ILLUSTRATIVE SAMPLE: an invented house, drawn for our website. Not a real house, client or job.

STRUCTURAL APPROACH REPORT: ILLUSTRATIVE SAMPLE

A 1930s semi, extended at the side and the back

Next door, the side wall near the boundary, and three ways to build the walls

This is the report we send before we start the calculations, on a job like this one. It is written to an invented client about an invented house: a 1930s semi on clay, with trees nearby. The architect's drawings, in one planning application, show a two-storey side extension with its side wall less than 1 m from the boundary with the detached house next door, and a single-storey extension at the back with its side wall on the boundary with the attached house. The report sets out where the Party Wall Act applies, what the Building Regulations in England ask of walls this close to a boundary, three ways to build the side extension's walls, and what we need before we design. Sketch SK-01 shows where each rule applies, SK-02 the house as it is with what comes out, and SK-03 to SK-06 the plans, the roof and the elevations. It is general information, not advice on your situation.

IN SHORT

- **Next door, on both sides:**
  - The rear extension's wall on the boundary, if no party fence wall stands on the line: a line of junction notice to the owners of the attached house, at least a month before the work starts (section 1(1) and 1(5)).
  - The beam where the back wall opens up, if its end sits in the party wall: a party structure notice, at least two months ahead (section 2(2)(f) and section 3(2)).
  - Each extension's foundations: a notice to the neighbour concerned if they go deeper than the foundations of a building or structure of theirs within 3 m, or cross the 45 degree line within 6 m (section 6(1) and 6(2)).
- **Both new walls near a boundary sit within 1000 mm of it.** In that band a wall should resist fire for 30 minutes from each side, shown for the whole wall, with only small openings (Approved Document B, Volume 1, paragraph 11.8, Table B1 item 5 and Table B2, and Appendix B, paragraphs B1 and B2).
- **The side window:** the side wall has one window, drawn small and obscured, to the shower room on the first floor; it, and any window added to that wall, has to meet the small-area rules (Approved Document B, Volume 1, Diagram 11.5; part 3; sketches SK-04 and SK-06).
- **How to build the side extension:** brick and block (C) is the simplest route at that distance. Timber frame (A or B) needs a tested or assessed system for the whole wall from each side, agreed with Building Control first (our judgement; part 5 and sketch SK-09).
- **Before we design:** the wall is chosen, Building Control agrees the evidence for it, and a trial hole shows the foundations and the clay (our judgement; part 6).

SOURCES

It is our reading as engineers, not legal advice. The main sources are listed here; others are named where they are used:

- Party Wall etc. Act 1996, by section: https://www.legislation.gov.uk/ukpga/1996/40
- The government's party wall booklet, by paragraph: https://www.gov.uk/government/publications/preventing-and-resolving-disputes-in-relation-to-party-walls
- Approved Document B, Volume 1, 2019 edition incorporating the 2020, 2022, 2025 and 2026 amendments, by paragraph and table: https://www.gov.uk/government/publications/fire-safety-approved-document-b

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AN ILLUSTRATION

The house from the street

AS IT IS



WITH THE SIDE EXTENSION



Computer-generated illustrations of the invented house, based on our sketches. The house next door is left out so that the side extension can be seen. For illustration only: not to scale and not a design.

ILLUSTRATIVE SAMPLE: an invented house, drawn for our website. Not a real house, client or job.

AN ILLUSTRATION

The house from the garden

AS IT IS



WITH BOTH EXTENSIONS



Computer-generated illustrations of the invented house, based on our sketches. The house next door is left out so that the side extension can be seen. For illustration only: not to scale and not a design.

