NINE WORKED CODES

A GAS PIPE USED AS THE EARTH. C1 OR C2?

NINE WORKED CODES

From **Best Practice Guide 4**. Work through them before looking at the right-hand column.

#	OBSERVATION	CODE
1	Main protective bonding conductor on a TN system is 4 mm²	**C2**
2	Main protective bonding connected to branch pipework, continuity back to the service not assured	**C3**
3	No RCD protection on a lighting circuit in a domestic property	**C3**
4	Metal socket outlet is live due to a fault	**C1**
5	Metallic gas pipe being used as the earthing of the installation	**C2**
6	RCD or RCBO on a TT system fails to trip when the test button is pressed	**C2**
7	Care home with no AFDD protection	**C3**
8	Consumer unit mounted at height but still accessible for operation, inspection, testing and maintenance	Acceptable — observation only
9	Switch line not identified as a line conductor at terminations	**NC** in the guide — **C3** on the report

Number 2 is a C3 — improvement recommended.

The main bonding conductor is there; it is just on branch pipework instead of before any branch, so the bond needs moving to the right place. It would be a **C2** if the omission made it **potentially dangerous**.

Number 5 catches people.

Using a gas pipe as the earth feels like it should be a C1 — but extraneous metalwork does run to earth, so under normal conditions nothing is dangerous. It is wrong, it is urgent, it is a C2. Same logic as the missing earthing conductor.

Number 7: the guide says C3.

BS 7671 (Reg 421.1.7) requires AFDDs on a care home's socket-outlet final circuits up to 32 A — but not meeting the current edition is not in itself unsafe. Code it on what it actually presents, and explain the missing AFDDs plainly in the observation.

NUMBER NINE, IN DETAIL — BECAUSE IT SHOWS HOW JUDGEMENT WORKS

A switch line in blue, with no brown sleeving at the terminations. Nothing is in the wrong terminal; it simply has not been identified.

CAN YOU FOLLOW THE CABLE ON INSPECTION?	CODE	WHY
Yes — route is traceable, terminations correct	**C3**	Not dangerous. An improvement for clarity and for whoever works on it next
No — route cannot be followed	**C2**	You cannot prove it is in the right place, so you cannot say it is safe

✋ **It becomes dangerous when someone else works on it.** An unidentified switch line is a trap for the next person — change a fitting, put the conductor back in the wrong terminal, and the C3 has just become a genuine hazard. That is the argument for sleeving, and it is why the code is not nothing.

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