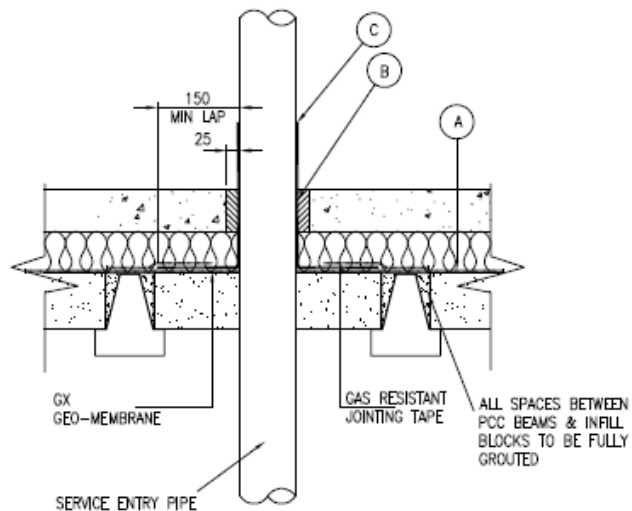


BEAM & BLOCK - TYPICAL CS-3 GAS PROTECTION DETAILS

REFERENCE NOTES

- (A) VISQUEEN GX GEO-MEMBRANE.
- (B) FACTORY FORMED TOP HAT DETAIL FIXED TO MEMBRANE AND TO EXTERNAL FACE OF PIPE USING PROPRIETARY DOUBLE SIDED GAS RESISTANT TAPE.
- (C) SERVICE PENETRATION THROUGH THE SLAB IS TO BE SEALED WITH APPROPRIATE SEALANT IN ACCORDANCE WITH MANUFACTURERS DETAILS.



**TYPICAL DETAIL AT SERVICE PIPE
PENETRATING SLAB
(ISOLATED LOCATIONS)**

SCALE (1:10)

CS3 GAS PROTECTION

ALL GX GEO-MEMBRANES ARE TO BE INSTALLED TO REASONABLE LEVELS OF WORKMANSHIP IN LINE WITH CURRENT GOOD PRACTICE UNDER CQA WITH INTEGRITY TESTING AND INDEPENDENT VALIDATION, IN ACCORDANCE WITH BS8485 AND TO THE APPROVAL OF NHBC.

ALL MEMBRANES TO BE LAPPED AND SEALED AT JOINTS USING PROPRIETARY DOUBLE SIDED SEALING TAPE. ALL SERVICES ENTRIES ARE TO INCORPORATE A SEALED JOINT, TOP HAT OR SIMILAR.

B.S.8485:2007

CHARACTERISTIC GAS SITUATION CS3 -
(EQUATES TO AMBER 2 OF THE NHBC TRAFFIC LIGHT SYSTEM)

SCORE REQUIRED 4.0

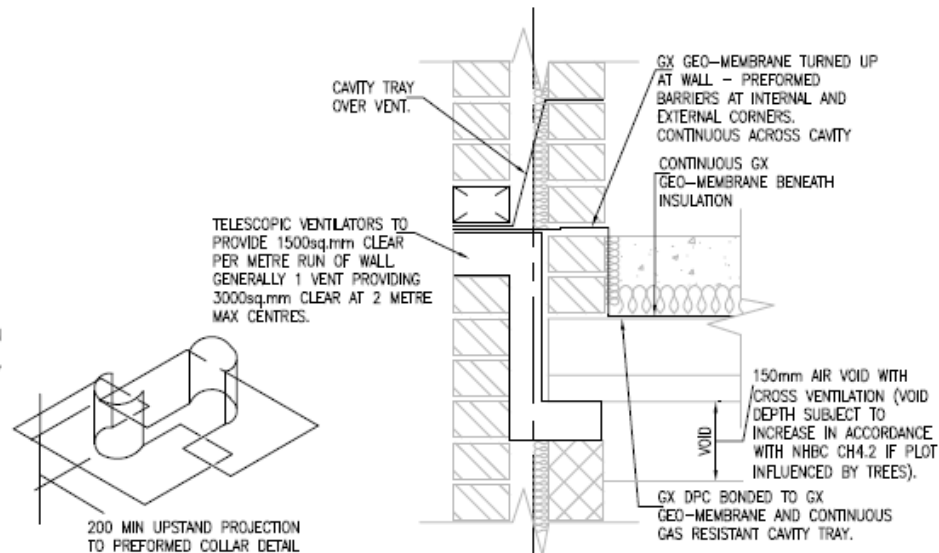
FLOOR/ VENTING - PRE-CAST BEAM & BLOCK FLOOR SLAB WITH MINIMAL SERVICE PENETRATIONS. SUB-FLOOR CLEAR VOID PROVIDING GOOD PASSIVE VENTILATION.