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PART 2

Party walls

Where the Act applies

- **The wall your house shares with the attached house is a party wall:** a wall that separates buildings belonging to different owners (section 20; booklet paragraph 3).
  - Opening up the back wall into the rear extension needs a beam. If its end sits in the party wall, the work cuts into a party structure (section 2(2)(f)).
  - That needs a party structure notice at least two months before the work starts (section 3(2)).
- **The rear extension's side wall is on the boundary with the attached house's garden.**
  - Section 1 covers building on the line of junction where nothing stands on it, or only a boundary wall that is not a party fence wall and not the external wall of a building (section 1(1)).
  - A masonry garden wall standing astride the line is a party fence wall (booklet paragraph 3). If there is one, section 1 does not apply: taking it down and rebuilding it as part of the extension is section 2 work, with a party structure notice two months ahead (section 2(2)(l) and section 3(2)).
  - Built wholly on your land, the new wall needs a line of junction notice at least one month ahead (section 1(5)).
  - Built astride the line, as a party wall, it needs your neighbour's consent by notice within 14 days; without that consent, you may build it only wholly on your own land, at your own expense (section 1(2), 1(3) and 1(4)).
  - Footings may project under their land where necessary, from one month to twelve months after the notice, at your expense and with compensation for any damage (section 1(6) and section 1(7)). Special foundations, meaning foundations with beams or rods in them to spread the load, need their consent in writing (section 7(4) and section 20).
- **Digging near either neighbour comes under section 6 when:**
  - within 3 m of any part of their building or structure, the dig goes lower than the bottom of its foundations (section 6(1)); or
  - within 6 m, it crosses a line drawn down at 45 degrees from the bottom of those foundations (section 6(2)).
  - A structure counts as well as a house: an extension, a garage or a garden wall. Its owner is an adjoining owner for section 6 even if their land does not adjoin yours (section 6(4); booklet paragraph 28).
- **Both extensions are close enough for the test to matter.** The rear extension's foundations run beside the attached house, and the side extension's are within 3 m of the house next door (section 6(1)).
  - The test is about depth and distance, not about whether anything is undermined (section 6(1)).
  - In a pair of semis built together, your own foundations are a fair guide to the attached house's, but not proof. Until the attached house's foundation depth is known, the careful course is to serve the notice (our judgement).
- **A section 6 notice goes at least a month before the dig.** It says whether you propose to underpin or otherwise strengthen or safeguard their foundations, with plans and sections showing the site and depth of the excavation and the site of any new building (section 6(5) and 6(6)).

How we suggest handling it

- **Speak to both neighbours before anything is served.** The booklet's advice is that a notice should not come as a surprise, and that neighbours who have already talked it through will more readily consent (booklet paragraphs 8 and 10).
- **Find out how deep the foundations are.** A trial hole beside the party wall at the back shows the foundation's depth and width and how the wall is built, so the notices can say how you propose to go about the work (our judgement).
  - We agree where it goes, how big it is and when it is dug: a trial hole within 3 m of the attached house that goes below its foundations is section 6 work in its own right (section 6(1)).

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- **One letter to each neighbour can carry all their notices.** The booklet allows the example letters to be combined where the work comes under more than one section (booklet Part 5, notes on completing the example letters). Each notice runs its own period: two months for a party structure notice, one month for the others (section 3(2), section 1(5) and section 6(5)).
- **Serve them in time, but not too early.** A party structure notice or a section 6 notice lapses if the work has not started within 12 months of service and is not carried on with due diligence (section 3(2) and section 6(8)).
- **After service:**
  - Party structure and section 6 notices: if the neighbour has not consented in writing within 14 days, a dispute is deemed to have arisen (section 5 and section 6(7)).
  - Line of junction notice, for a wall wholly on your land: the Act asks for a month's notice, not consent (section 1(5)). The booklet puts it as "Unless your neighbour objects, you may start work one month after your notice was served" (booklet paragraph 25).
- **A dispute is settled by surveyors:** one agreed surveyor for both owners, or one each, who at once select a third; the agreed surveyor, or any two of the three, settle it by an award (section 10(1) and section 10(10)).
- **Access to next door's land is limited.** The Act gives entry, in usual working hours and on at least 14 days' notice to the owner and the occupier, only for work under the Act (section 8(1), 8(3) and 8(4); booklet paragraph 20).
  - The booklet treats access to build a wall as something a neighbour may allow voluntarily, for a better finish on their side (booklet paragraph 20). So agree access early, or plan to build and point both walls from your side (our judgement).
- **Have a schedule of condition made before work starts,** of the attached house's back wall and its side of the party wall, and of the side of the house next door. The Act does not require one, but the booklet says "It is therefore highly advised that such a record is made" (booklet Appendix 1, "Schedule of Condition").
  - It protects both sides if a crack is later blamed on the work (our judgement).

Who pays

- **As building owner, you normally pay for the work** (section 11(1)).
- **The surveyors' costs fall where the award puts them** (section 10(13)). The booklet says that is usually the building owner, including the neighbour's surveyor's fees, when the work is solely for the building owner's benefit (booklet paragraph 15).

