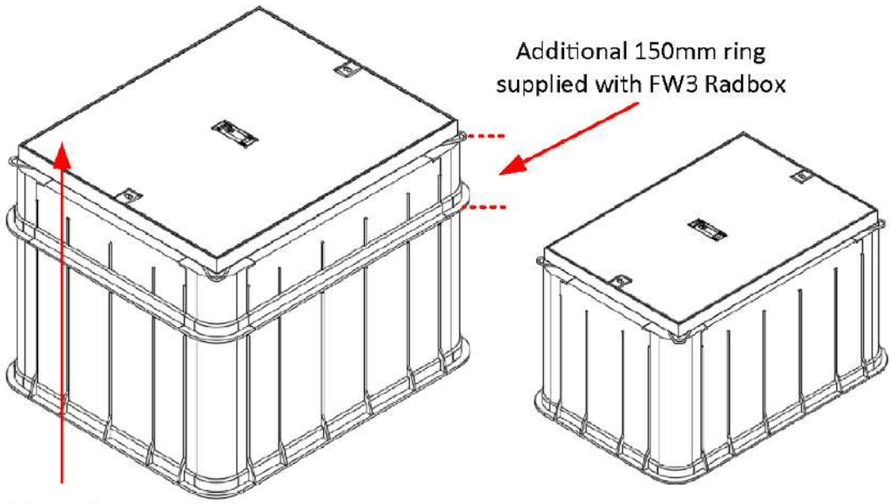
FW1 Quadbox Chamber Dimensions

FW1 – 550 x 315 x 450 **Inside**, 684 x 449 x 460 **Outside**

Carriageway chambers **must** be constructed of reinforced concrete, plastic chambers are not approved for use in the carriageway, nor recommended by the manufacturer.

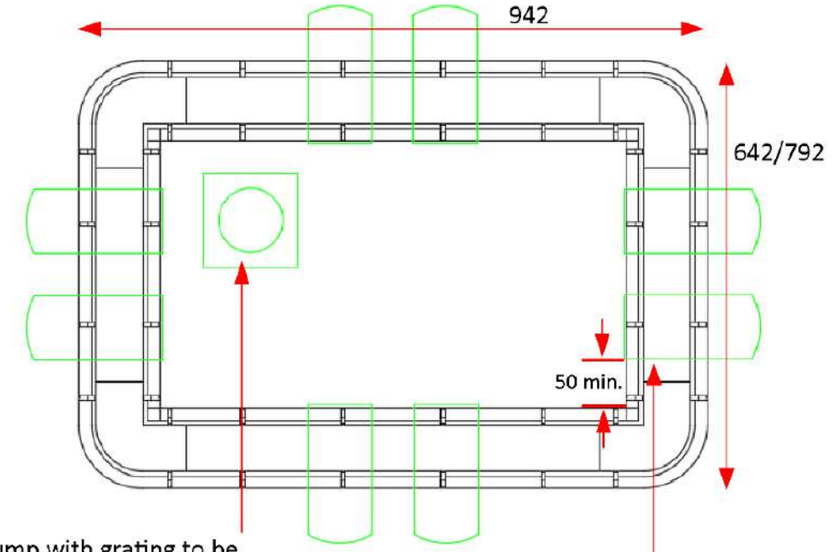
	VMTD0004a	
	Version 1.0 Created 16/10/2024	**Radius FW1 Quadbox**
	Created by Andrew Coles	Drawing owned and maintained by
	Authorised by Mark Forster, Fixed Access Network Engineering	**VMO2 Fixed Access Network Engineering**

FW2 & 3 Assembly



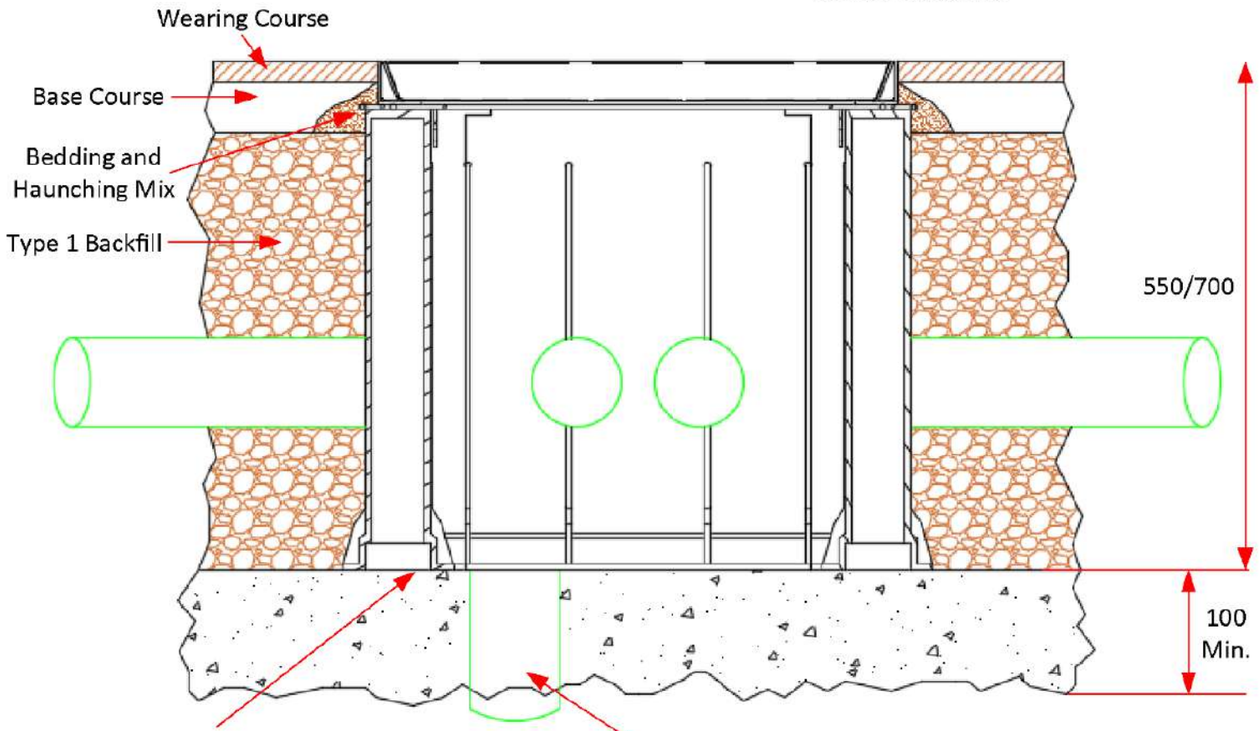
Additional 150mm ring supplied with FW3 Radbox

Virgin Media approved and supplied chamber lid to B125 for Footway applications.



Sump with grating to be located off centre

Ducts must not enter within 50mm of a corner section. 75mm preferable.



Float finished concrete floor at base of chamber with fall to grating.

UPVC Sump - to extend below base structure for natural drainage/soakaway. To BS4660 standards.

Ducts to be cut flush and sealed with mastic

1. All dimensions in millimetres unless otherwise stated.
2. Reinstatement to comply with the requirements of the NRSWA (subject to category).
3. All ducts to be cut flushed and sealed with mastic, with a min. clearance of 50mm from chamber corners.
4. All materials and workmanship to be in accordance with the specification.
5. Virgin Media supplied Radius Footway covers and frames are class B125 to BSEN124.
6. Concrete base slab to be placed, tamped and surface finished. Radbox chambers to be installed and levelled to suit.
7. Duct entries vary in number, grouping and orientation. Duct entry positions should be agreed with the Virgin Media Build Engineer prior to construction.
8. Draw lines shall be secured inside chambers by tying off to a suitable fixture or by tying to an approved batten.
9. Standard backfill requirements for a Radbox chamber shall be type 1 in all circumstances unless further support is required then concrete backfill is recommended.
10. For full build guidelines please refer to the Radius Installation guide found on their VM landing page.

FW2 & FW3 Radbox Chamber Dimensions

FW2 – 750 x 450 x 500 **Inside**, 942 x 642 x 500 **Outside**
FW3 – 750 x 600 x 650 **Inside**, 942 x 792 x 650 **Outside**

Carriageway chambers **must** be constructed of reinforced concrete, plastic chambers are not approved for use in the carriageway, nor recommended by the manufacturer.

Duct entry holes in Radbox assemblies must be core drilled using suitable equipment. Where possible, holes should be drilled at marked locations.

FW3 150mm ring can be removed if extra depth not required and can also be stacked at the bottom, underneath main Radbox assembly.

VMTD0005a

Version 1.0 Created 16/10/2024

Created by Andrew Coles

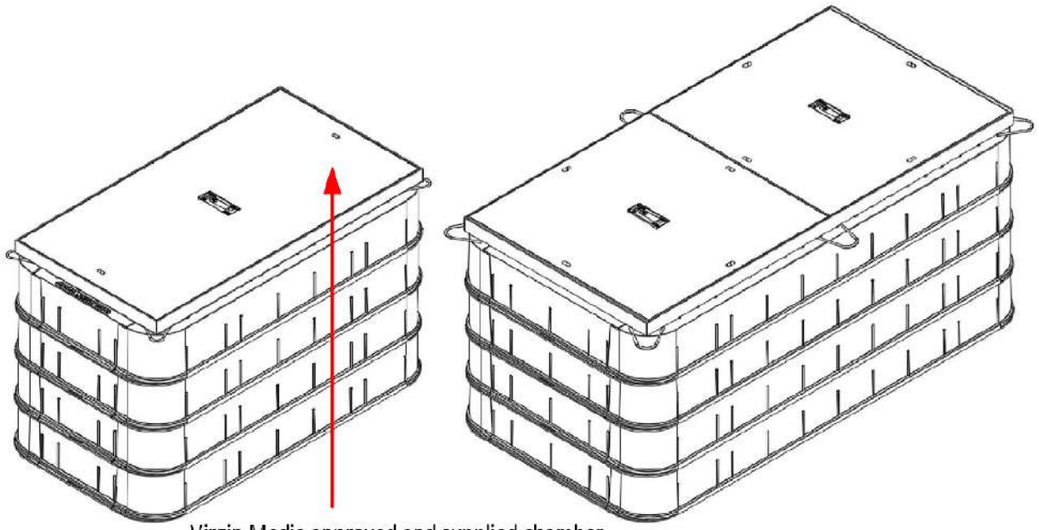
Authorised by Mark Forster, Fixed Access Network Engineering