SCORE ACHIEVED 2.0

MEMBRANE - VISQUEEN GX GEO-MEMBRANE INSTALLED TO REASONABLE LEVELS OF WORKMANSHIP / IN LINE WITH CURRENT GOOD PRACTICE WITH INDEPENDENT VALIDATION. ALSO 1 IN 3 PLOTS REQUIRES A FULL INSITU GAS TEST - THIS REQUIRES 1 WEEKS NOTICE ON 01244288178

SCORE ACHIEVED 2.0

TOTAL SCORE ACHIEVED 4.0

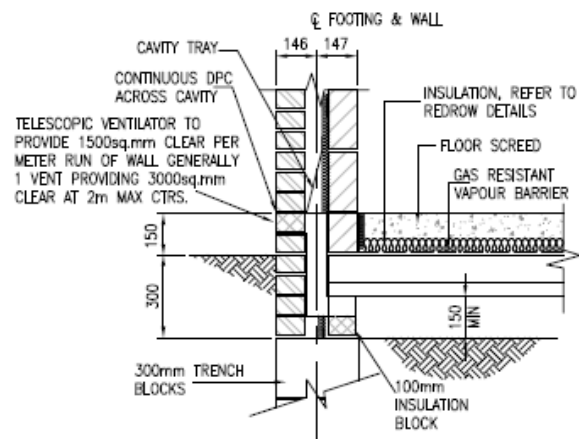


**COLLAR DETAIL (C)
(OR SIMILAR)**

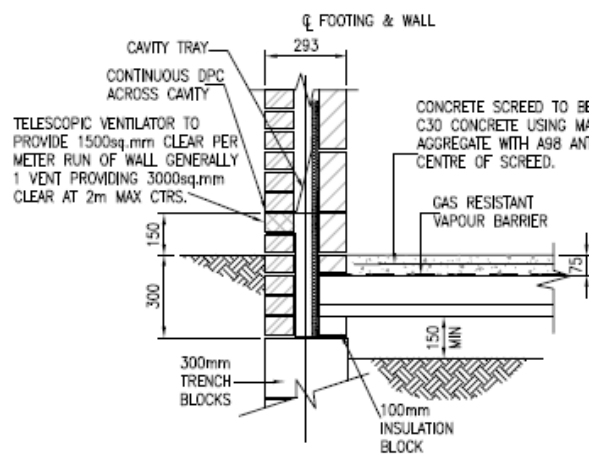
SCALE (1:10)