PART 3

Walls near the boundary

Fire

- **In England, within 1000 mm of the relevant boundary** (Approved Document B, Volume 1, paragraph 11.8 and Table 10.1):
  - the wall should be fire resisting from both sides;
  - the only unprotected areas, such as windows, are small ones: each up to 1 m², which may be two or more smaller areas within a 1 m by 1 m square, and at least 4 m from any other such area, or each up to 0.1 m² and at least 1.5 m from any other unprotected area, large or small (Approved Document B, Volume 1, Diagram 11.5);
  - the outer surface facing the boundary should be class B-s3, d2 or better.
- **The fire resistance for such a wall** is 30 minutes for loadbearing capacity, integrity and insulation (REI 30), from each side separately (Approved Document B, Volume 1, Table B1 item 5 and Table B2).

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- **It is shown for the whole wall as built,** by a test, a design standard or an assessment. Small changes, such as an air gap or an added layer of insulation, can alter the result (Approved Document B, Volume 1, Appendix B, paragraphs B1 and B2).
- **Both walls in this plan fall in that band:** the side extension's side wall, less than 1 m from the boundary, and the rear extension's wall on it (Approved Document B, Volume 1, paragraph 11.8; sketch SK-01).
- **At 1000 mm or more, the rules relax:** fire resistance from the inside only, and larger openings, up to 5.6 m² in all at 1 m for a house of up to three storeys and 24 m long (Approved Document B, Volume 1, paragraphs 11.9 and 11.18, and Diagram 11.7).
  - Setting the side wall back that far would change the planning drawings, which the council decides (our judgement).

The side window

- **The window drawn in the side wall has to meet the small-area rules above, and so does any window added to that wall** (Approved Document B, Volume 1, Diagram 11.5; sketches SK-04 and SK-06).
  - A window that does not can shrink, move to the front or back, or be fixed shut and glazed to the fire resistance the wall needs, which then does not count as an unprotected area (Approved Document B, Volume 1, Appendix A, "Unprotected area").

Who decides

- **Building Control decides whether the walls comply,** measured to the relevant boundary, which is the boundary the wall faces (Approved Document B, Volume 1, paragraph 11.5; our judgement).
- **Where the boundary runs is a matter of title and agreement with the neighbour.** The Act has no provision to settle a boundary dispute, and Building Control does not settle it either (booklet paragraph 43; our judgement).
  - If it cannot be agreed, the courts can settle it, or mediation, arbitration or an independent person's decision (booklet paragraph 43).
- **With a wall this close to the line, set out from the deeds and a measured survey,** so the wall stays on your land (our judgement).

Building and keeping the walls

- **The side wall is built and maintained from the narrow strip on your side,** or from next door's land only with their agreement (our judgement).
- **Eaves, gutters and downpipes stay on your side of the boundary** (our judgement).

PART 4

If the side extension is built in timber frame

What the Building Regulations ask for

- **Thirty minutes' fire resistance for the loadbearing walls and the structure** of a house whose top floor is no more than 5 m above ground (Approved Document B, Volume 1, Table B1 items 1 and 2, and Table B2).
- **The first floor: R 30, and EI 15 from below,** in the upper storey of a two-storey house, "but not over garage or basement" (Approved Document B, Volume 1, Table B1 item 3(b)).
- **Cavity barriers where the frame's cavities have edges, including round windows and doors.** The exemption in Diagram 5.3 covers walls of two leaves of brick or concrete, each at least 75 mm thick, so it does not cover a timber frame (Approved Document B, Volume 1, paragraphs 5.17 and 5.18, and Diagram 5.3).

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- Each barrier, tested from each side separately, should give 30 minutes' integrity and 15 minutes' insulation (Approved Document B, Volume 1, paragraph 5.20).
- Approved Document B lists simple forms that may be used in a stud wall or round openings, such as timber at least 38 mm thick, and says they do not necessarily achieve that performance (Approved Document B, Volume 1, paragraph 5.21). We would use a closer with its own test evidence, and agree any listed form with Building Control (our judgement).
- The barriers are tightly fitted to a rigid construction and fixed mechanically, and fixed so that movement, such as the frame shrinking, or a failure in a fire of their fixings, of services through them or of what they abut, does not make them ineffective (Approved Document B, Volume 1, paragraphs 5.22 and 5.23).

