

Scottish Water PSTN Replacement Project

Space & Resilience challenge



Space – site cabinets

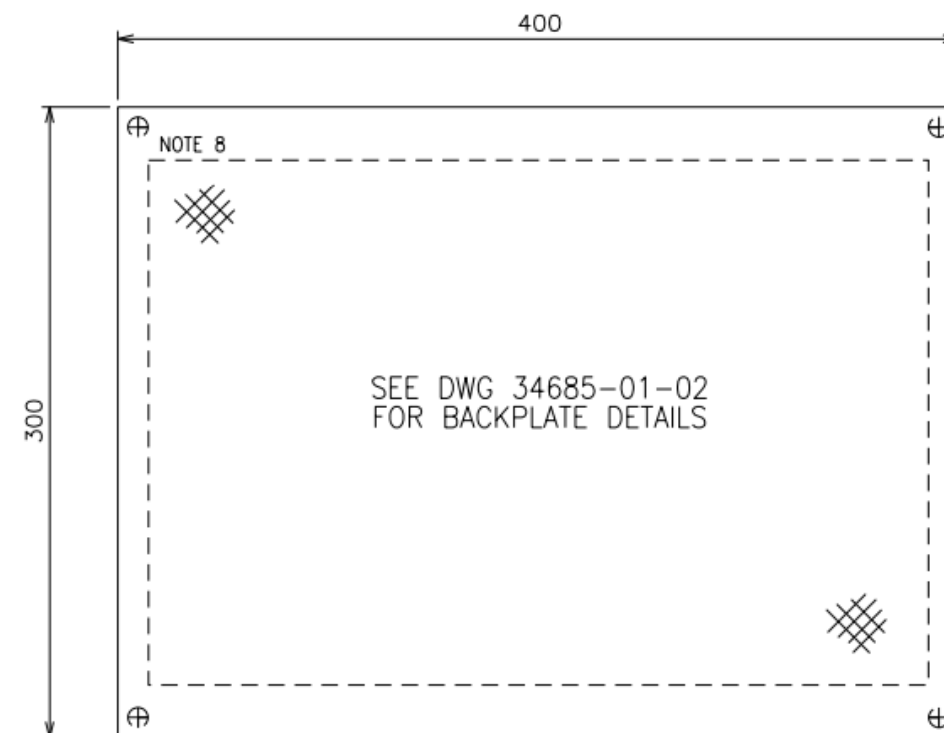
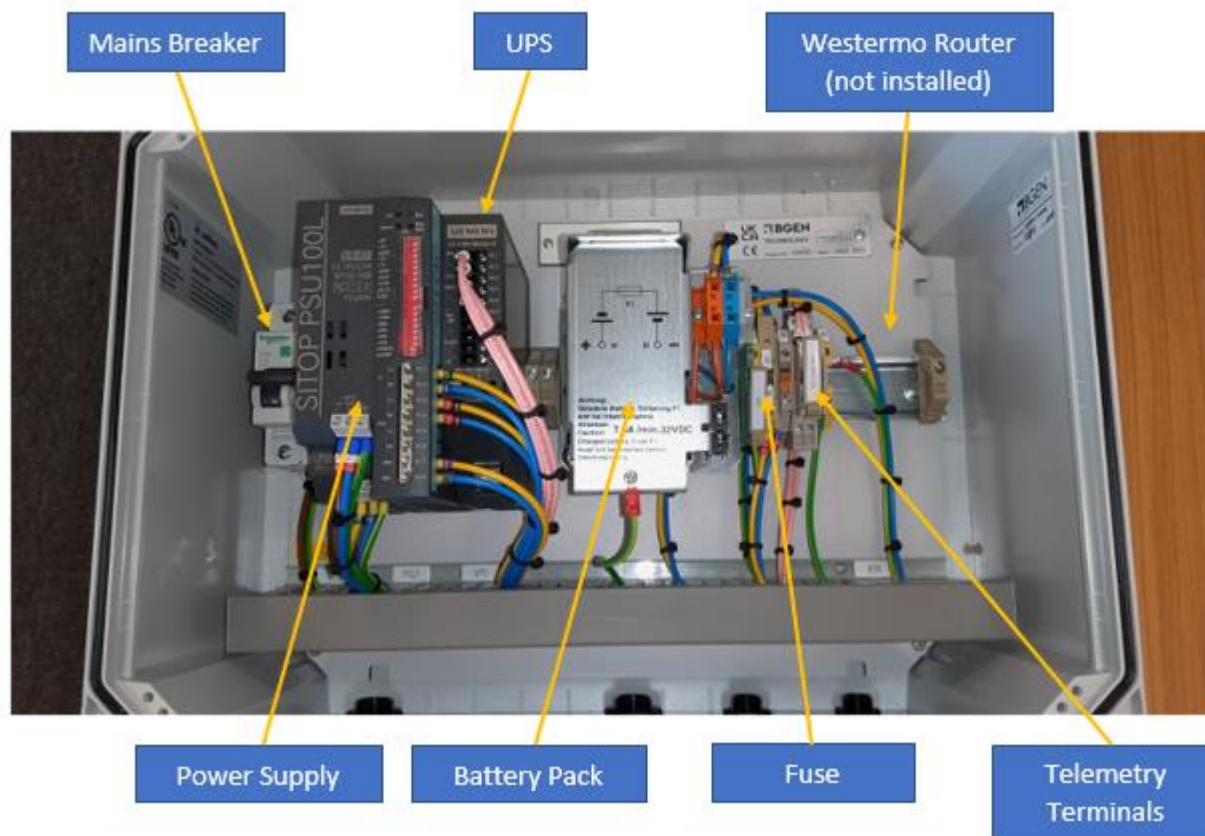
During the installs throughout our pilot phase the issue of no space has started to trend, 11 of 56 jobs (20%). This could affect up to 500 sites across our operational estate so the team is working to develop solutions for these sites ready for roll-out in the 2nd delivery phase.

