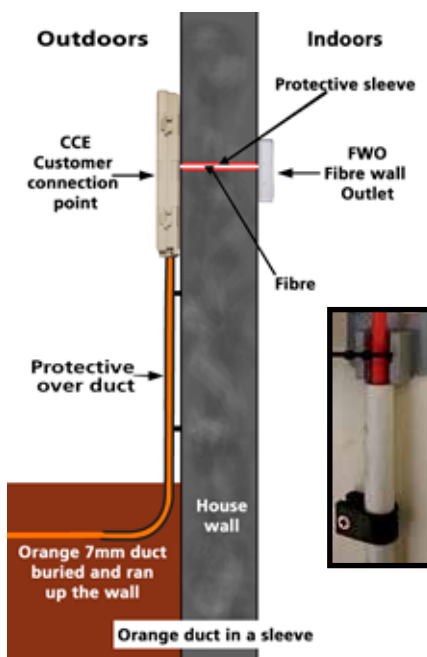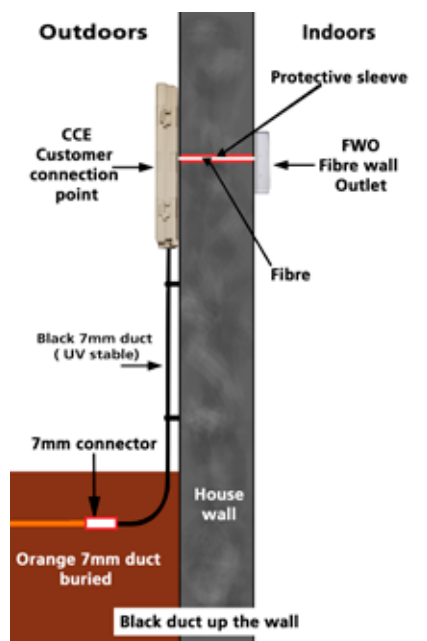# House kit Installation

(This is the preferred method for installing the fibre. If a different installation method is required, please contact install@b4rn.org)

Getting your property ready to be connected to the B4RN network is your responsibility, but we'll supply the materials and any guidance you might need. To finance this project, we're ask everyone to apply for a government Gigabit Voucher. This contributes to the funds to build the network, and also gives you a dig grant of £150. This grant is paid after you confirm a live connection and can be used in these 3 ways;

1. You decides to dig the duct in and install the fibre boxes yourself or with their neighbours. The grant will be paid directly to you by B4RN.

2. Ask a B4AV volunteer to do it if one is available often they can do the house kit and you can do the duct across the garden . The grant can be paid to or shared with the B4AV group.

3. You use our approved contractor at an agreed price and pay them for the work. The grant will be paid to you by B4RN. You will be responsible for any additional costs above the grant value. *A list of recommended contractors is included at the end of this guide.* Vouchers are issued per property and must be requested by you at https://b4rn.org.uk/postcode-checker

House install method one

Crossing your land to the house wall

Where you can cross the garden depends on where the fibre meets the boundary of the property, as well as the location of the router. Don't forget, the orange pipe's inner surface must be kept clean and dry, so keep the end covered with a push-on cap or some tape.

You'll need to bury the pipe somewhere it won't get damaged by things like gardening or traffic – aim to dig a trench that is approximately 30cm deep.

Consider running the pipe in the 'shadow' of a boundary wall or fence, where it'll be less likely to be disturbed. Another good choice is to follow a gravel path; rake back the gravel, dig a trench, install the pipe, then refill the trench (having removed any rocks that could damage the pipe) and replace the gravel. Always be mindful of what traffic crosses the pipe – a footpath will be fine, but a gravel drive for vehicles will need the pipe to be deeper or have additional protection.

Digging a slit trench across the lawn seams messy, but once the turf has recovered, it will be in a safe spot that's unlikely to be disturbed.

Whatever the route, it's a good idea to protect the pipe using some water pipe, or offcuts of B4RN 16mm duct (which we can supply). Remember to keep a drawing of the route for future reference.