DPM TO DPC DETAIL

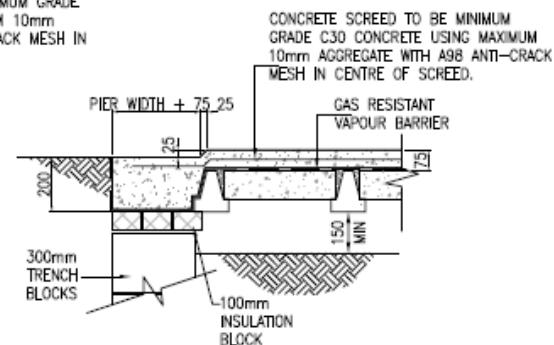
SCALE = 1:10



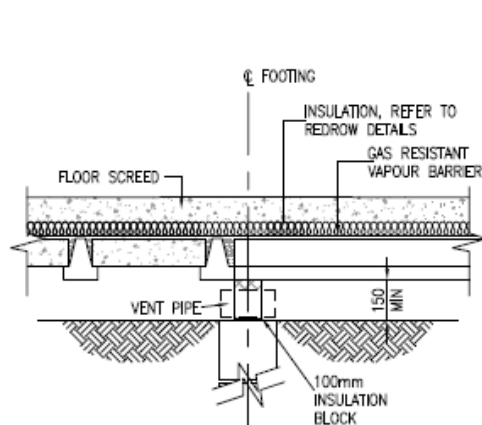
EXTERNAL WALL SECTION



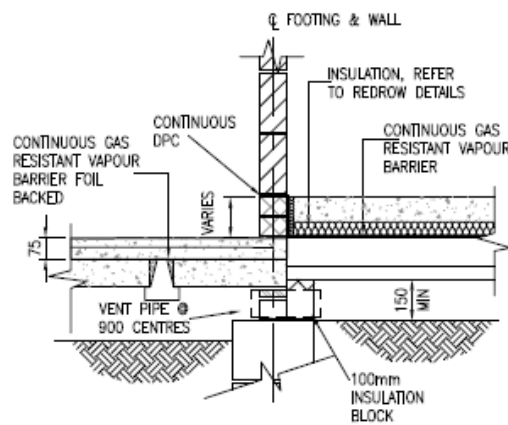
EXTERNAL GARAGE SECTION



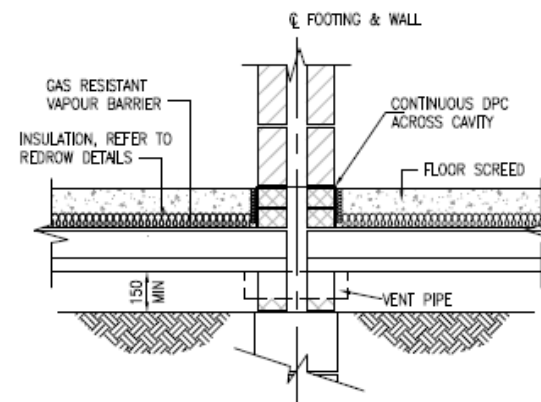
GARAGE THRESHOLD



INTERNAL SECTION



INTERNAL GARAGE
CONTINUOUS MEMBRANE



PARTY WALL SECTION



One record sheet to be completed for each plot inspected

job number	RED455	design source/ref:	WYG	specification source/ref:	A050826	other documents attached	✓ / ✗
site name / location	THINGWALL	building use:	<u>residential</u>	commercial	other (describe)		
plot number/s	226	building description:	no. of storeys = <u>2</u>	<u>detached</u>	semi-detached	terrace	apartment block
compiled by:	DR	gas protection type:	active / <u>passive</u>	foundation type:	<u>Suspended Beam and Block floor on piled fnd</u>		

Ventilated sub-floor (if present)	inspection date/time:	JANUARY 2014	inspected by:	DR	photographed:	✓ / ✗ YES
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	✓ / ✗	Notes/recommendations (see guide below)					
void former type	✓	1. CLEAR AIR VOID					
height of void space	✓	2. 150mm MIN					
gravel type	X	3. NOT APPLICABLE – VENTED CLEAR VOID PROVIDED					
pipe size and spacing	X	4. NOT APPLICABLE – VENTED CLEAR VOID PROVIDED					
external wall airbricks	✓	5. PROPRIETARY TELESCOPIC VENTS PROVIDED AT MAX 2m CENTRES					
internal sleeper walls	✓	6. PROPRIETARY 50mm DIA PVC PIPES AT MAX 2m CENTRES					
external vent trenches / ducts	X	7. NOT APPLICABLE – VENTED CLEAR VOID PROVIDED					

Gas barrier	inspection date/time:	9 TH JANUARY 2014	inspected by:	DR	photographed:	✓ / ✗ YES
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	✓ / ✗	Notes/recommendations					
membrane type	✓	8. PROPRIETARY 2000g VISQUEEN GX HYDRO-CARBON VAPOUR BARRIER					
extent of coverage	✓	9. ALL					



underside of membrane	✓	10. BEAM AND BLOCK LEVEL SURFACE
slab/membrane condition	✓	11. VERY GOOD
laps and joints	✓	12. GOOD CONDITION, OVERLAP AND SEALED JOINTS
damp-proof course	✓	13. YES, CONTINUOUS MEMBRANE, PLUS CAVITY CLOSER TO BE INSTALLED OVER
service entries and seals	✓	14. GOOD SEALS : TOP HATS / TAPED
cavity inspection	✓	15. GOOD