Drawing owned and maintained by

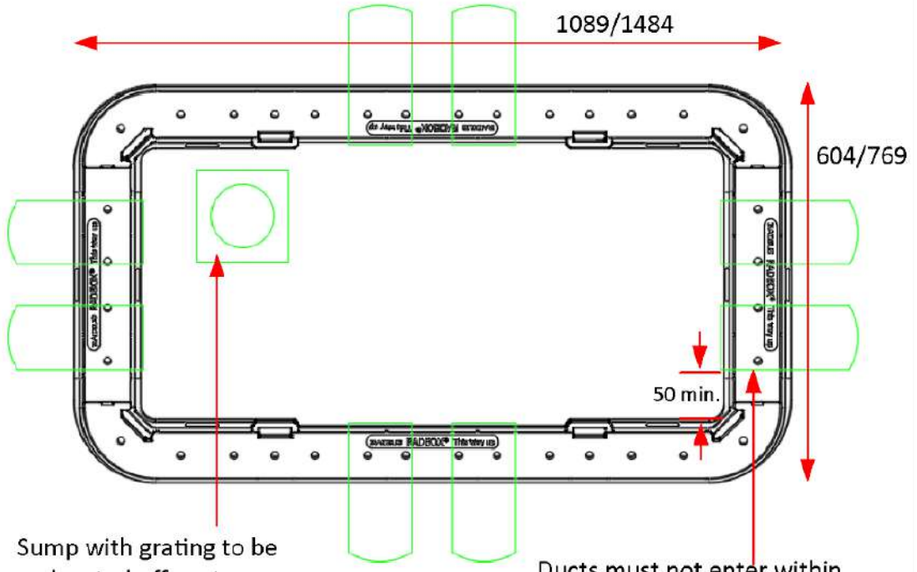
VMO2 Fixed Access Network Engineering

Radius FW2 & FW3 Radbox

FW4 & 6 Assembly



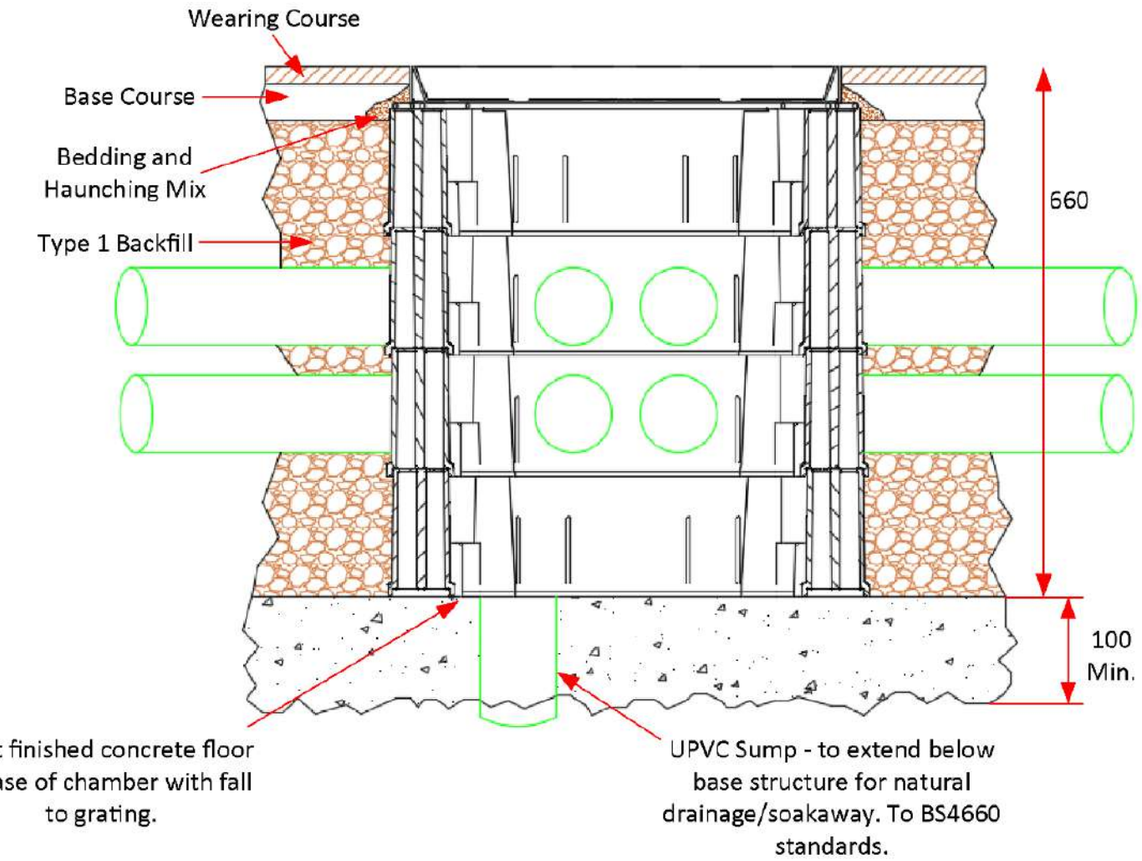
Virgin Media approved and supplied chamber lid to B125 for Footway applications.



Sump with grating to be located off centre

Ducts must not enter within 50mm of a corner section. 75mm preferable.

Ducts to be cut flush and sealed with mastic



Float finished concrete floor at base of chamber with fall to grating.

UPVC Sump - to extend below base structure for natural drainage/soakaway. To BS4660 standards.

1. All dimensions in millimetres unless otherwise stated.
2. Reinstatement to comply with the requirements of the NRSWA (subject to category).
3. All ducts to be cut flushed and sealed with mastic, with a min. clearance of 50mm from chamber corners.
4. All materials and workmanship to be in accordance with the specification.
5. Virgin Media supplied Radius Footway covers and frames are class B125 to BSEN124.
6. Concrete base slab to be placed, tamped and surface finished. Radius chamber rings to be installed and levelled to suit.
7. Duct entries vary in number, grouping and orientation. Duct entry positions should be agreed with the Virgin Media Build Engineer prior to construction.
8. Draw lines shall be secured inside chambers by tying off to a suitable fixture or by tying to an approved batten.
9. Standard backfill requirements for Radbox 2 chambers shall be type 1 in all circumstances unless further support is required then concrete backfill is recommended.
10. For full build guidelines please refer to the Radius Installation guide found on their VM webpage.

FW4 & FW6 Radbox ^{2} Chamber Dimensions

FW4 – 915 x 445 x 610 **Inside**, 1089 x 604 x 610 **Outside**
FW6 – 1310 x 610 x 650 **Inside**, 1484 x 769 x 610 **Outside**

Carriageway chambers **must** be constructed of reinforced concrete, plastic chambers are not approved for use in the carriageway, nor recommended by the manufacturer.

Duct entry holes in Radbox 2 assemblies must be core drilled using suitable equipment. Where possible, holes should be drilled at marked locations.

Please Note – Ducts should never enter through the bottom section or the top section without prior approval from your Virgin Media site contact.

VMTD0006a

Version 1.0 Created 16/10/2024

Created by Andrew Coles

Authorised by Mark Forster, Fixed Access Network Engineering

Drawing owned and maintained by

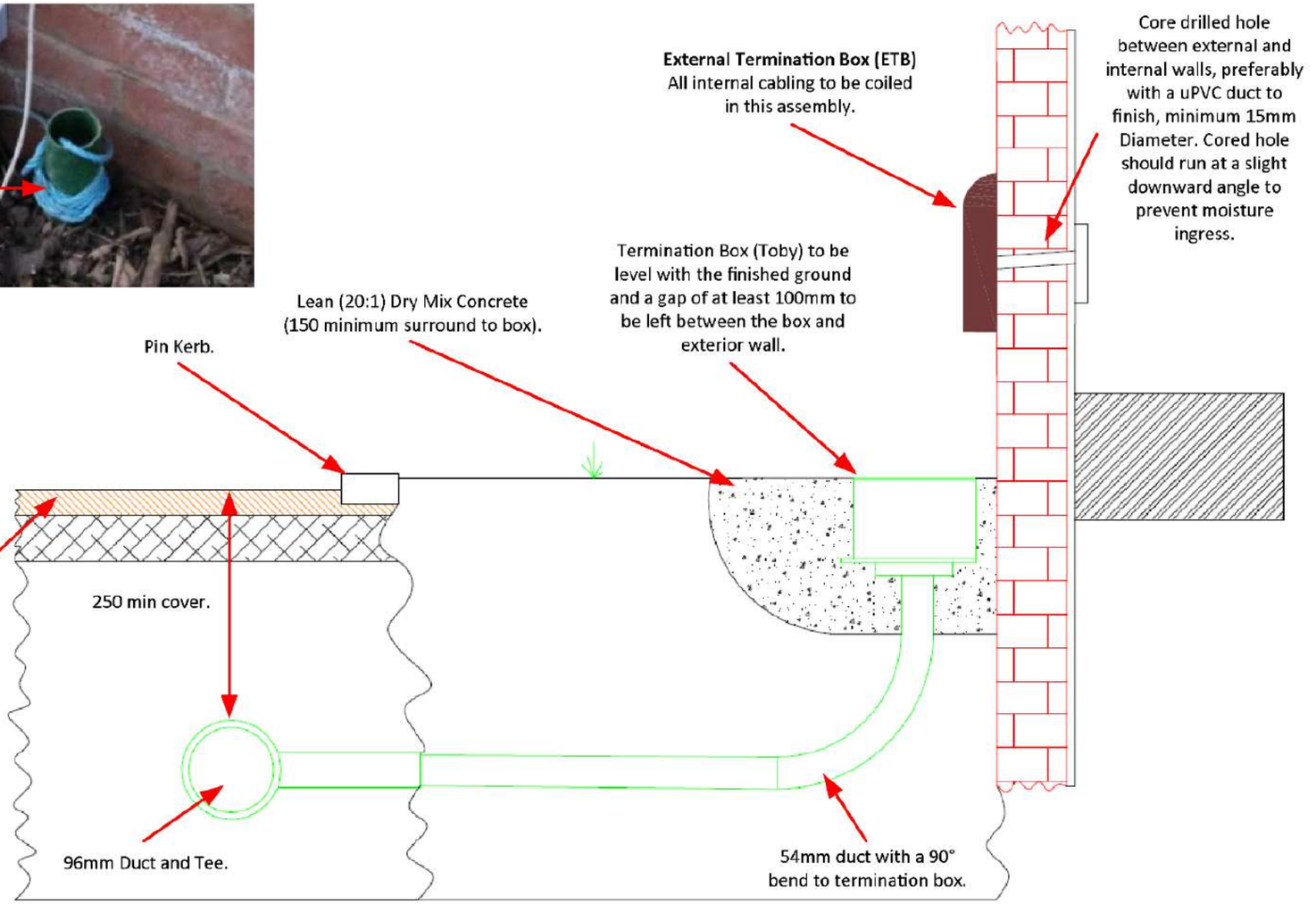
VMO2 Fixed Access Network Engineering

Radius FW4 & FW6 Radbox 2

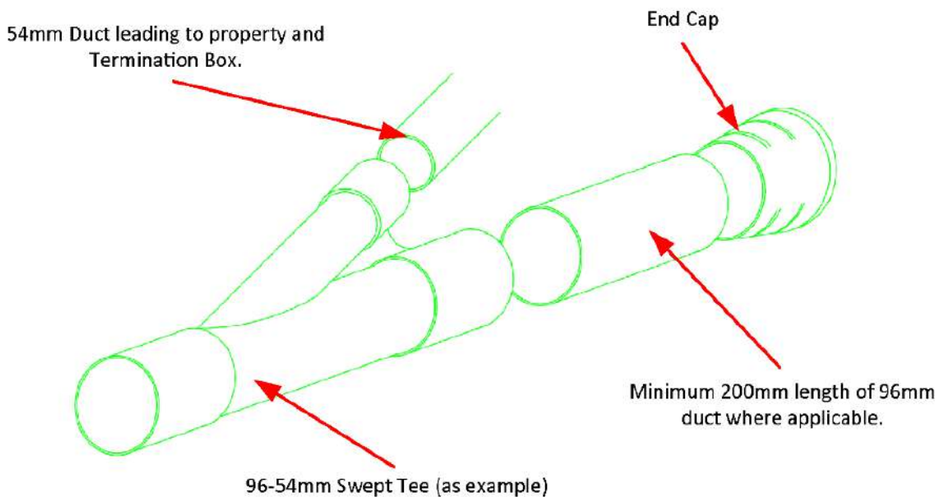
Care must be given to the location of Virgin Media and Openreach ETB's, this is even more important if your site is Openreach Fibre. A distance of at least **350mm** between core locations for external cabling must be provided to allow adequate space for ETB's to be fitted.

Slimline ETB
All Micro Duct shall be terminated back to this location with 2.5m tails. Pre-Loaded Micro Duct **MUST NOT** be cut. ETB's are available in either White, Grey or Brown to suit your external build

Only the final Tee in a duct route is required to be roped. Roping every Tee will lead to blockages and should be avoided.