A question for Building Control

- **Which evidence will they accept for a timber frame wall within 1000 mm of the boundary?** It needs 30 minutes from each side for the whole wall, slips or brick leaf included (Approved Document B, Volume 1, Table B1 item 5 and Table B2, and Appendix B, paragraphs B1 and B2). Ask before choosing (our judgement).
- **We treat the answer as a hold point:** the wall is not fixed until it is in (our judgement).

What we design

- **Stability:** a timber frame needs its own bracing and holding down. Where the extension opens into the house, the lintels and beams over the openings in the old side wall are ours to design, with the props that hold the house up while the openings are made (our judgement).
- **Where the new frame meets the house:** timber shrinks across the grain as it dries, mostly at the floors. So the new floors are set to settle to the old levels, and the junction gets a movement joint, not a rigid tie (our judgement; sketch SK-08).
- **Foundations:** the frame is light, but on clay with trees nearby the depth follows the clay and the trees, not the load (our judgement).
- **Air under the old floor:** if the house has a suspended timber ground floor, the extensions will cover air bricks. Its void should still have openings in two opposite walls, with a free path to all parts, of at least 1,500 mm² per metre run of wall or 500 mm² per m² of floor, whichever is greater, carried through the new floor voids or in pipes of at least 100 mm diameter where the new foundations cross the path (Approved Document C, 2004 edition incorporating 2010 and 2013 amendments, paragraph 4.14(b), written for a suspended timber floor; our judgement in applying it here).
- **Clay brick slips** go on a slip system made for timber frame, over a breather membrane and a drained, ventilated cavity, not stuck straight to the sheathing (our judgement; sketch SK-07).
  - Ask the supplier for its third-party approval for timber frame with a drained, ventilated cavity, its fire classification and fire test evidence, and its cavity barrier and window details (our judgement).
- **Slips and the planning permission:** if a condition asks for materials to match the house, or for samples to be approved, the council decides whether slips comply (our judgement).

PART 5

Three ways to build the side extension's walls

These are three ways to build the side extension's walls, side by side, with the side wall less than 1 m from the boundary. Sketch SK-09 shows a typical section of each, for comparison only.

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The three options

	A. TIMBER FRAME, CLAY BRICK SLIPS	B. TIMBER FRAME, BRICK OUTER LEAF	C. BRICK AND BLOCK CAVITY WALL
Inside to outside	Plasterboard, service zone, insulation board, studs, sheathing, breather membrane, battens, slip carrier board, clay slips	The same frame to the membrane, then a drained cavity and a brick leaf on flexible ties	Plasterboard, block inner leaf, cavity insulation, brick outer leaf
Thickness	The thinnest	Thicker: a brick leaf and cavity outside the frame	About as thick as B
30 minutes from each side, for the whole wall	A tested or assessed system needed	The same, from the frame supplier	Masonry makes the evidence simpler
Cavity barriers	At edges and openings	At edges and openings	Not needed where Diagram 5.3's conditions are met
Movement	The frame shrinks at the floors	Frame and brick move differently	Still detailed for movement
Planning	The council confirms slips meet any materials condition	Real brick, which still has to meet any materials condition	Real brick, which still has to meet any materials condition
Building it	Quick on site to a weathertight shell; slips after	Frame and roof first, brick after	Usually slowest on site: two wet leaves

Option B, a brick leaf on the frame

- **Real brick outside,** so no question about slips and the planning permission. If a condition asks for materials to match the house, or for samples to be approved, the brick still has to meet it, and the council decides whether it does (our judgement).
- **Thicker than A,** which matters where the wall is already close to the boundary (our judgement).
- **Two trades and two kinds of movement:** the frame shrinks and the brick does not, so the leaf is held on flexible ties, with gaps at sills, eaves and pipes sized to the frame supplier's shrinkage figure (our judgement).
- **Still a timber frame for fire:** the cavity barriers stay, and the evidence from each side for the whole wall comes from the frame supplier (Approved Document B, Volume 1, paragraph 5.18, Diagram 5.3, and Appendix B, paragraphs B1 and B2).

Option C, brick and block

- **The simplest within 1 m of the boundary.** Two leaves of brick or concrete need no cavity barriers where Diagram 5.3's conditions are met (Approved Document B, Volume 1, paragraph 5.18 and Diagram 5.3).
  - Masonry makes the evidence from each side simpler; it is confirmed from the block maker's evidence for the chosen block and loading (our judgement).
- **No shrinkage at the floors,** though clay brick tends to expand and block to shrink, so the leaves, the ties and the junction with the house are still detailed for movement (our judgement).
- **Usually the slowest on site:** two wet leaves, then plaster or dabs. The weather, the frame's lead time for A or B, access, and when the trades are free can change which option is quickest overall (our judgement).
- **Our design changes with it:** steel beams on padstones in the blockwork, in place of posts in a frame (our judgement).

