

Date: 15 April 2025
Reference: 14-768-V6

SUBFLOOR VOID VALIDATION – HAWKS VIEW, CASTLETON

Project Name:	Hawks View, Castleton (formerly known as Castleton Sidings)
Project Number:	14-768
Client:	Kellen Homes
Date:	15 April 2025
Project Manager & Qualifications:	J Sheridan (MeSci, FGS)
E3P Engineer:	T Walker
Gas Membrane Installers Name & Qualifications:	Westbourne Civil Engineers Ltd & Keytec Installation Services
Ground Gas Protection Design Report:	E3P Gas Protection Design Report (14-768-R8, March 2025)
Plots:	Subfloor Void – Plots 171-174

The gas mitigation measures validation site inspection record and associated photographs are enclosed within this letter as a Controlled Quality Assurance (CQA) site data capture record.

FINAL QUALITY ASSURANCE

E3P SITE VALIDATION CQA	QUALIFICATIONS	POSITION
Thomas Walker	-	Technician

PREPARED BY	QUALIFICATIONS	POSITION
Jessica Sheridan	MeSci, FGS, MEnvSci	Senior Consultant

AUTHORISED BY	QUALIFICATIONS	POSITION
Martin Dyer	BSc (Hons), FGS, FEnvSci, CEnv	Director

Table 1 Validation Letter References

PLOT NUMBER	DATE	REPORT REFERENCE
Subfloor 9-15, 18-21, 127-129	14/03/2025	V1
Membrane – Plots 18-21	19/03/2025	V2
Membrane – Plots 9-12, 125-129	21/03/2025	V3
Membrane – 13-15	28/03/2025	V4
Membrane – 130-131	01/04/2025	V5
Subfloor – 171-174	15/04/2025	V6





GROUND GAS MITIGATION DESIGN

The Ground Gas Risk Assessment for the site determined that site should be classified as Characteristic Situation 2 with incorporation of low level VOC resistant membrane in accordance with BS8485 2015 (+A1 2019).

A Gas Protection Design Report (GPDR) was prepared by E3P (14-768-R8, March 2025). Since the issue of the report, minor revisions have been made to the subfloor design, which are presented within this verification letter for clarity.

The GPDR has been prepared, reviewed, and authorised by a suitably qualified person who holds the relevant technical and professional qualifications.

OVERVIEW OF GROUND GAS MITIGATION DESIGN & CONSTRUCTION REQUIREMENTS

Characteristic Situation 2 – Design Mitigation Requirements.

- ❖ Passive sub-floor dispersal layer of very good performance which meets all criteria out in Paragraph B.6 of BS8485:2015 (minimum 150 mm clear void space and with correct frequency of side ventilation).
- ❖ Lapped and taped / sealed gas and low level VOC resistant membrane in the floor slab construction which meets all the criteria as set out in Table 7 of BS8485:2015 (+A1 2019) and Verification in Section 3.2.2 of CIRIA 735³³

Banners Gate prepared the site-specific engineering drawings on behalf of Kellen Homes as Foundation Detail Ref: 23147 500 F.

The sub-structure design forms a key component of the validation procedure to ensure the constructed mitigation requirements meet the specified design criteria.