Terminating a Single Way Duct Configuration at the Last Swept Tee



1. All dimensions in Millimetres unless otherwise stated.
2. Reinstatement to comply with requirements of the NRSWA (subject to category).
3. The installed assembly complies with BSEN124 and should only be installed in line with these guidelines. Any deviation from this install example must be highlighted with the local Virgin Media Delivery Engineer.

Important Note: If internal wiring is complete before external civils infrastructure is deployed the Termination Box (Toby) should be located immediately opposite the Internal Back-box or below the External Termination Box (ETB). If the external civils infrastructure is complete first then consideration must be given to the placement of the Toby compared to the cable input point at the property.

VMTD0011c

Version 1.9 Revised 03/10/2024

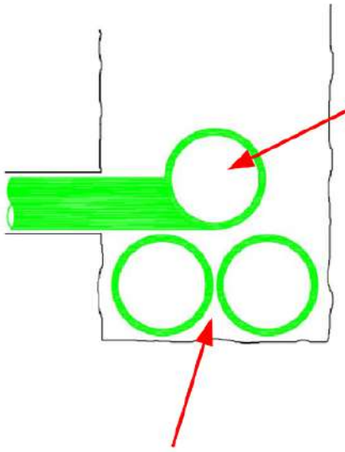
Updated by Andrew Coles, created by Stephen Scott

Authorised by Mark Forster, Fixed Access Network Engineering

Drawing owned and maintained by

VMO2 Fixed Access Network Engineering

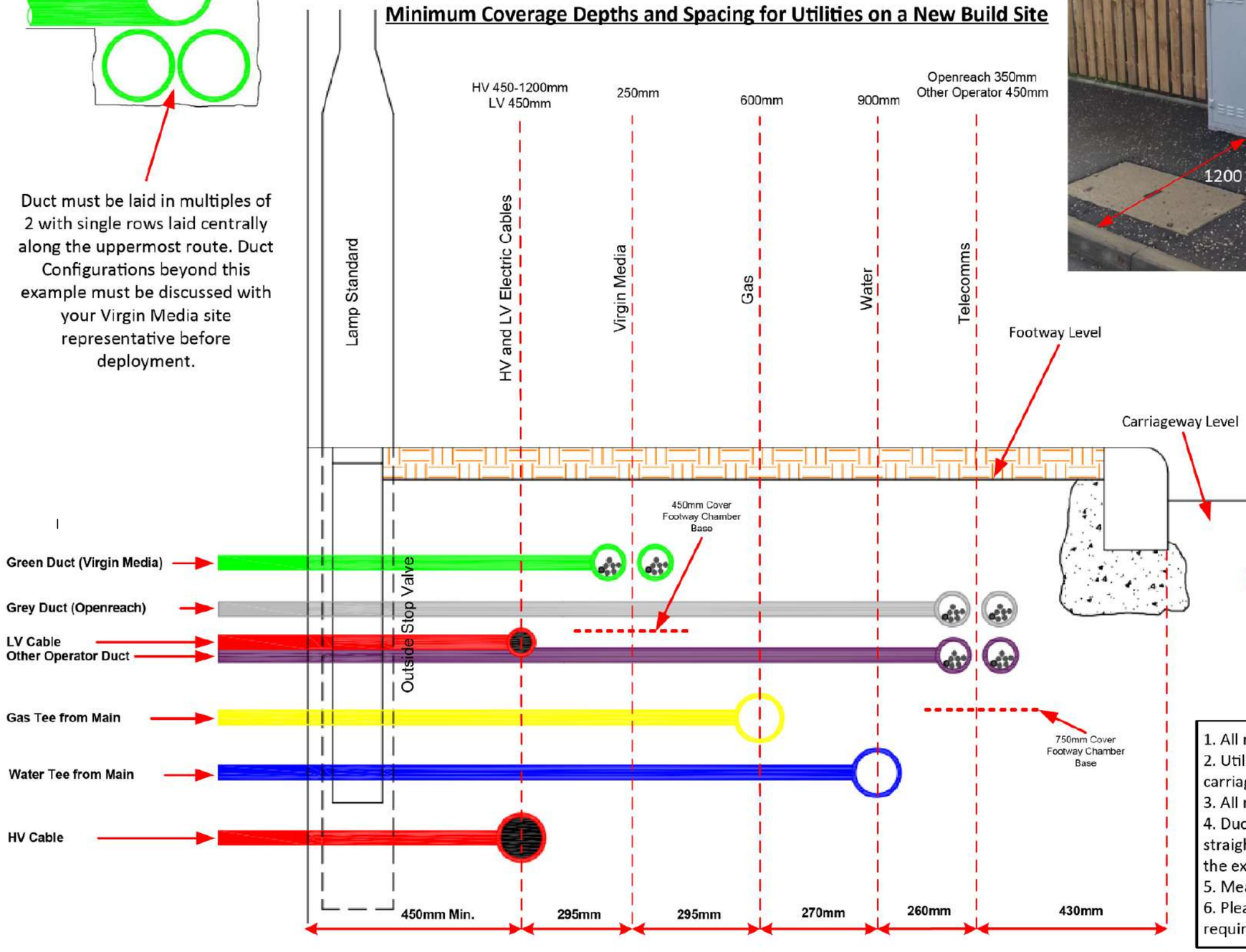
Residential Termination Box



Tee's must always be installed on the upper most duct and the route closest to the property being served.

Duct must be laid in multiples of 2 with single rows laid centrally along the uppermost route. Duct Configurations beyond this example must be discussed with your Virgin Media site representative before deployment.

Minimum Coverage Depths and Spacing for Utilities on a New Build Site



Street Furniture in the Highway

When deploying our service on new sites, we aim to follow the national minimum standard of **1.2m** space from the front of our street furniture to the edge of the new public highway. We understand that the average highway on new sites will generally be 2m so maintaining the desired 1.8m space that most local authorities look for may be difficult. Please liaise with your regional highways teams prior to design/adoption to discuss any issues they may have with street furniture in newly created highways. We will always work with you to install our equipment in the best location possible.

This example shows how staging utilities in a new footpath using the minimum standards from the Streetworks UK standards, you can achieve 5 utilities in less than a 2m footway (1.7m example shown), with space for 450/750mm cover footway boxes. This would allow the potential addition of a third Telecoms supplier (below the Openreach minimum depth) while still maintaining all standard depths for all critical utilities.

Remember, Virgin Media Duct Coverage is...

Footway – 250mm (260mm Scotland)

Carriageway – 450mm

1. All measurements in millimetres unless otherwise stated.
2. Utilities measurements are distance from outer footway limit with the carriageway.
3. All measurements are minimum depth of cover requirements.
4. Duct/cable routes are indicative and drawn on the basis that all utilities lead straight to the property and do not terminate in the footway with Cable TV being the exception.
5. Measurements taken from NJUG Guidelines 2014.
6. Please refer to VMTD0017d for full details of duct alignment and backfill requirements in a service trench.

Street Works UK
Connecting communities, enabling growth

VMTD0017c

Version 1.8 Revised 04/10/2022

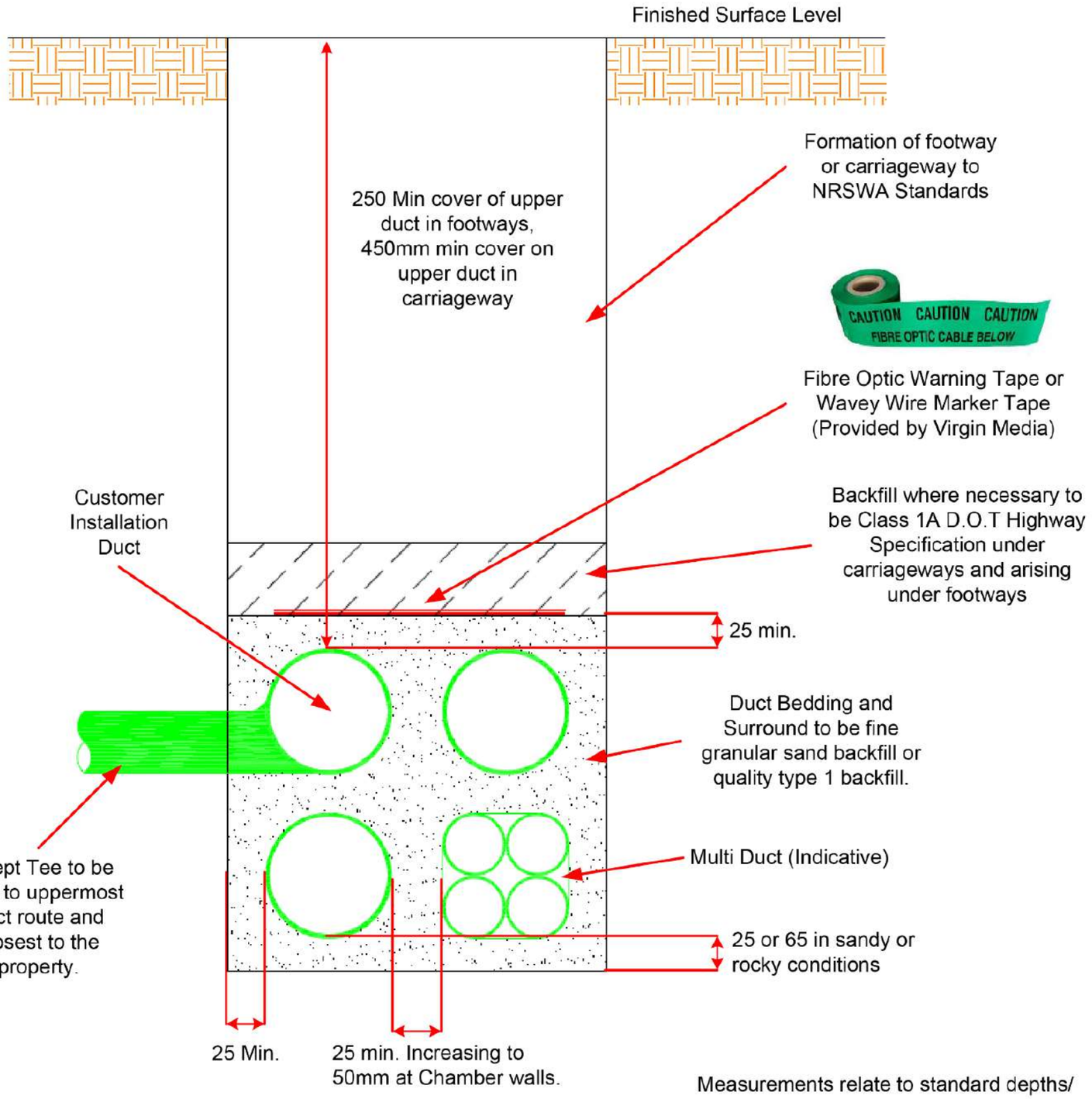
Updated by Andrew Coles, created by Stephen Scott

Authorised by Mark Forster, Fixed Access Network Engineering

Drawing owned and maintained by

VMO2 Fixed Access Network Engineering

Virgin Media Streetworks Requirements

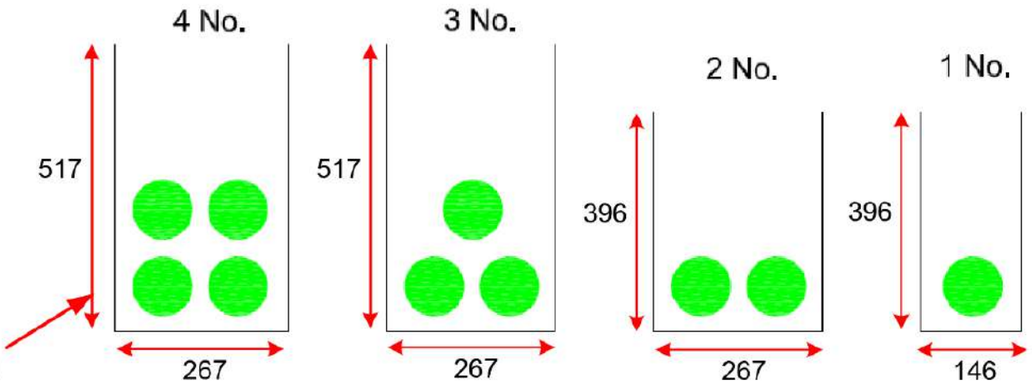


1. All measurements in millimetres unless otherwise stated.
2. Reinstatement to comply with the requirements of the NRSWA (subject to category)
3. All duct to be Green, supplied and approved by Virgin Media.
4. Swept Tee's must always be installed on the uppermost duct line closest to the property.
5. A minimum clearance of 25mm must be left between all Duct routes and edge of trench and base of backfill. Any deviation must be approved in advance with the Virgin Media Delivery Engineer.