House Install Method One
Feed the orange pipe into an outer duct, before it comes out of the ground – electric conduit works well. Then route this up to the outside wall box, taking care to use gently curving bends.

House install method two

House Install Method Two
Connect the orange pipe to 7 mm black pipe, before routing it up the wall. As the orange pipe is not UV stable, it must be joined below the surface using our standard push-fit connector. Cut the pipe square and make sure the joints are below ground level and away from curves in the pipe. Use screws to hold the pipe clips to avoid using a hammer to fix the pipe to the wall, as you may crush it.

House Installation

1

What you will need
- Fibre Wall Outlet (FWO) and Customer Connection Enclosure (CCE).
- Masonry drills, spirit level, screwdriver and a spade.
- Suitable drill bits, in size and length, to suit supplied screws
- Protective sleeve (copper pipe, plastic tube).
- Wall retaining clips.
- Suitable sealant, filler/cement.
- Personal protective equipment (PPE).

Inside the property- Fibre Wall Outlet (FWO) installation

2

Inside the property – Fibre Wall Outlet (FWO) installation
The white FWO connects to the router and comes with fibre optic cable pre-attached. Feed this cable through a hole drilled in the exterior wall to the grey connection box outside. Ideally, the two boxes will be 'back to back'.

Install the FWO The fibre inside is delicate and easily broken. Protect the cable with a length of 5-7mm plastic pipe or copper pipe. Taping this pipe to some rigid wire or the drill bit to pull it through the hole. Make sure this pipe is flush with the wall and does not intrude into the boxes as it can trap and damage the fibre.
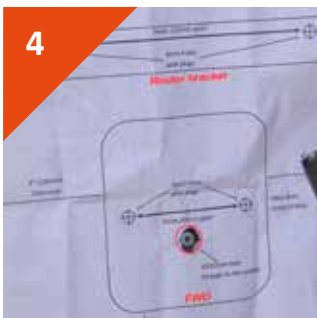
Drilling House Walls

3

Before drilling the wall, make sure to check for electrical cables, pipes and battens.
Drilling from inside to outside can cause a small lump of render or stone to chip off the wall. Similarly, drilling from outside to in can damage the interior finish. However, in both cases, any marks may be covered by the boxes.

Drill slowly and switch off 'hammer' mode for the last bit of drilling – avoid using any excessive force. Whichever direction you choose to drill, ensure there is a slight downward slope so moisture will not run into the house. Once finished, seal the hole with suitable building sealant to stop water or draughts getting in.

4

Use the template to mark the position of the 10mm or 12mm hole to the the fibre entry point. Make sure there is 75mm (3inch) of clearance to the skirting or any other obstruction.

5

Using the template mark and drill the two fixing holes with a 6mm drill for the FWO.

6

Install the two larger plugs and carefully position the back plate. Care must be taken not to dislodge the fibre and the blue fibre socket. Care must be not to pinch the fibre cable as it enters from the back

7

Fix the FWO in place by using the two larger screws supplied. If the fibre or the blue fibre socket is dislodged carefully rewind avoiding too tighter coils. The fine fibre is easily damged.

8 After checking the fine blue and orange fibers are carefully positioned inside the enclosure the cover is lined up and pushed in completely.
Avoid trapping and kinking the fibre cable.

9 The router can be wall-mounted above the FWO. Generally it is stood on a surface within 2 metres but if it needs to be further away longer cables can be provided at an extra cost.

Outside the property - Customer Connection Point (CCE) Installation

10 The grey CCE box is locked with a screw and two press clips.
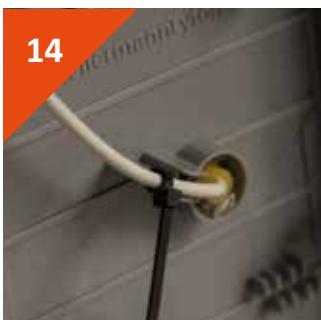
11 Drill out the central hole in the CCE, feed through the fibre cable and fix with the screws provided.