Figure 1 Structural Engineers Substructure Design – External Wall

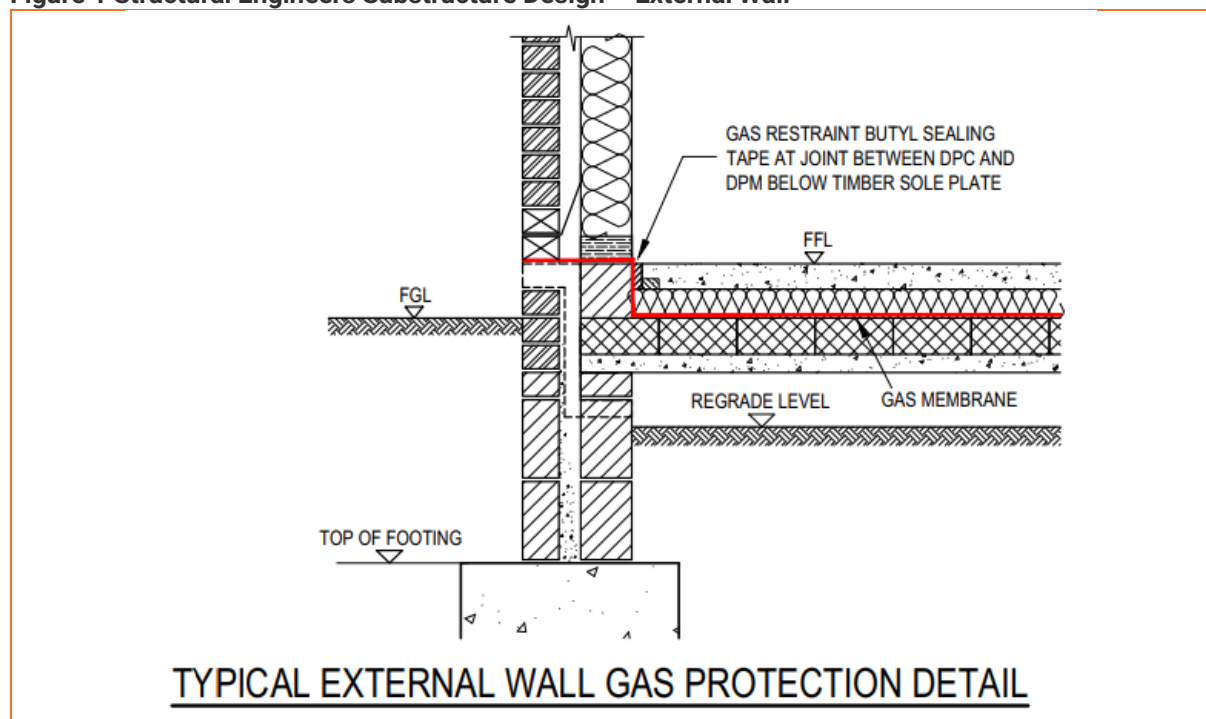




Figure 2 Structural Engineers Substructure Design – Party Wall

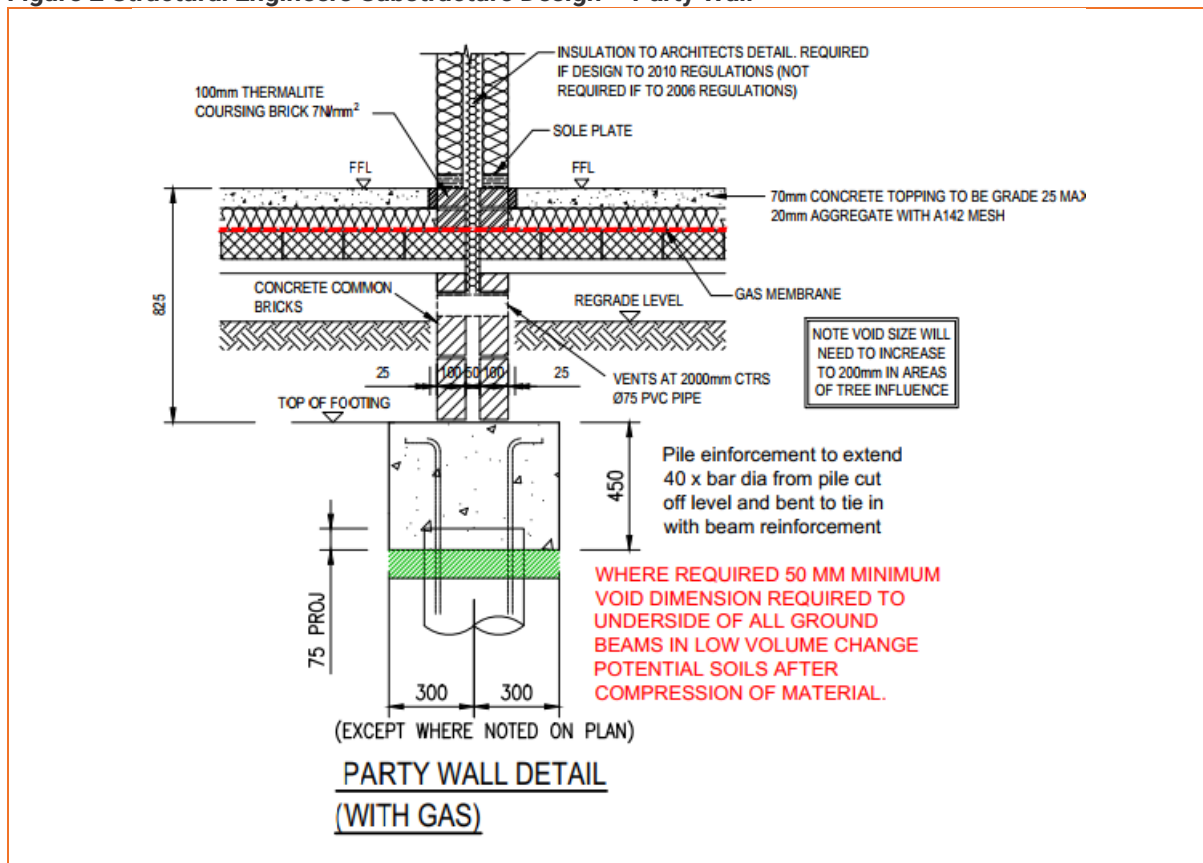
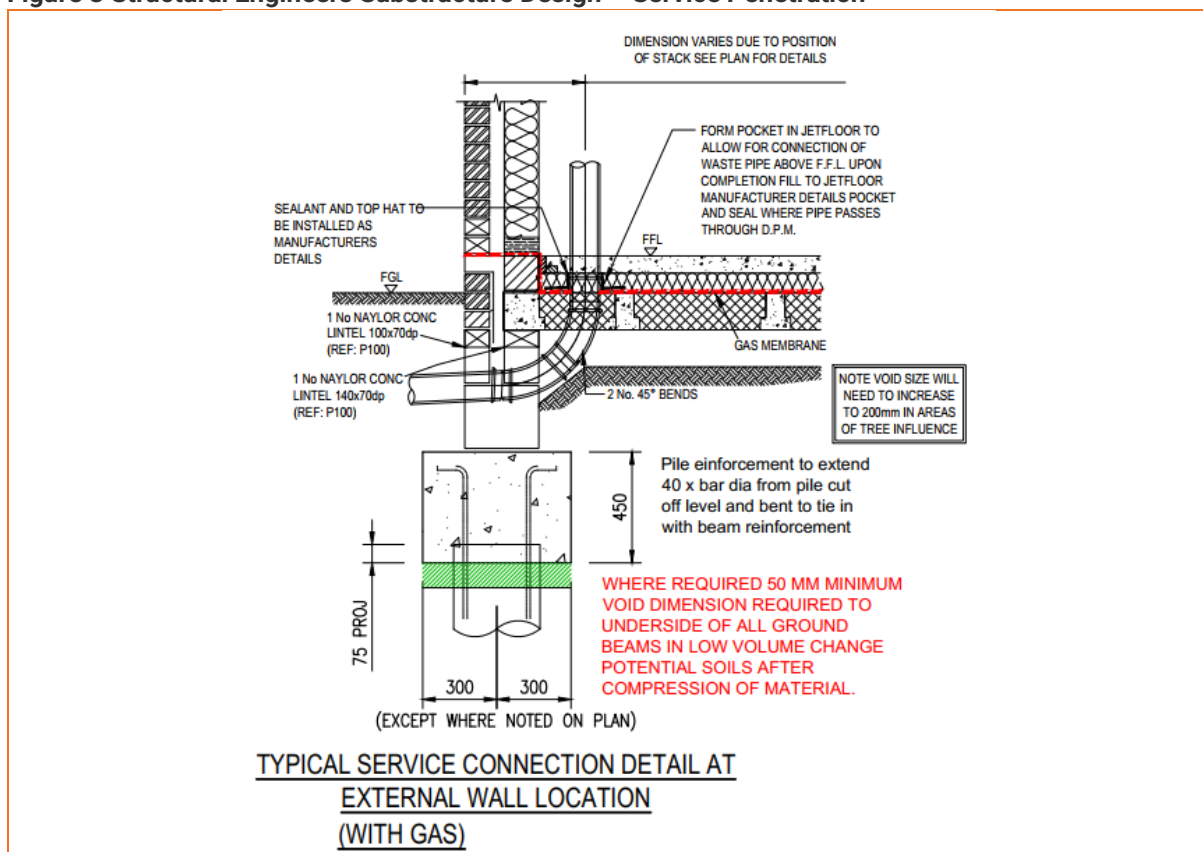