Guide notes:

1	void former type	proprietary type - manufacturer and specification, in accordance with design?, installed properly without damage?
2	height of void space	height of proprietary former or constructed ventilation space below suspended floor - note any debris on void / obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), any evidence of flooding
3	gravel type	gravel type, if used (limestone / granite etc.) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging / contamination by clay, organic matter, other debris. Take photographs of stockpile close up shot of stone with tape measure. Alternatively check details on delivery tickets for stone. Take photographs of adjacent plots if at this stage of construction. Check depth of stone conforms to at least 300mm if visible.
4	pipe size and spacing	diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing / separation and jointing as on design drawing - if not sketch arrangement - do pipes connect with external (telescopic / swan-neck) vents? Take photographs of vents on external walls for each plot. (May be possible to photograph other plots on site which are at stage of installing vents. Will be useful for these plots later on).
5	external wall airbricks	check numbers, size and positions as design drawing (if not shown, make sketch; check for blockage, e.g. by mortar, or soil / pavings etc.
6	internal sleeper walls	check for ventilation holes - e.g. honeycombe brickwork or pipe crossings - note size, spacing and location - in accordance with design?
7	external vent trenches / ducts	check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines / contamination; if pipe or other vents - check positions and construction for functionality and absence of blockages - vents may be built over
8	membrane type	note manufacturer & product spec, inc. batch nos. if present - in accord with spec? Check storage arrangements - protected from dirt & damage?



9	extent of coverage	if membrane is incomplete, further inspection will be required - note areas completed / incomplete - is membrane fully visible or have internal walls been constructed over membrane / screed placed?
10	underside of membrane	Where necessary , for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50mm no fines concrete blinding layer or appropriate geo-textile (see also below)
11	slab/membrane condition	record presence of debris / rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic / tools and equipment / materials, and temporary weighting down of membrane, e.g. use of boards - record evidence of footprints / tracks on membrane surface, creases or water/wind damage. Take photographs of each plot inspected.
12	laps and joints	check the all joints are lapped and sealed in accordance with manufacturer's requirements / specification, particularly where creases/folds are present (usually minimum 150mm laps with double-sided tape between sheets, and single-sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot.
13	damp-proof course	record DPC manufacturer and product code - usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC - note any potential stress points and tension between the two; check for damage to DPC
14	service entries and seals	note number, position and diameter of service entries - check top hat seal arrangements in accordance with design / specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150mm) check , with jubilee clips to secure top hat seal to pipe - note presence of clips and tightness of connections. Take photographs for all plots inspected.
15	cavity inspection	check gas membrane or gas resistant dpc is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant dpc or membrane across cavity to main membrane. Take photographs for all plots inspected.

This plot has PASSED inspection.
(Any proposed remedial works will be noted in the 'Remarks' column on this form).

An addition inspection visit IS / IS NOT* required for this plot.

Qualified Engineer: Signed:.....
(Print Name)

* Delete as appropriate

Redrow Lancashire : Thingwall, Knowsley
 Job No: RED455 Plot No: 226
 Date of visit: 09.01.2014



Plot 226 Thingwall

House Type: Detached Construction Type: Block and beam Gas Protection : CS-3	
Floor Type	1. Suspended block and beam ground floor with ventilated void
Validation	2. Independent validation of all plots, insitu gas testing 1 in 3 plots
Void former type	3. Clear air void
Height of void	4. 150mm min
External wall airbricks	5. Proprietary telescopic vents at max 2m centres
Internal sleeper walls	6. 50mm dia pvc pipes at 2m centres
External vent trenches/ducts	7. N/A
Membrane type	8. Visqueen GX Gas resistant (hydro-carbon) vapour barrier
Extent of coverage	9. All
Underside of membrane	10. Beam and block level surface
Slab/membrane condition	11. Very good
Laps and joints	12. Good condition, overlap and sealed joints
Damp-proof course	13. Yes and cavity closer to be installed over
Service entries and seals	14. Good seals : top-hats / taped
Cavity inspection	15. Good

This plot had PASSED inspection.
 (Any proposed remedial works will be noted in the 'Remarks' column on this form).
 An additional inspection visit IS NOT required for this plot.
 Qualified Engineer: David Bell