12 It's easier to use the provided template to mark the three screw positions – position this over the hole in the wall.

13 Feed the fibre cable through and fix with the screws provided. On uneven walls, pack out the gaps using offcuts of 16mm duct.
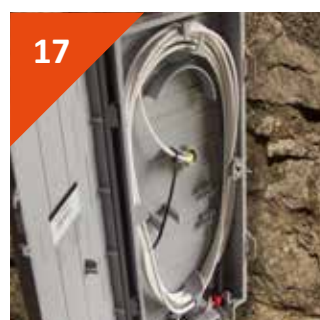
14 Fix the fibre cable into the guide by the central hole with a cable tie.

15 Bring the black 7mm duct into the bottom right entry point. Fix with a foam seal (provided) and secure in place with a cable tie.
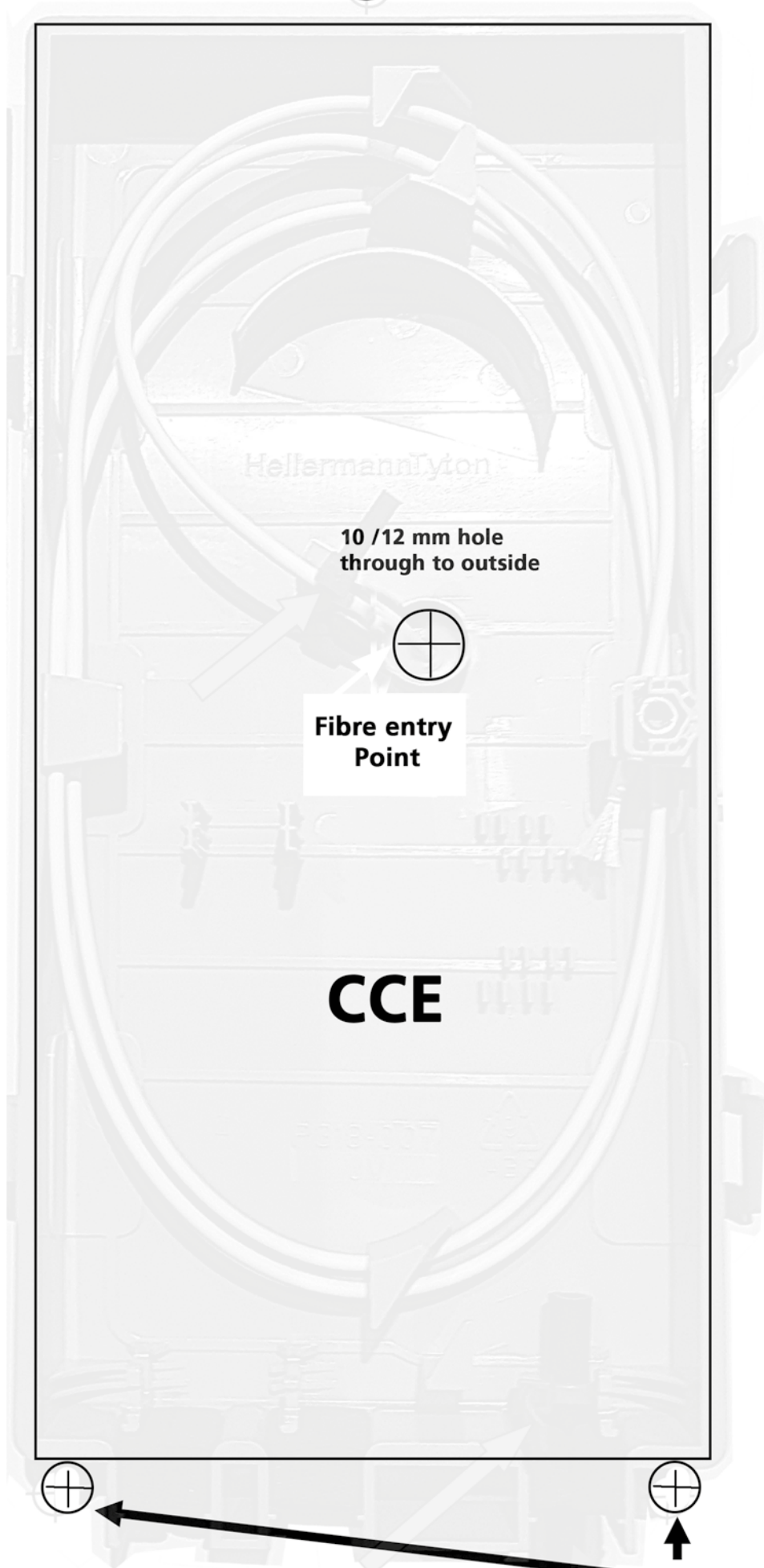
16 Seal the other entry points with the other foam pieces.