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Comparing the cost

Where it helps the choice, your own report compares the rough cost of the options from published cost guides and merchant prices, for comparison only: not an estimate or a quote. This sample leaves the figures out. A builder's price for each option, from the same sketch and the same window and door schedule, settles it.

Our view

- **For the side extension, choose C, brick and block (our judgement).** Within 1 m of the boundary it gives the 30 minutes from each side most simply, needs no cavity barriers where Diagram 5.3's conditions are met, and matches the rear extension.
- **Choose A only with the evidence in hand:** a tested or assessed system for the whole wall from each side, accepted by Building Control before the frame is ordered (our judgement).
- **B gives the least advantage here:** the thickness and bricklaying of masonry, the barriers and movement detailing of a frame, and the frame supplier's evidence still needed (our judgement).

PART 6

What we need from you

- [ ] **Who owns the attached house and the house next door?** Every owner needs serving (booklet paragraph 7).
- [ ] **Does either neighbour have a garage, an extension or a garden wall near your boundaries?** Any structure within the distances in part 2 brings section 6 in if the dig goes deep enough to meet the test for it (section 6(1), 6(2) and 6(4)).
- [ ] **Is there a garden wall on the line where the rear extension goes, and does it stand astride the line?** It decides between a line of junction notice and a party structure notice (part 2; section 1(1)).
- [ ] **What do your deeds or title plan show for both boundaries,** and can you agree the lines with the neighbours, from the deeds and a measured survey, before setting out (part 3)?
- [ ] **Can your builder dig a trial hole beside the party wall at the back, where we agree,** so we can see the foundation and take a sample of the clay?
- [ ] **Can you mark the trees near the extensions on a plan?**
- [ ] **Can you lift a floorboard, or look for air bricks,** so we know whether the ground floor is suspended timber or solid?
- [ ] **Which wall would you like for the side extension, A, B or C (part 5)?**
- [ ] **Will you or your architect ask Building Control the question in part 4?**
- [ ] **If you choose timber frame, will a supplier design the panels, or will it be built on site to our design?**
- [ ] **The beams at the back and where the hall wall comes out: would you like them flush in the ceiling, or below it?**
- [ ] **For your architect:** does the side window, as drawn, meet the small-area rules in part 3, and can any other window go to the front or back?
- [ ] **For your builder:** can you price A, B and C from sketch SK-09, with the same window and door schedule for each?

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PART 7

The notices you are likely to need

Which apply depends on the tests in part 2, and on what the trial hole, the drawings and the measured boundaries show.

NOTICE	TO	WHEN	ACT
Party structure notice: the beam end in the party wall	The owners of the attached house	At least two months before the work	Sections 2(2)(f) and 3(2)
Line of junction notice: the rear extension's wall, wholly on your land, where no party fence wall stands on the line	The owners of the attached house	At least one month before the work	Sections 1(1) and 1(5)
Notice of adjacent excavation: the rear extension's foundations, if they go deep enough to meet the test in part 2	The owners of the attached house	At least one month before digging	Sections 6(1), 6(2) and 6(5)
Notice of adjacent excavation: the side extension's foundations, if they go deep enough to meet the test in part 2	The owners of each building or structure the test is met for, such as the house next door	At least one month before digging	Sections 6(1), 6(2), 6(4) and 6(5)

- **Every owner is served.** The booklet says a freehold or a leasehold owner may be an adjoining owner, and "it is your duty to notify all Adjoining Owners" (booklet paragraph 7).

PART 8

What happens next

Once the wall is chosen and Building Control has agreed the evidence for it, we do the calculations and drawings: the foundations; the frame or the masonry; the beam at the back, and the beam where the hall wall comes out between the kitchen and the dining room; the lintels and beams over the openings into the side extension; the roof where it is carried on over the side extension; the rear extension's flat roof, the trimming round its lantern and the beam over its folding doors; and the props that hold the house up while the openings are made. They are drawn so Building Control and a builder can work from them. We answer Building Control's questions on our calculations as part of the job.