Preferred Options for Duct Configuration in Footway and Highway Situations

All even numbers of duct in the same trench will be laid in pairs stacked on top of each other, with the exception of some special engineering difficulties which may require a different duct arrangement (to be agreed in advance with the Virgin Media Engineer).

<u>Odd number duct configurations will have the single duct laid nearest the surface equispaced between the two lower ducts.</u>



Measurements relate to standard depths/ widths if trench is made up to the specification highlighted here with a 25mm bedding around ducts on all sides.

Street Works UK
Connecting communities, enabling growth

VMTD0017d

Version 1.5 Revised 04/10/2022

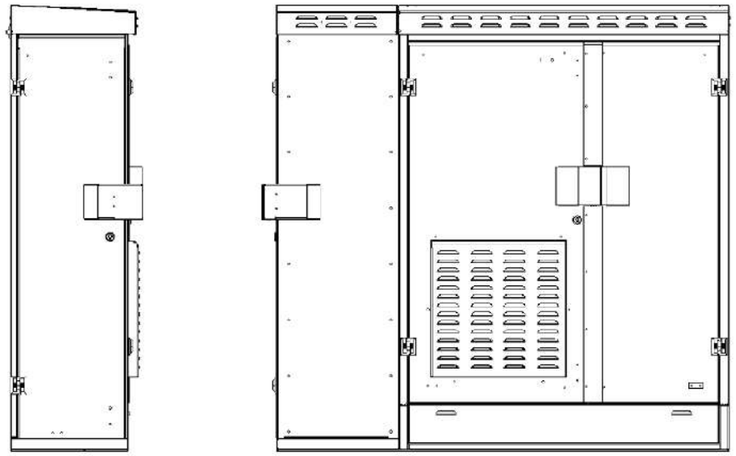
Updated by Andrew Coles, created by Stephen Scott

Authorised by Mark Forster, Fixed Access Network Engineering

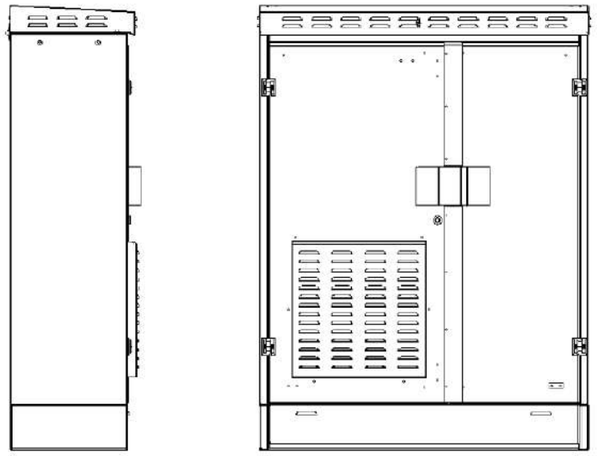
Drawing owned and maintained by

VMO2 Fixed Access Network Engineering

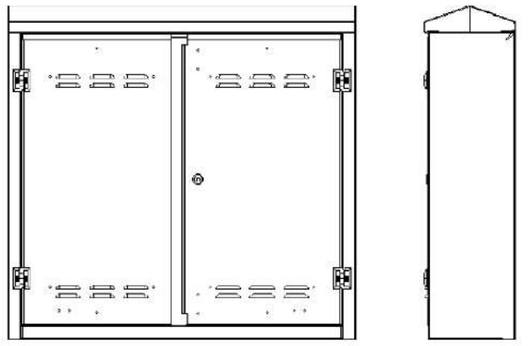
Typical Layout of Ducts in Trenches



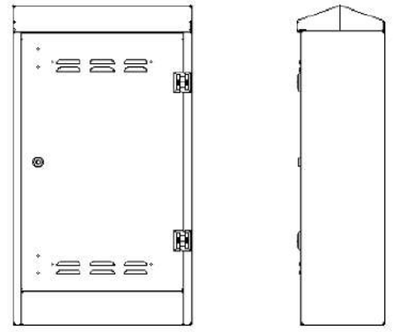
POP-A Power Pillar - 1538 W x 1515 H x 400 D
Node Cabinet L2.25 or L2.5
Cabinet combines standard POP-A cabinet with power pillar section, providing a single cabinet solution to a previously two cabinet design (POP-A + SD1 power cabinet). When used as eCIN (~10,000 homes served) or OLT cabinet (~4000 homes).



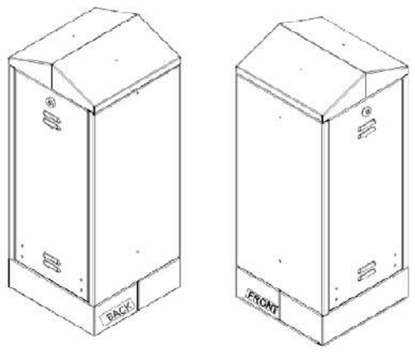
POP-A - 1124 W x 1515 H x 400 D
Node Cabinet L2.25 or 2.5
Standard POP-A cabinet without power pillar section. When used as eCIN roughly 10,000 homes served or OLT cabinet roughly 4000 homes.



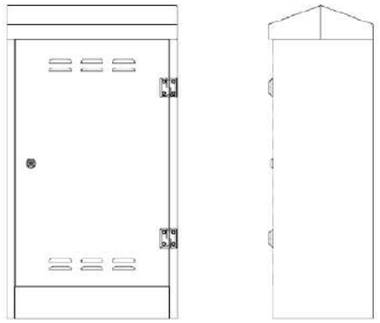
VMDD4i - 1000 W x 960 H x 250 D (at base)
Distribution Cabinet L3 or L4
1 per 2048 homes (max) when used as a dual backboard L3.
1 per 192 homes (max) when used as a dual backboard L4



VMSD3i - 535 W x 960 H x 250 D (at base)
Distribution Cabinet L3 or L4
1 per 1024 homes (max) when used as a L3.
1 per 96 homes (max) when used as a L4.



VMFB2 - 338 W x 815 H x 338 D (at base)
Distribution Cabinet L4
1 per 48 homes (max) when used in a New Development (NexFibre/NetEx).



VMSD1 – 535 W x 985 H x 330 D
Power Cabinet

Power Requirements – The POP-A cabinet will be co-located with a smaller SD1 power cabinet, or potentially as a combined POP-A Power Pillar. Due to the size and importance of these cabinets, a lot of planning consideration will be taken when locating these to serve a new build site. Normally these will be off site and out of visible range of your new properties.

If the cabinet can be deployed within your new site boundary, we may ask you for a LV power feed for the primary cabinet from your on site power distributer, please take this into consideration when planning power requirements for your site.

There may be a delay with deployment of service if our Primary Fibre cabinet has to be deployed off site due to time restrictions in receiving power quotes from regional DNO's and potential restrictions from local authorities.

1. All measurements in millimetres.
2. This guide is representative of the cabinets utilised across VMO2's XGS-PON networks, the description and number of homes served is indicative only to give an impression of what cabinets to expect based on the size of your site. Full confirmation of the cabinet types and positioning will be agreed at the planning stage.
3. All cabinets are supplied with the standard VMO2 cabinet colour of Goose Grey.
4. Cabinets manufactured and supplied to VMO2 by Eurocraft.

New Cabinets - SD3i and DD4i cabinets are the new cabinet sizes designed for VMO2, which have a reduced depth of 250mm, compared to the SD1i and DD3i cabinets at 330 and 400mm, respectively. The new cabinets will start being deployed once existing stock has been depleted.

Example POP-A with SD1 Power Cabinet

EUROCRAFT TECHNOLOGIES

VMTD0031c

Version 1.0 Created 02/04/2024

Created By Andrew Coles

Authorised by Mark Forster, Fixed Access Network Engineering

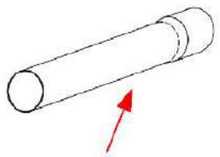
Drawing owned and maintained by

VMO2 Fixed Access Network Engineering

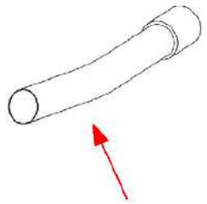
XGS-PON Distribution Cabinets

PP & PVC-U Duct Items from Radius & Emtelle, supplied by Virgin Media for your new site...

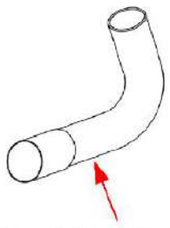
- ☒ Manufactured from virgin PP or PVC-U polymer for 100% reliable performance.
- ☒ Solid wall construction, capable of being back filled with "as dug" materials where appropriate and not be affected by sharp stone impingement.
- ☒ Strong, flexible and impact resistant yet lightweight.
- ☒ Flexible and easy to work with, even at well below zero temperature.
- ☒ Long life resistance to fatigue and resistant to many common liquids and chemicals.
- ☒ All duct manufactures to BS-EN 61386 Industry Standard (450N Class)



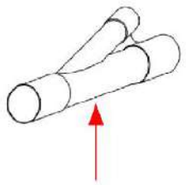
54/96mm Duct. Available in 3m (54mm) and 4m (96mm) lengths, used in all duct configurations requiring 96mm duct runs.



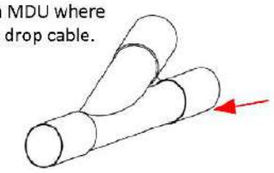
54/96mm Slow Bend. Used to ease main ducting around bends and obstacles. Also used to extend the main 96mm duct towards a building when terminating a Swept Tee in an MDU.



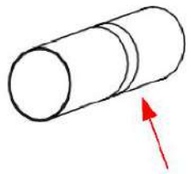
54/96mm 90° Bend. Used primarily in cabinet root base construction. These bends should not be utilised for moving duct around obstacles due to the limitation on cable bending radius. This piece can be used when bringing a duct into an MDU where trunk cable is used and not drop cable.



96mm to 54mm Swept Tee. A standard lateral connection size where 54mm duct will feed a property from a 96mm main line duct.



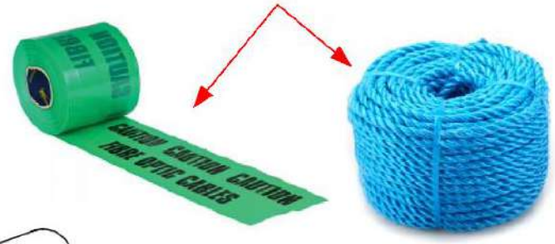
54/96mm Swept Tee. Used mainly for MDU installation where larger duct capacity is required.



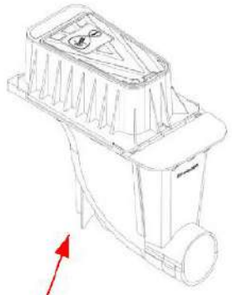
Slip Collar/Coupler. Available for both 96mm and 54mm duct connections, also available as a 96/54mm reducer.