17 Coil up loosely the excess fibre cable around the guides provided. **Do not cut this fibre cable we need it left to its full length for splicing and do not coil too tightly or bend remember its glass!**

Scew points 6mm
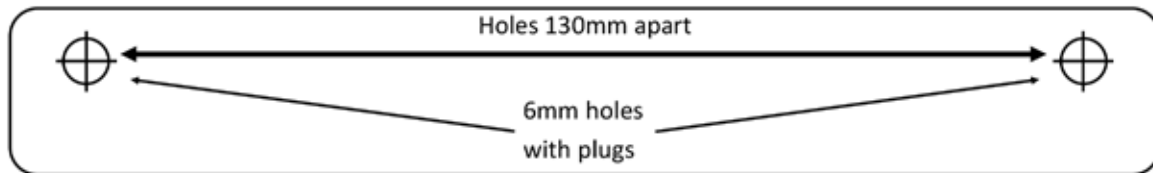
10 /12 mm hole
through to outside

Fibre entry
Point

CCE

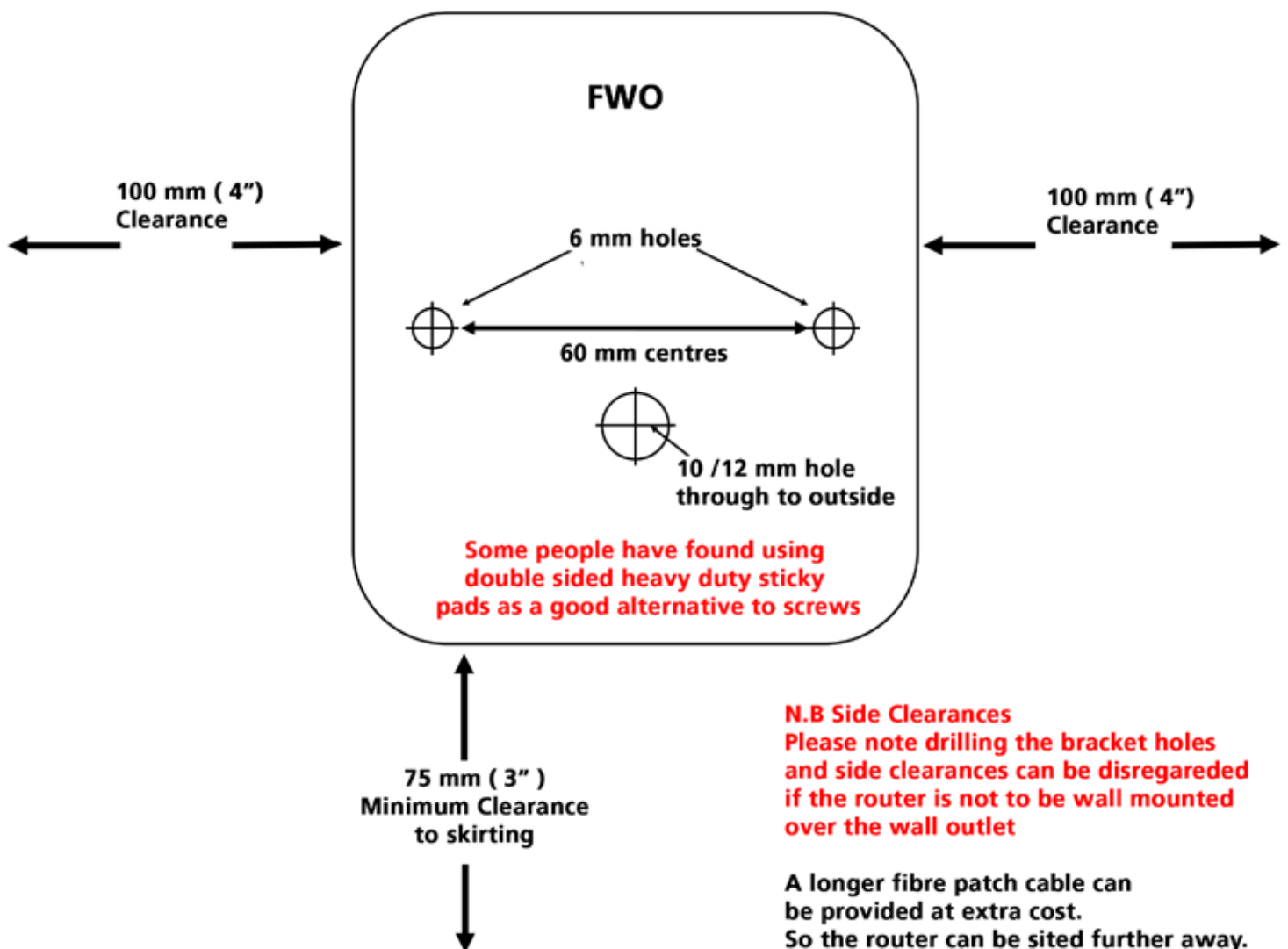Scew points 6mm

Interior Fibre Wall Outlet (FWO) Template

(Note: Clearances **not** to scale)

Holes 130mm apart

6mm holes
with plugs

This bracket is supplied with the router

FWO

100 mm (4")
Clearance

6 mm holes

60 mm centres

10 /12 mm hole
through to outside

100 mm (4")
Clearance

Some people have found using
double sided heavy duty sticky
pads as a good alternative to screws

75 mm (3")
Minimum Clearance
to skirting

N.B Side Clearances
Please note drilling the bracket holes
and side clearances can be disregareded
if the router is not to be wall mounted
over the wall outlet

A longer fibre patch cable can
be provided at extra cost.
So the router can be sited further away.

Once the house kit is installed, you're ready for the fibre blowing and splicing teams to fit your router and connect you to the network. We don't require access to your home to do this, but if you let; install@b4av.org know when the House Kit installation is complete, it will help the volunteers connect you as quickly as possible.

Now you have an idea of what is required and you would like materials please conta us

We can supply

1. Sandard house kit

2. Extra orange 7mm pipe in metres

3. Extra black 7mm plastic pipe to run up the wall in metres

4. Protective pipe in metres

Please supply your Details - Name, Telephone, Address

Importantly have you registered for a voucher   If No please register before returning
Register by the 10th Sept when vouchers end
Email this information to install@b4av.org

If you wish to pay someone to do the work, contact the following for a quote.
Complete installation

Jona Aal **Email jona.aal@gmail.com** **Mob 07940 731 375** **Tel 01434 345 620**	**Swinhope Handyman Services** **gtinfomail@gmail.com** **Mob 07775616187**
Adrian Hutchinson **adrianhutch@aol.com** **07910053108**	**Trevor Wilkinson Construction** **EMAIL: t.e.wilkinson@btinternet.com** **Mob: 07710 898 212**

R Ainsley-Raffel Contracting
Email: wdat2012@gmail.com
Mob 07421 001 908

Ground Works only

P Dodd Services **Email peterdoddfencing@gmail.com** **Office:01434 688459 Mob: 07711 353 383**	**R Robson Contracting** **Email r.robson@hotmail.com** **Mob 07527 375 464**