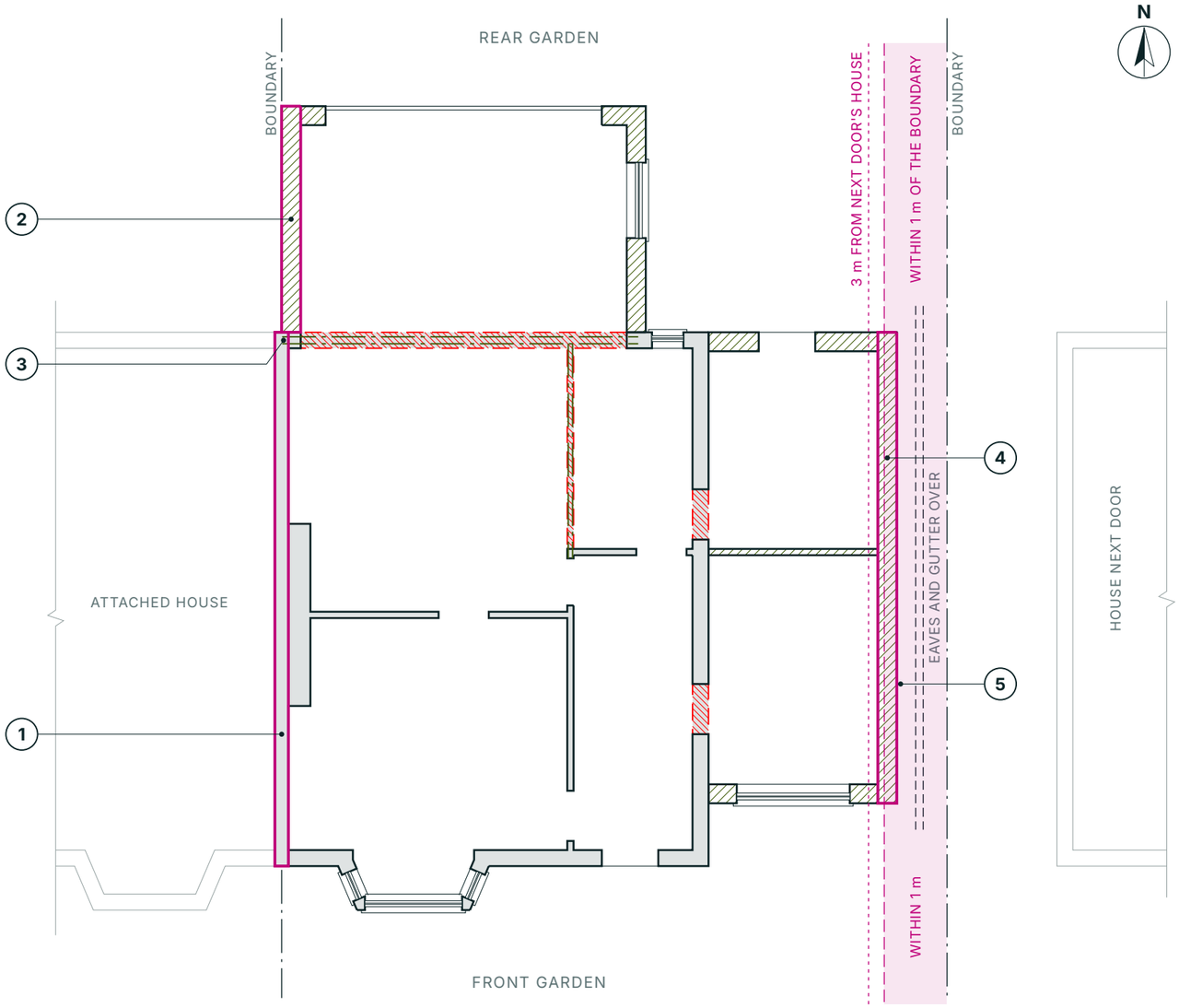
This sample is written to an invented client. Your own report follows your house, your drawings and your neighbours.

To ask for a report like this, start your project at https://housestructuralengineers.co.uk/start.html, email your drawings to hello@housestructuralengineers.co.uk, or call 01483 363308. We reply within one working day. Fixed fee, confirmed in writing before we start.

Sketches SK-01 to SK-09 follow.

Our reading as engineers, not legal advice. An illustrative sample: the house, the plan and the neighbours are invented, and the sketches are drawn for this sample.