Split Duct Kits are available to repair damaged sections of existing duct or where its too difficult to replace an damaged section of duct. Please liaise with your local Virgin Media contact for best practice use.

Marker tape and draw rope supplied by Virgin Media. Please ensure that both are used as advised by your local Virgin Media site contact.



End Cap. Available in 54mm (Yellow) and 96mm (Red).



Termination boxes must be utilised for end of swept Tee routes. Each property must be fitted with an appropriate box.

To prevent wastage of materials and unnecessary waste, we recommend the use of suitable deburring and chamfer tools when cutting duct. **This will allow you to use as much duct as possible and reduce plastics waste on your site.** Recommended tools are available direct from Emtelle or your local wholesale supplier.

Duct
- 54mm – 3m Lengths – VM SKU 10015594
- 96mm – 4m Lengths – VM SKU 10015580
- 96mm – 6m Lengths – VM SKU 10015579

Bends/Collars
- 54mm – 11.25° Bend – VM SKU 10015598 or 10007590
- 54mm – 22.5° Bend – VM SKU 10015597
- 54mm – 45° Bend – VM SKU 10015596 or 10007588
- 54mm – 90° Bend – VM SKU 10015595
- 96mm – 11.25° Bend – VM SKU 10015584
- 96mm – 22.5° Bend – VM SKU 10015583
- 96mm - 45° Bend – VM SKU 10015582
- 96mm – 90° Bend – VM SKU 10015581
- 54mm – Slip Collar/Coupler – VM SKU 10015599 or 10007591
- 96mm – Slip Collar/Coupler – VM SKU 10015585
- 96mm – Double Socket Coupler – VM SKU 10015586 or 10007578
- 96mm – Reducer (96mm to 54mm) – VM SKU 10015589

Split Duct
- 96mm – Duct Inserts (for use with split duct repair kit) – VM SKU 10015593 or 10007585
- 96mm – Duct Repair Kit 3m Length – VM SKU 10015592 or 10007584
- 96mm – Split Swept Tee (96mm to 54mm) – VM SKU 10015588
- 96mm – Horizontal Split Swept Tee - 10015521

Swept Tee's
- 54mm to 54mm Swept Tee – VM SKU 10015519
- 96mm to 54mm Swept Tee – VM SKU 10015587
- 96mm to 96mm Swept Tee/Y Branch – VM SKU 10015590 or 10007582
- Footway Termination Box Horizontal Entry – VM SKU 10011047
- 54mm Duct Cap – VM SKU 10015601
- 96mm Duct Cap – VM SKU 10015591 or 10007583

Miscellaneous
- Draw Rope 500m, 6mm Diameter – VM SKU 10015464
- Fibre Optic Marker Tape 365m – VM SKU 10007596

Delivery to your site will be through our delivery partner GXO in Virgin Media branded trucks.

Need Duct Items for your site?

Contact your local Virgin Media representative to arrange a duct delivery direct to your holding yard. Please allow 7-10 business days for delivery so try and give us as much notice as possible.

1. All measurements in millimetres unless otherwise stated.
2. This guide is representative of the duct items utilised and provided by Virgin Media. Where the duct supplied does not meet your site requirements or you have special engineering requirements then please liaise with your Virgin Media site contact to discuss any issues.
3. All duct is manufactured by Radius or Emtelle and provided in Green, this is to differentiate our network from other operators and is part of the Streetworks UK standards set out for utilities colouring and usage. Virgin Media supplied duct is also stamped as property of Virgin Media.
4. Do not use our duct to satisfy the build requirements of other operators, you will be asked to remove any duct used for purposes not within our network plan. On the contrary, do not use other operator duct to complete our on site network build either.
5. Deliveries will be made by the Virgin Media fleet on either curtain sided trucks or read load LGV's. Moffet Mounty fork lift vehicles are available for larger deliveries, please advise in advance if you do not have unloading facilities for pallets on your site prior to your order being placed.
6. If you have an overstock of duct items at the end of your project, get in touch with your local Virgin Media contact to arrange uplift of these materials.

Virgin media O2 GXO RADIUS CTS EMTELLE

VMTD0043

Version 1.7 Revised 31/07/2024

Updated by Andrew Coles, created By Stephen Scott

Authorised by Mark Forster, Fixed Access Network Engineering

Drawing owned and maintained by **VMO2 Fixed Access Network Engineering**

New Build Civils Duct Items

Classification: Internal

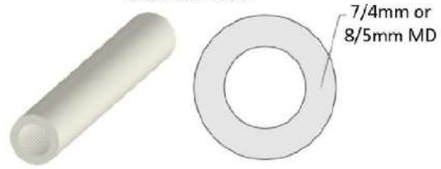
- All cable supplied by Virgin Media.
- All cabling must be labelled in the ITB to highlight its destination.
- ITB backboxes must be installed within 1m of a power outlet.
- Individual cable lengths should not exceed 30m, please seek advice before wiring if this isn't possible.
- 150mm minimum tails to be left coiled in each back box – 2.5m minimum if using pre-loaded.
- Metallic cables must be separated from low voltage electrical cabling by at least 50mm. Our cable may only be installed adjacent to LV power cabling where LV cables are installed in a separate conduit or are of a mineral insulation or armoured construction.
- For guidance on LSZH cabling please refer to document VMTD0063.

Slimline ETB

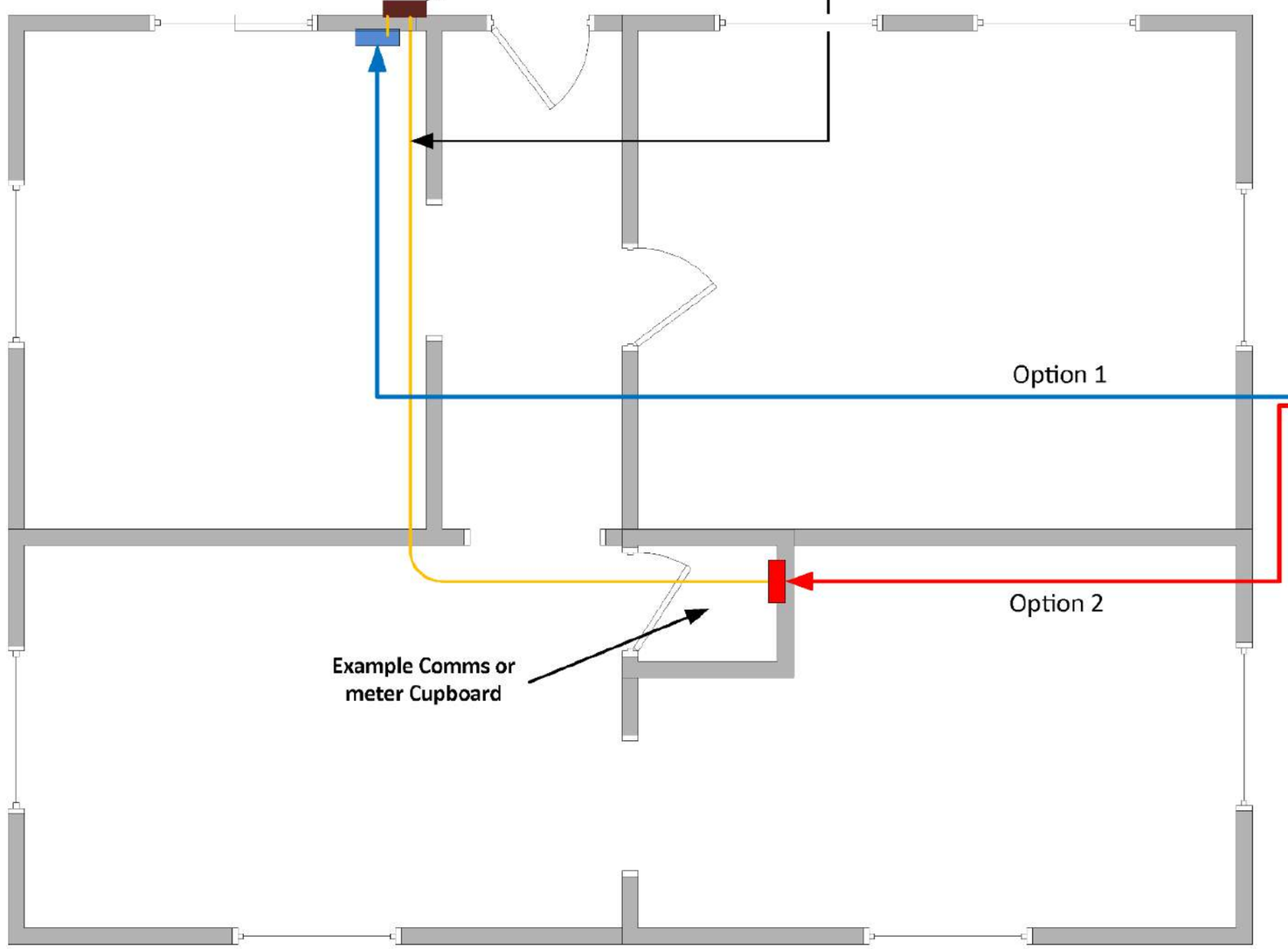
All cables terminated back to this location with 150mm minimum tails (2.5m if using pre-loaded MD) and labelled. Available in either White, Grey or Brown to suit your external build.

EMTELLE

LSZH Microduct



Outside Diameter (mm) nom	Inside Diameter (mm) nom	Weight (g/m)	Minimum Bend Radius (mm)	Maximum* installation pull force (N)
7.0	4.0	39.2	90	140
8.0	5.0	45.2	110	170

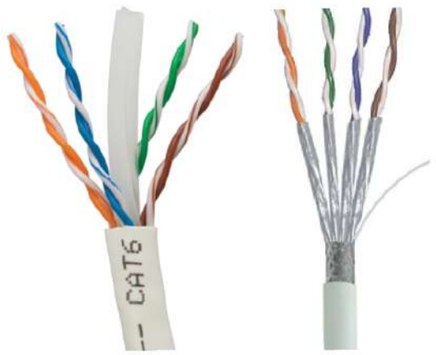


Internal Microduct

The connection from the ETB to either the living room (option 1) or the central point (option 2) should be done in Microduct, which will run alongside the Openreach equivalent. The MD should terminate to a double backbox ITB shown below. Pre-loaded microduct can be used in this instance, **this is a micro-duct that already has fibre pre-installed within it**, removing the need to push or blow a fibre in at the point of install. They come in a variety of lengths and the ITB can also store up to 10m of fibre, enabling it to be utilised even on short distances between the two connection points. 2.1m minimum tails are required to be left at either end when using pre-loaded MD. This will be managed into the ETB & ITB by VMO2 engineers and not left loose until point of sale. **Please note that the pre-loaded fibre is connectorised, so neither the fibre or the micro-duct can be cut to length where the pre-loaded version is used.**

ITB shown surface mode onto 2 gang flush metal back box

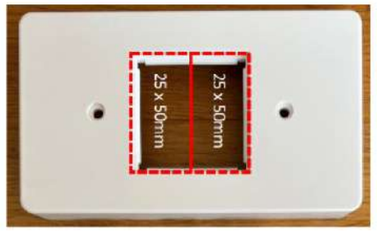
The ITB could be placed behind the ETB, in the living room or in to a central locations, such as an under stairs comms cupboard, if available – shown as option 1 or 2.



Ethernet Connections

The developer may want to consider installing additional Ethernet connection points from the modem location (Living Room, Comms Cupboard etc) around the home (to the Study, for example). Whilst not essential for our services to function, should Ethernet cables be utilised a minimum of Cat 6 grade Ethernet is advised – Cat 6a preferable for future proofing.