2021/22			2022/23												2023/24												2024/25											
Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
◆ GATE 80.1			◆ Top-end System Available																																			
			◆ GATE 90: 1st Delivery Phase																																			
			Stand up full delivery team Connect 180 pilot site to top-end Hardware order for next phase Migrate 1250 sites off PSTN																																			
																	◆ GATE 90.1: 2nd Delivery Phase																					
																	Migrate 1486 sites off PSTN Remaining hardware order																					
																													◆ GATE 90.2: 3rd Delivery Phase									
																													Migrate remaining 1372 sites off PSTN									



Typical Comms Enclosure - Layout and Dimensions

Below is our typical comms enclosure which includes the Westermo router (4G/Broadband), power supply, UPS battery back-up and a mains breaker. This is adequate for almost 80% of our sites but a smaller solution is being investigated for smaller cabinets and bollards with space issues.



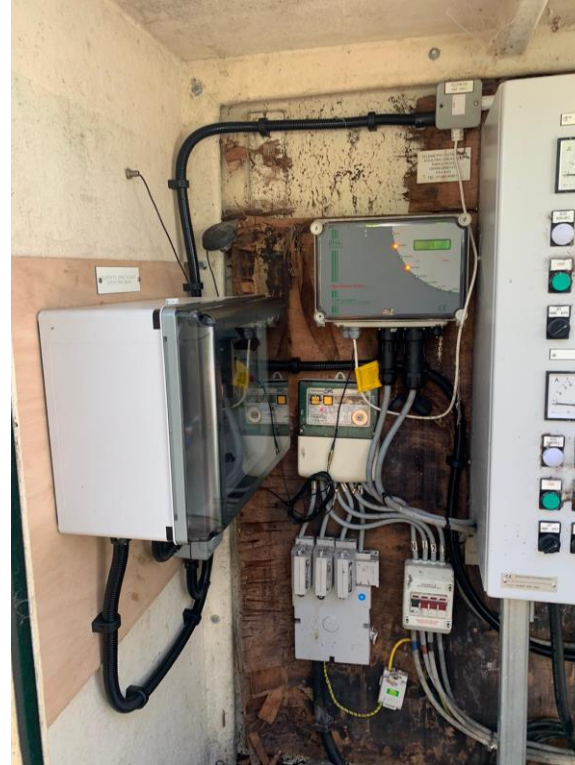
FRONT VIEW

Successful install - KINLOCH HOUSE WWPS NO280122

Before

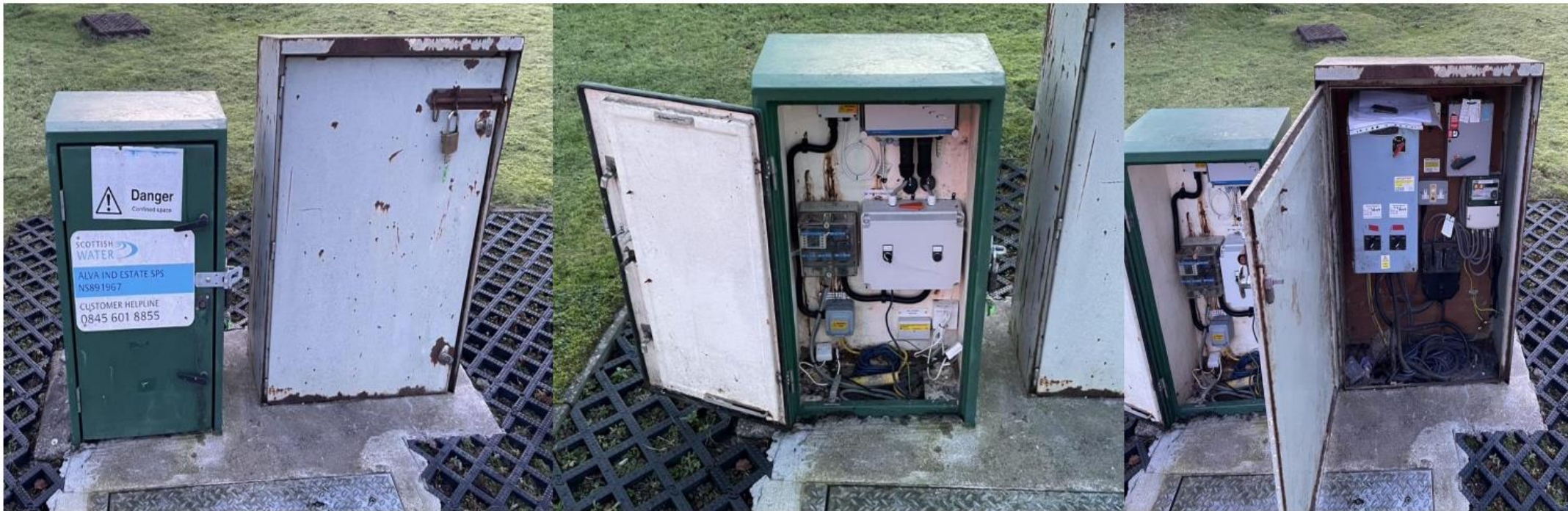


After

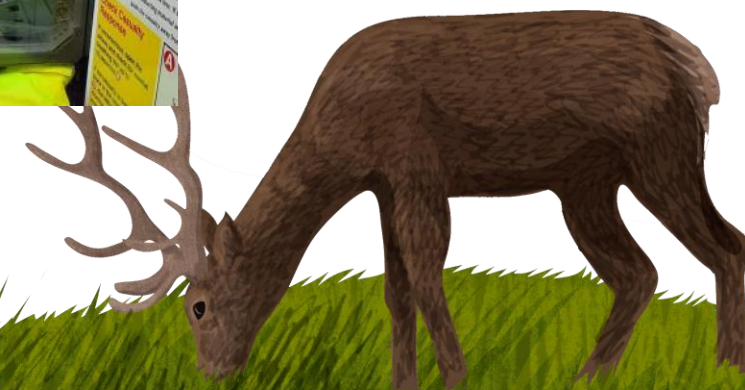
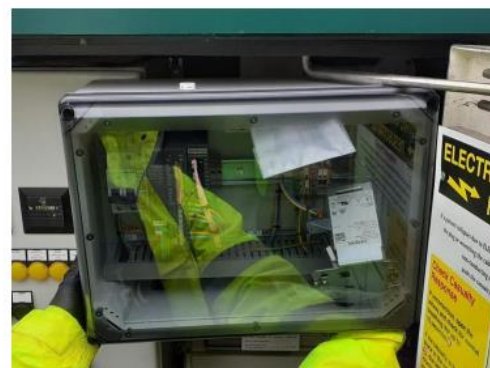


Sites with Space Issues: Small “Lucy” Kiosk No Space [DL5843 Alva Ind Estate WWPS]