House Structural Engineers is a trading name of PF & Co Holdings Ltd, registered in England and Wales, company number 16649319. Registered office: 2 Queens Drive, Guildford, GU2 9PP.



1 PARTY WALL AND BOUNDARY RULES PLAN

Ground floor, as proposed: where each rule applies

NOT TO SCALE

WHERE EACH RULE APPLIES

An invented house, drawn for this sample: a 1930s semi, the attached house to the left, a detached house next door to the right. What comes out of the house is on SK-02; the plans, the roof and the elevations are on SK-03 to SK-06.

1. The party wall with the attached house (Party Wall etc. Act 1996, section 20).
2. The rear extension's side wall, wholly on your land with its face on the boundary, in brick and block: a line of junction notice, at least one month ahead, if no party fence wall stands on the line (sections 1(1) and 1(5)). Within 1000 mm of the boundary, so 30 minutes from each side for the whole wall, and only small openings (Approved Document B, Volume 1, paragraph 11.8, Diagram 11.5; Table B1 item 5 and Table B2); none is drawn. Its foundations sit beside the attached house: the depth test of section 6(1).
3. The beam over the new opening in the back wall bears in the party wall: cutting into it is section 2 work, two months' notice (sections 2(2)(f) and 3(2)).
4. The side extension's side wall, less than 1000 mm from the boundary: 30 minutes from each side for the whole wall, and only small openings (Approved Document B, Volume 1, paragraph 11.8, Diagram 11.5; Table B1 item 5 and Table B2). Its one window is on the first floor (SK-04). Its eaves and gutter stay on your side.
5. Its foundations, within 3 m of the house next door: section 6 if they go deeper than the foundations of that house or any structure of theirs (section 6(1)); within 6 m, the 45 degree line (section 6(2)).

Measure both boundaries before setting out. The trial hole beside the party wall at the back, where we agree, shows the foundations (the report's part 2).

KEY

- Existing wall
- New wall
- Existing wall coming out
- Wall a rule applies to
- Beam over (new)
- Within 1 m of the boundary
- 3 m from next door's house
- Eaves and gutter over
- Neighbouring house
- Boundary

NOTES

Illustrative only: not to scale and not a design; no sizes on purpose. Balloons key to the notes.

Rev	Date	Description	By
P01	27 Nov 2026	Illustrative sample	HSE

House
STRUCTURAL ENGINEERS
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hello@housestructuralengineers.co.uk
01483 363308
House Structural Engineers is a trading name of PF & Co Holdings Ltd, registered in England and Wales, company number 16649319. Registered office: 2 Queens Drive, Guildford, GU2 9PP.

JOB	SAMPLE
PROJECT	Illustrative sample
ADDRESS	An invented house, for this sample
CLIENT	Not a real client