Example double gang Faceplate



Virgin media O2

VMTD0053

Version 1.3 **Updated** 28/10/2024

Created by Andrew Coles

Authorised by Mark Forster, Fixed Access Network Engineering

Drawing owned and maintained by

VMO2 Fixed Access Network Engineering

New Home Pre-Wire for XGSPON

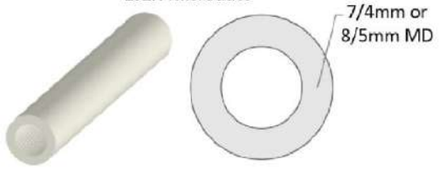
- All cable supplied by Virgin Media.
- All cabling must be labelled in the ITB to highlight its destination.
- ITB backboxes must be installed within 1m of a power outlet.
- Individual cable lengths should not exceed 30m, please seek advice before wiring if this isn't possible.
- 150mm minimum tails to be left coiled in each back box – 2.1m minimum if using pre-loaded.
- **Pre-loaded fibre is connectorised, so neither the fibre nor the micro-duct can be cut to length where the pre-loaded version is used.**
- Metallic cables must be separated from low voltage electrical cabling by at least 50mm. Our cable may only be installed adjacent to LV power cabling where LV cables are installed in a separate conduit or are of a mineral insulation or armoured construction.
- For guidance on LSZH cabling please refer to document VMTD0063.

Lockbox to Property

An empty micro-duct should be run between the lockbox and the property. The utility cupboard, if present, would be a suitable location to terminate the MD. The VMO2 engineer will blow the drop fibre cable through the MD at the point of sale. The micro-duct must be a LSZH product, example shown in the image to the right. Diameters of MD may vary over time. Please consult VMO2 on the up to date MD specifications.

EMTELLE

LSZH Microduct



Outside Diameter (mm) nom	Inside Diameter (mm) nom	Weight (g/m)	Minimum Bend Radius (mm)	Maximum* installation pull force (N)
7.0	4.0	39.2	90	140
8.0	5.0	45.2	110	170

Midi-ITB (180x180x60mm)

The midi-ITB is new internal solution able to accommodate a much greater length of coiled fibre cable. It is designed so that once a fibre cable has been blown to the lockbox/DP, the spool can be directly stored inside on a central spindle, as shown in the images below. The unit has options for routing ducts in and out using knockouts on the rear, or entries on the bottom. A combination of rear entry and bottom exit shown below.

Mini-ITB (standard double socket size)

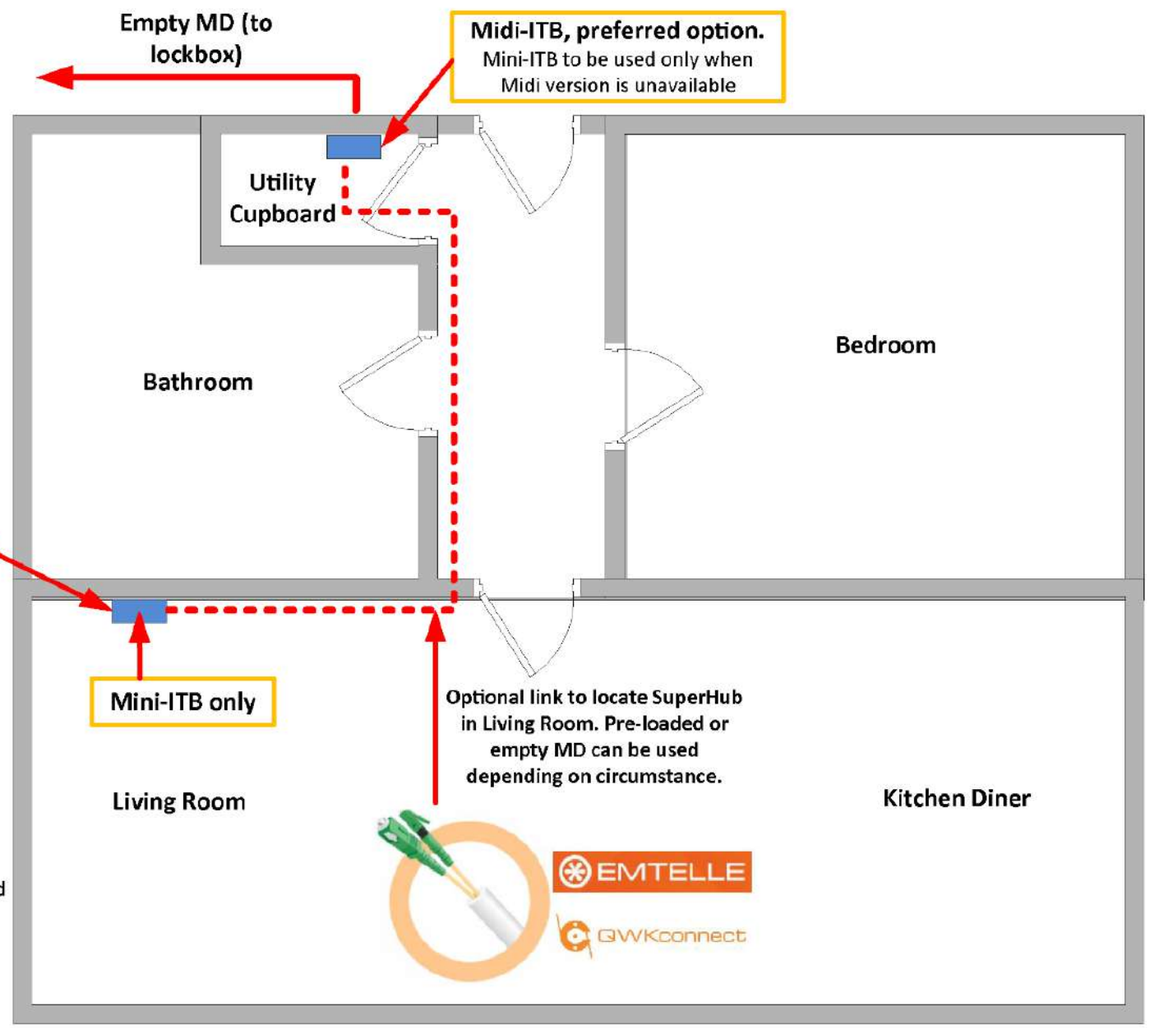
The mini-ITB is winding plate that fits to a standard 2-gang metal backbox, flush mounted into the wall cavity. Up to 10m of fibre cable can be stowed on the plates winding rings, with the option to reverse and install a second plate for an additional 10m of storage. The fitting of the additional winding plate and finished faceplate will be performed by the VMO2 engineer at the point of sale.

Mini-ITB

Mini-ITB with excess fibre (up to 10m) on winding ring plate, mounted to 2 gang metal backbox,

Second winding plate could be added and reversed to manage an additional 10m of fibre

Example of finished faceplate with fibre module wall outlet fitted



Midi-ITB

Midi-ITB shown with coil, 7/4mm LSZH MD fitted with ELF restraints – above.

Empty back plate, below left. Finished faceplate below right.
Images are from a prototype, colour will be matched on finished product.

Virgin media O2

VMTD0054	
Version 1.2 Created 28/10/2024	Drawing owned and maintained by
Created by Andrew Coles	VMO2 Fixed Access Network Engineering
Authorised by Mark Forster, Fixed Access Network Engineering	

MDU Pre-Wire for XGSPON

VM02 New Site Rep Contact details

Name .....
Phone .....
Email .....

New Site Rep Contact Card

EMTELLE

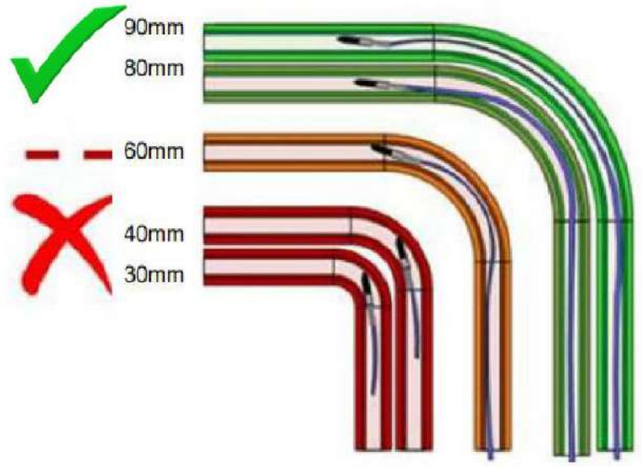
LSZH Microduct

7/4mm or 8/5mm MD

Outside Diameter (mm) nom	Inside Diameter (mm) nom	Weight (g/m)	Minimum Bend Radius (mm)	Maximum* installation pull force (N)
7.0	4.0	36.3	90	146
8.0	5.0	45.2	110	176

LSZH Micro-Duct
LSZH **MUST** be used for internal micro-duct runs.

Only Velcro ties or millipede ties should be used during installation of the LSZH LMD.
If standard cable ties are used, they can be over tightened which may damage the micro duct and prevent the fibre from passing through.



Duct minimum bend radius

Developer Instructions

Developer to :

- Install micro-duct from the ETB to a double gang backbox in either the utility cupboard/understairs comms area or near the ETB on the inside of the dwelling.
- Care must be taken when installing to ensure no kinks or blockages are created. The minimum bend radius is **90mm**.
- **Pre-loaded micro duct (LMD) can never be cut to length**
- Velcro or millipede ties must be used when fixing micro tubes to containment (Free Issue).
- This LSZH LMD is to be left with min. **2.5m** slack concealed, with the end presented loose within the final destination location and labelled 'Virgin Media02.
- The Virgin Media02 fibre Euro modules will be free issued and placed into the **2 gang box 47mm depth.**
- Tubing must be separated from low voltage electrical cabling by at least 50mm, unless the LV cables are installed in a separate conduit or are of a mineral insulation or armoured construction.
- All tubing must be labelled in the ETB to highlight it's destination.
- All sockets must be installed within 1m of a power outlet.
- For future proofing of your property we recommend CAT6 installation from each TV point back to the same location as the ITB.
- Developer to provide power: each powered device requires a 230v (13 amp) power socket (includes VM02 Hub).
- All Micro Duct tubing supplied by VM02

MDU Lock Box
All cables terminated back to this location with **2.5m** minimum tails and labelled. run back to central distribution point in building (i.e. Lockbox)

Slimline ETB
All cables terminated back to this location with **2.5m** minimum tails and labelled. Available in either White, Grey or Brown to suit your external build.

Pre-loaded micro-duct (LMD) **MUST NOT** be cut to length, as the fibre is contained within it has connectors on both ends.

1x LSZH MD
Micro Duct From Lock Box to ITB

1x LSZH LMD
Pre-loaded micro Duct or Empty Micro Duct From ETB to ITB

Midi-ITB (180x180x60mm)

Fibre Termination (ITB), in utility cupboard + 2 gang shown above.

Option to co locate within utility cupboard.

Optional link to locate the Super Hub in the living room.
Pre-loaded micro-duct or empty micro-duct can be used depending on circumstance

m-ITB

Double gang back box to be **47mm**
When installing pre-loaded fibre micro duct, electricians must leave a minimum of **2.5m** of LSZH LMD at the m-ITB and **2.5m** at the external wall box (ETB).