Figure 3 Structural Engineers Substructure Design – Service Penetration





SUMMARY OF VALIDATION INSPECTION & APPROVAL

SUB-FLOOR VOID

The sub-floor void for plots 171-174 was inspected on 15th April 2025.

The sub-floor void was observed and inspected to be a minimum of 150 mm with no visible inclusions that would limit the performance of this ventilation mechanism. Sleeper wall ventilation bricks were also observed to be present.

Photographs of the sub-floor voids are included in the final section of this CQA Validation.

AIR BRICKS & TELESCOPIC VENTILATION

As per NHBC guidance and the structural engineers design as part of the mitigation a telescopic vent and vent brick is required at 2 m intervals in the brick course. E3P can confirm these have also been fitted accurately on all elevations of the plot to allow the sufficient function of the passive sub-floor ventilation system.

E3P ENGINEER'S SITE CHECK SHEET

The engineer check sheet completed whilst on-site during the validation on a plot-by-plot basis is attached, and a complete set of images is presented as evidence. Larger images are presented at the rear of this section.

All information provided within this validation letter report was accurate at the time of construction. E3P operates under the assumption that all data provided by installers is reliable.



Floor Void Inspection

15 Apr 2025 / T Walker

Complete

Score	4 / 4 (100%)
Site Name	Castleton Sidings
Project Number	14-768
Conducted on	15 Apr 2025 3:47 PM BST
Prepared by	T Walker
Location	162 Fairway Rochdale England OL11 3BZ United Kingdom (53.58908754432113, - 2.1815482459404136)
<u>Plot Inspection</u>	4 / 4 (100%)
Plot Inspection 1	1 / 1 (100%)
Plot Number	172
Is the void clear?	Yes
Depth of Void	200
	
Photo 1	
Plot Inspection 2	1 / 1 (100%)
Plot Number	173
Is the void clear?	Yes
Depth of Void	180



Photo 2

Plot Inspection 3

1 / 1 (100%)

Plot Number

171

Is the void clear?

Yes

Depth of Void

190



Photo 3

Plot Inspection 4

1 / 1 (100%)

Plot Number

174

Is the void clear?

Yes



Photo 4

Depth of Void

190



Photo 5



Media summary



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5