The exact number of these type of small Lucy kiosks is currently unknown until all site surveys are completed. The smaller prototype enclosure will not fit in to these type of kiosk.



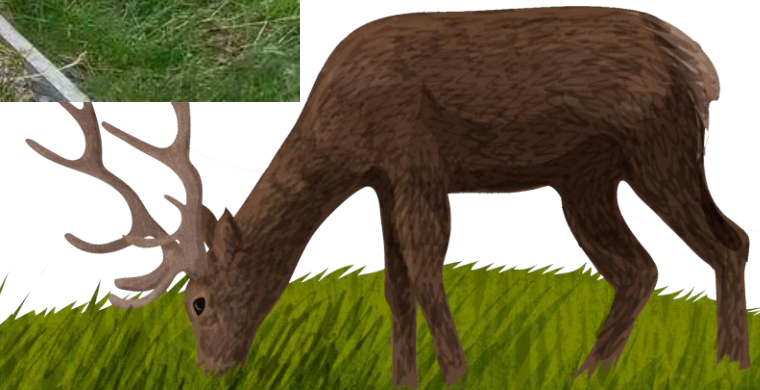
Sites with Space Issues: IDS CSO Kiosk No Space – Phase 0.1b [DL5242 The Cross CSO]



**Sites with Space Issues:
CSO SW Std Product Small No Space [DL5462 CALIFORNIA FORMER STW CSO 2017
NS913765]**



Small padlocked cabinet on right hand side belongs to the DNO



Sites with Space Issues: Small “Lucy” Kiosk No Space [DL5912 St. Thomas Well WWPS]



Resilience – Storm Arwen and its cousins

- Storms Arwen/Barra/Corrie/Malik main impacts were power related. Overhead lines down via wind and/or tree damage. This also took down BT overhead lines.
- However, it also demonstrated how future storms/power events will impact comms post IP rollout.
- Mobile masts quickly failed after battery back up exhausted
- Internet unavailable once cabinet battery back up exhausted
- Customer internet down in any case after power off
- Two main consequences:
 - Customers couldn't call/contact us
 - Telemetry comms down so couldn't see our assets
- When we convert to IP, most will be FTTC, so the lack of power resilience will make this worse, despite us putting battery back up in our new installs.