Power socket required for router

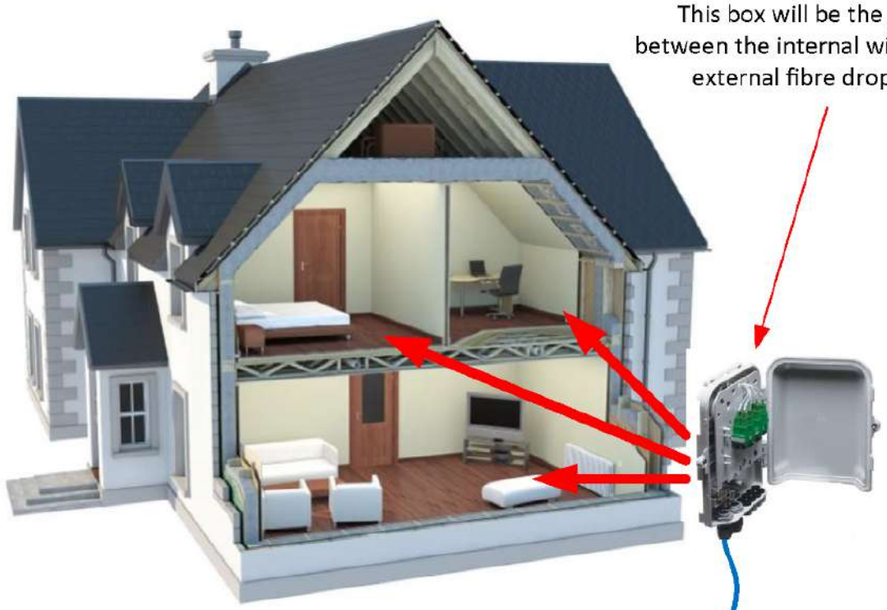
Please note
All internal wires and sockets beyond the ETB are the responsibility of the developer/future homeowner.
Any faults or defects resulting in an VM02 visit may incur a charge.

	VMTD0054b	
	Version 1.0 Issued 07/10/2024	Drawing owned and maintained by
	Created by Andrew Coles & Daniel Murray	**VMO2 Fixed Access Network Engineering**
	Authorised by Mark Forster, Fixed Access Network Engineering	

Overview XGS-PON Internal Home Pre-wire

This guide is designed to show at a high level what the different responsibilities for installing Virgin Media Duct and blown fibre on a New Build site. For developers, this process is quite similar to how we have asked you install our network for some time, albeit some of the materials such as Termination boxes will look slightly different. For FTTP, pre wiring the home now becomes a more important task and we ask you to consider future proofing your homes as much as possible. Please refer to VMTD0053 for details on pre wiring.

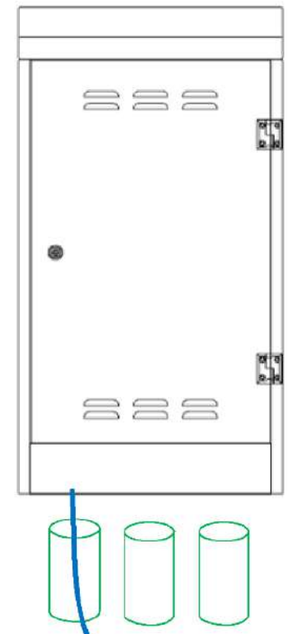
Customers Premise



All internal wiring completed by your on-site electricians, with cables coiled externally inside a wall mounted termination box (ETB). This box will be the junction between the internal wiring and the external fibre drop cable.

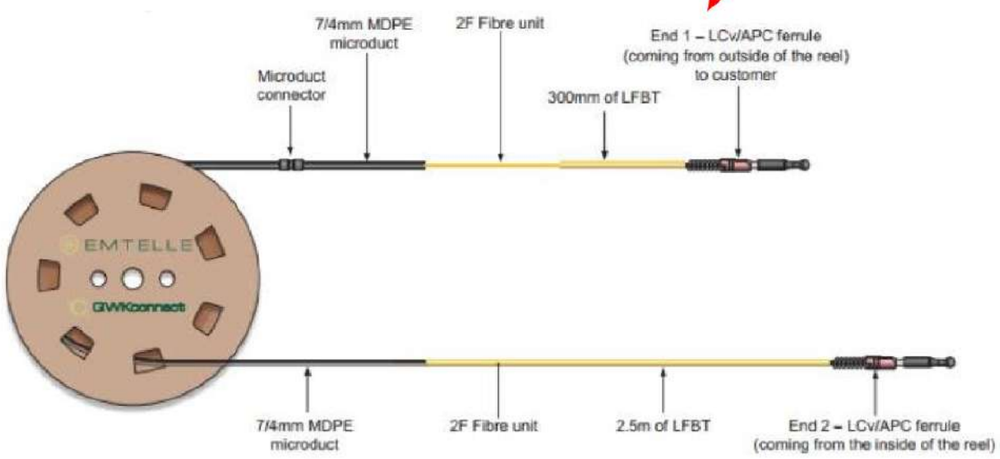
Virgin Media on-site distribution cabinet and associated chamber constructed by our contractors. We will either tie into the duct you have already laid on site or if we build first then we leave duct poke outs for your ground-workers to connect to instead.

VMSD3i Cabinet

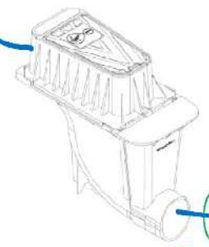


Whilst cabinets are the preferred solution, we also have options for underground DPs (distribution points) that can be mounted within our own footway chambers, or within Openreach network in PIA settings.

6 or 7mm Outside Diameter Blown fibre micro tube installed by Virgin Media prior to a customer install. This is pre loaded with a fibre drop cable and speeds up the end install process for the customer.



Termination Box



All on site 96/54mm duct and footway termination boxes (Toby) installed by your ground-worker to Virgin Media standards and as per the site design agreed in advance of the site starting.

Once all duct is installed, Virgin Media will pre pull individual blown fibre micro tubes from the distribution cabinet/DP to each external termination box.

On Site Footway Chamber

Please Note – Equipment and tubing images are examples, actual equipment may vary.

VMTD0062

Version 1.9 Revised 28/10/2024

Updated by Andrew Coles, created By Stephen Scott

Authorised by Mark Forster, Fixed Access Network Engineering

Drawing owned and maintained by
VMO2 Fixed Access Network Engineering

FTTP on a New Build site

Level	Riser	Home Count
40		2
39		4
38	14 Units in Catchment	4
37	Small Lockbox (Up to 16 units)	4
36		8
35	24 Units in Catchment	8
34	Medium Lockbox (Up to 24 units)	8
33		5
32		5
31		5
30		5
29		5
28		5
27	45 Units in Catchment	5
26		5
25	Large Lockbox (Up to 48 units)	5
24		9
23	46 Units in Catchment	9
22		9
21		9
20	Large Lockbox (Up to 48 units)	10
19		7
18		7
17	46 Units in Catchment	8
16		8
15		8
14	Large Lockbox (Up to 48 units)	8
13		7
12	24 Units in Catchment	7
11	Medium Lockbox (Up to 24 units)	10
10		10
9	40 Units in Catchment	10
8		10
7	Large Lockbox (Up to 48 units)	10
6		8
5		8
4	48 Units in Catchment	8
3		8
2		8
1	Large Lockbox (Up to 48 units)	8
0		0
-1	Node Lockbox FTTP	0

Individual 12f tubes (7mm O/D) from the primary FTTP lockbox to each lockbox in the building.

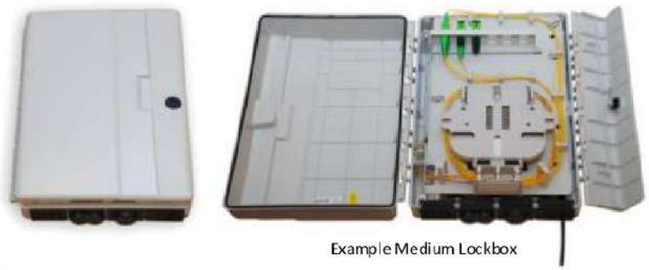
Wall Mounted Distribution Boxes

We supply a range of plastic (FTTP) and powder coated galvanised steel distribution boxes (HFC) for terminating drop cables in an MDU. Available in three sizes depending upon the number of units being supplied...

Small HFC – 400 x 300 x 210 HWD – 16 Units
Medium HFC – 700 x 500 x 260 HWD – 32 Units
Large HFC – 1000 x 800 x 300 HWD – 64 Units

Small FTTP – 300 x 245 HW – 1-16 Units
Medium FTTP – 368 x 275 HW – 17-24 Units
Large FTTP – 500 x 375 – 25-48 Units

Node Lockbox FTTP – 600 x 440 x 220 HWD



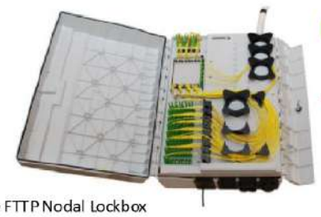
Example Medium Lockbox

Lockboxes must always be sited on the lower floor of the catchment apartments.

Any combination of lockbox size can be used in partnership in the same building but remember that each lockbox requires a single feed, more lockboxes will mean more fibre tubes run in the riser between floors.

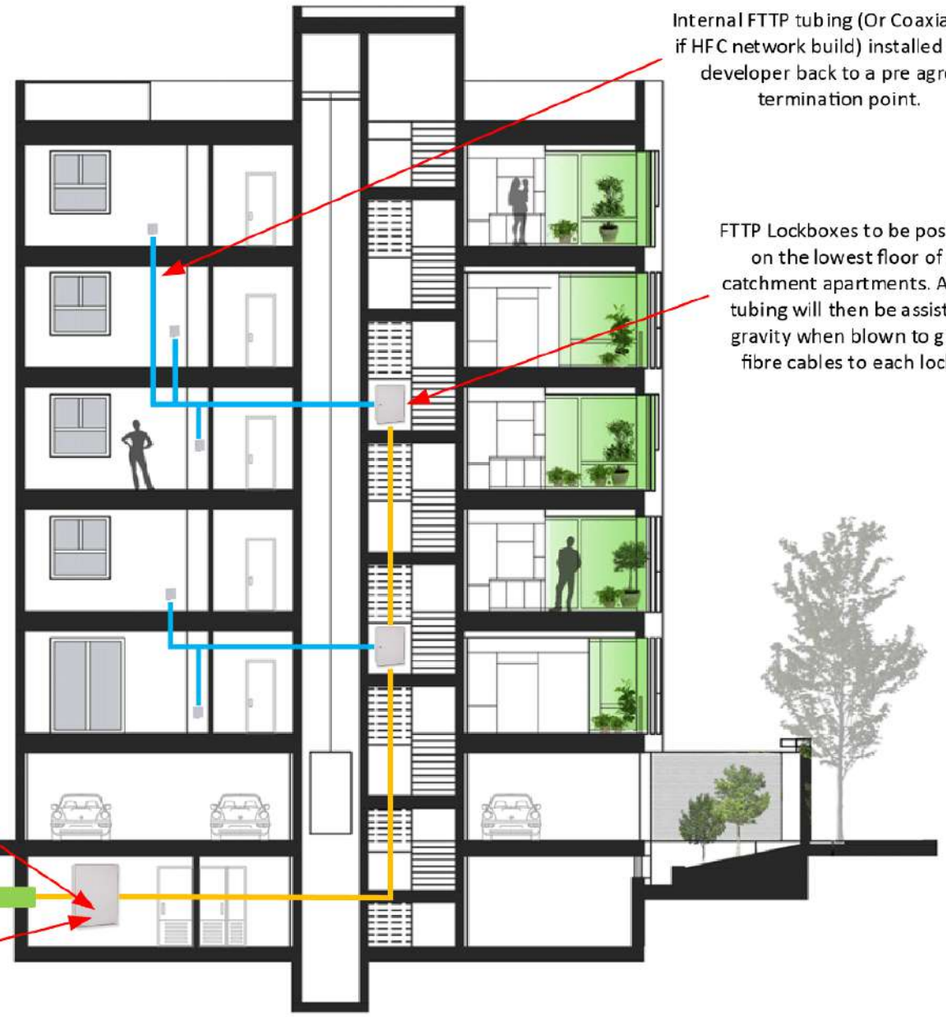
Ideally any individual drop-fibre tubing from a lockbox to an apartment should be no more than 70m.

Primary Lockbox, either for terminating incoming external cabling or used as a primary connection point for the entire building if capacity suits the size of the cabinet. The primary distribution cabinet should always be installed directly above or next to the incoming 96mm duct feed, so there is no more than 3m distance between of external cable run within a building.



Example FTTP Nodal Lockbox

- All cable/tubing/consumables supplied by Virgin Media.
- A minimum of 2 sockets (master bedroom and living room) per unit. Further sockets can be agreed with local Virgin Media New Build teams.
- All cabling/tubing must be labelled in the distribution cabinet to highlight its destination.
- All sockets must be installed within 1m of a power outlet.
- Individual cable lengths should not exceed 75m from a distribution point, please seek advice before wiring if this isn't possible.
- 150mm minimum tails of Coaxial cable to be left coiled in each back box.
- Cables must be separated from low voltage electrical cabling by at least 50mm. Our coaxial cable may only be installed adjacent to LV power cabling where LV cables are installed in a separate conduit or are of a mineral insulation or armoured construction.
- There is no specific requirement to separate any internal fibre tubing from other communications cabling.
- For guidance on LSZH cabling please refer to document VMTD0063.



Internal FTTP tubing (Or Coaxial cable if HFC network build) installed by the developer back to a pre agreed termination point.

FTTP Lockboxes to be positioned on the lowest floor of the catchment apartments. All drop tubing will then be assisted by gravity when blown to get the fibre cables to each lockbox

VMTD0051	
Version 1.5 Revised 07/09/2022	Drawing owned and maintained by
Updated by Andrew Coles, created by Stephen Scott	**VMO2 Fixed Access Network Engineering**
Authorised by Mark Forster, Fixed Access Network Engineering	

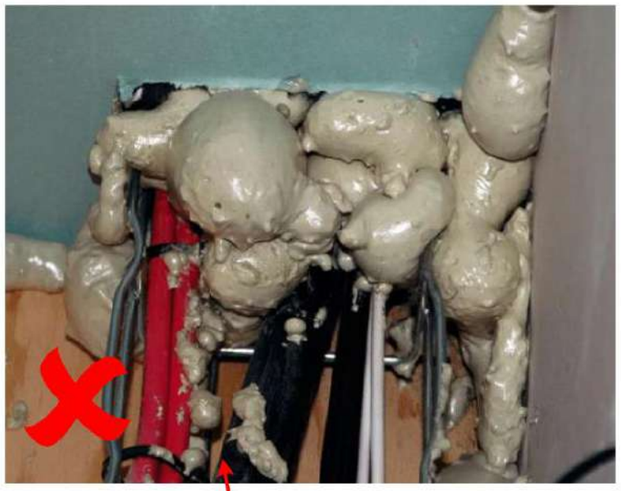
Large Multi Dwelling Unit Pre Wire

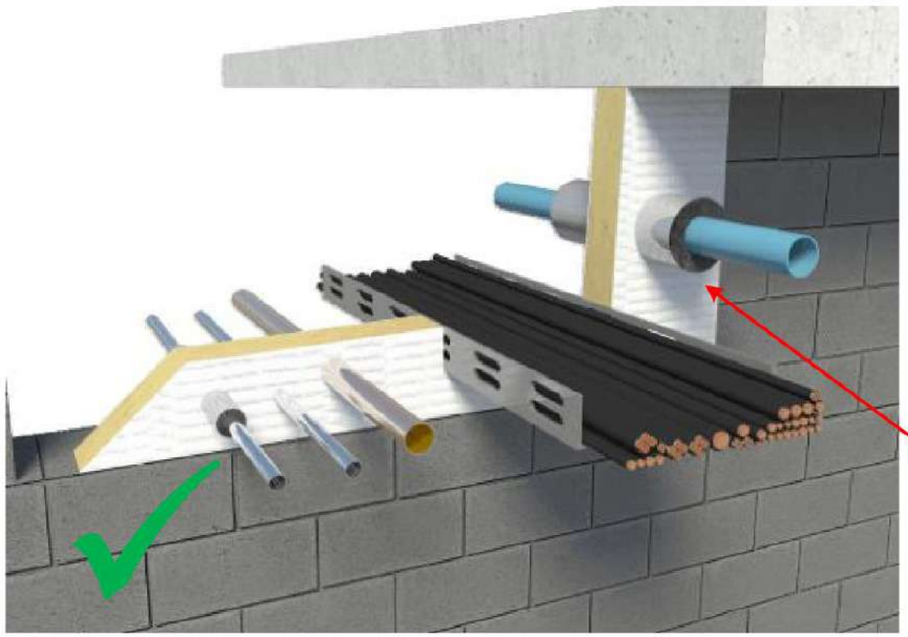
This guide is intended solely for guidance purposes and does not endorse the use of specific products or over rule any local fire protection regulations or restrictions. Please consider all aspects of fire protection within your building and ensure consultation with industry experts to make sure all regulations are adhered to.

ROCKWOOL® Firestop compound is the perfect product for use in fire rated walls and floors where cable penetration is required. It is a low maintenance product with 6 hours fire protection and no smoke emission.

ROCKWOOL® provides intumescent putty pads which can be used to fire seal sockets within dry walls that require an element of fire protection.

Note - Remember that a product can be "fire resistant" but not Low Smoke... always confirm the specifications of the product you are deploying on site and use branded materials where possible. If Virgin Media is required to fire seal an entry point to a building as a retrospective work then a branded material suitable for the job will be used under guidance from a fire consultant.



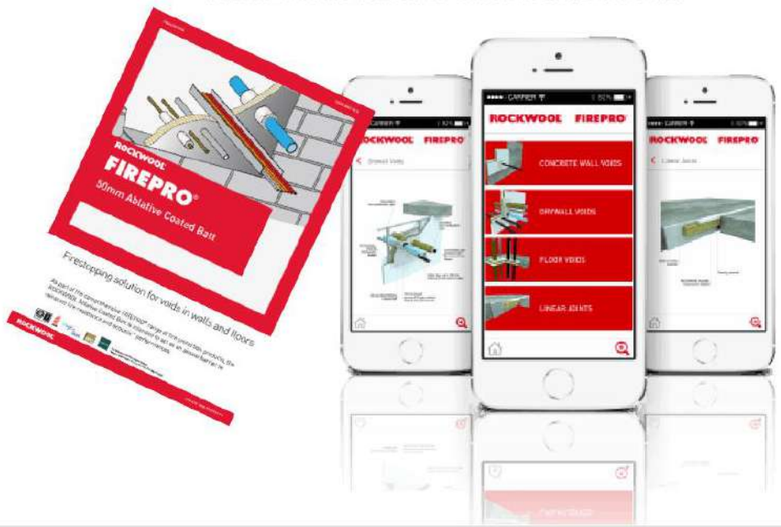


Forward planning of your fire protection requirements will mean choosing the correct method at the point of construction and prevent retrofitting of potentially unsuitable materials. Its easier to work with products like ablative coated batts at the point of first fix rather than trying to retrofit a solution that potentially wont meet the manufacturers install standards.

Notes:

- Virgin Media has consulted ROCKWOOL® on the best practice use of fire stopping and fire protection materials that are directly utilised in the deployment of cabling within a building and recommends the use of their rated range of products. This guide is intended to provide a point of reference and does not directly endorse a specific product or brand, please always consult a fire protection professional for guidance on protecting your building/project accordingly.
- Fire protection materials used incorrectly on site and identified by a Virgin Media employee will be reported to on site H&S as well as the HSE. There is no excuse for the misuse or incorrect install of fire protection.
- Virgin Media reserves the right to refuse access to our network infrastructure on site if guidelines are not met and our network will not be protected against potential fire ingress or assists in the spread of fire within a building.
- Where possible, we recommend the use of removable or malleable materials for fire protection within risers or partition walls so that future upgrade works or re-cabling exercises will not adversely damage the properties of installed fire protection.

ROCKWOOL® provides access too all of their technical documents and guidance both through its website and on its handy to use FirePro® App for smartphones. Full details can be found at www.rockwool.co.uk.



	VMTD0063b	
	Version 1.4 Revised 05/10/2022	Drawing owned and maintained by
	Updated by Andrew Coles, created by Stephen Scott	**VMO2 Fixed Access Network Engineering**
	Authorised by Mark Forster, Fixed Access Network Engineering	

Fire Stopping Guidelines

Filoform offers different products to suit your internal & external duct sealing requirements, from either re-enterable duct sealant systems to full fire protection. Full details on the product range available can be found on the Filoform website at www.filoform.co.uk.

Tel: 01189 886 873 – Fax: 01189 886 576 – E-Mail: info@filoform.co.uk

Notes...

- This guide is intended to highlight the benefits of using a specialist product in completing duct sealing within a building to meet BS:EN 1366-3 and to the Virgin Media standards. Other products are available for use from other suppliers but please ensure they meet the required standards before install.
- Any duct seal utilised on Virgin Media cable routes must be agreed in advance with the local engineer, if sealant is used incorrectly or an improper sealant is used (expanding foam), Virgin Media reserves the right to request removal and replacement of seals and cabling at the developers expense.
- Any duct sealing requirements within your building must be done with guidance from your fire consultant to ensure that the required materials used are suitable for the environment being utilised within.
- There are varying levels of internal duct seals available depending on the environment of install required. Remember, not all duct seals are fire proof/resistant but not all duct seals need to be. Always ensure you use the product suitable for the intended environment.

GAS & WATER PROTECTION

When sealing internal Virgin Media access cable ducts, either the '56 or 96mm' ducts against water & gas then the recommended sealing method to use is **FiloSeal+** from Filoform.

FiloSeal + is a universal product for sealing cables and pipes in ducts or bore holes. FiloSeal + is very easy to apply regardless of the type of cable scenario in the cable ducts as it uses a uniquely shaped foam piece which positions neatly around the cable or pipes in the duct. FiloSeal + uses our MD+ sealant which is easily applied from a 310ml tube using a skeleton gun.
The unique design of the tri-flexible foam makes positioning and separation of the cables very simple while also providing cable separation and a backing for the MD+ to be applied on.





FIRE RESISTANCE AND LARGE HEAVY CABLES

If and when Fire Resistance is needed to seal a cable duct or large heavy cables, then all Virgin Media's ducts should be sealed using **FiloSeal+HD FIRE**, which gives a minimum of 2 hours fire resistance in accordance with BS EN 1366-3:2009.

Duct sealing system FiloSeal+HD FIRE is a highly certified fire, gas and water sealing system for both ducts and transit frames. FiloSeal+HD FIRE provides a strong support system using our specially formulated material called Formite which builds up like a honeycomb structure.
FiloSeal+HD FIRE is suitable for sealing any cable configuration or pipes contained in one duct and also allows easy re-entry of the seal to add or remove cables or pipes as required.


Part Numbers...

Gas and Water Protection – P/N 282580 (Ducts up to 125mm) – FiloSeal+
Fire Resistance and Large Heavy Cables – P/N 280070 (Ducts up to 110mm) **–** FiloSeal+HD FIRE
Other sizes available upon request from Filoform direct.

newbuild@virginmedia.co.uk
0800 408 0088

How to get Virgin Media into your new development builds
With Virgin Media, it's easy to find out what broadband, TV and home phone options we can provide for your development. Even better? Our site request service is at no extra cost to you (although further requests for the same site may be charged). We recommend doing this 9 months before you expect homebuyers to move in.

For technical information on how to support your on-site deployment, check out the New Build Developer's Guide, or fill in the form now. Prefer to chat? Give us a call on 0800 408 0088.

www.virginmedia.com/broadband/network-expansion