SKETCH — A3 LANDSCAPE

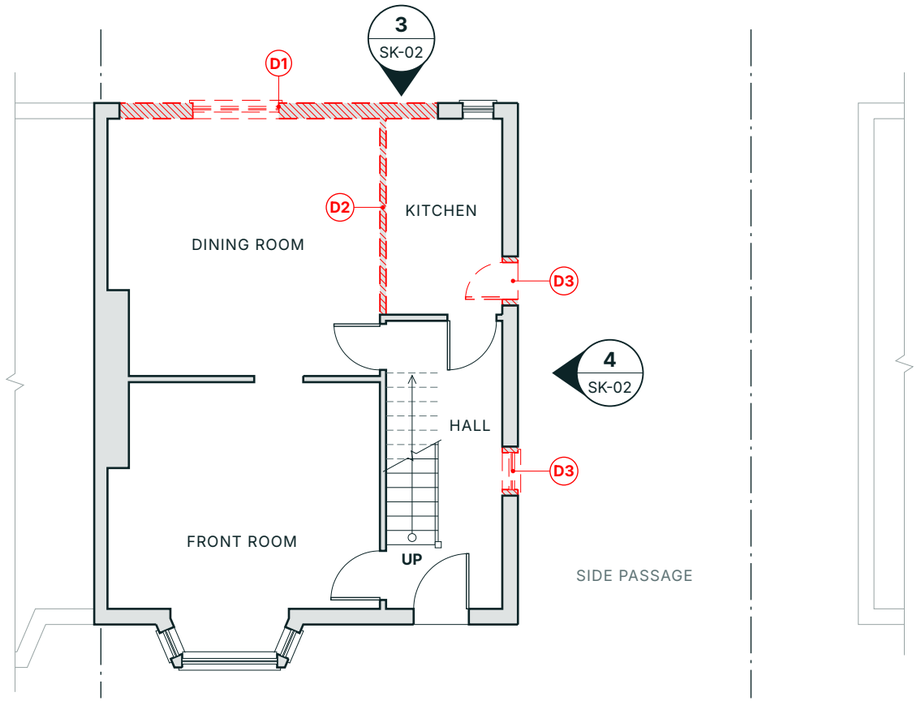
Party wall and boundary rules

DRAWN	CHECKED	APPROVED
HSE	Sample	Not a design

SCALE AT A3	DATE
Not to scale	27 November 2026

STATUS	SUITABLE FOR
S2	Information

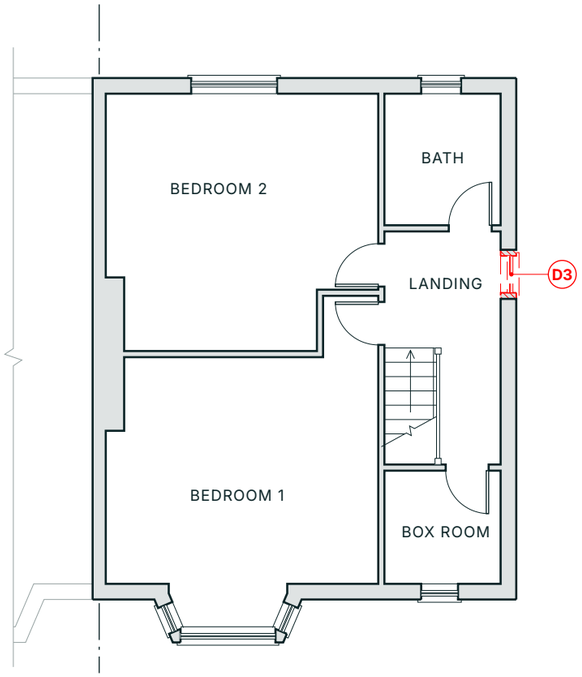
DRAWING NUMBER	REVISION
SK-01	P01



1 EXISTING GROUND FLOOR PLAN

As it is, with what comes out in red

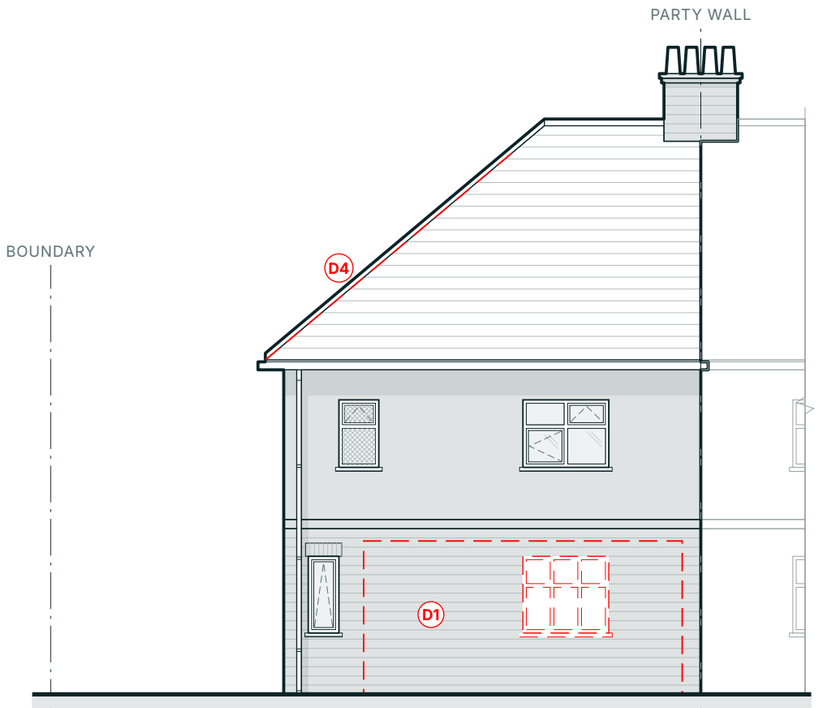
NOT TO SCALE



2 EXISTING FIRST FLOOR PLAN

As it is, with what comes out in red

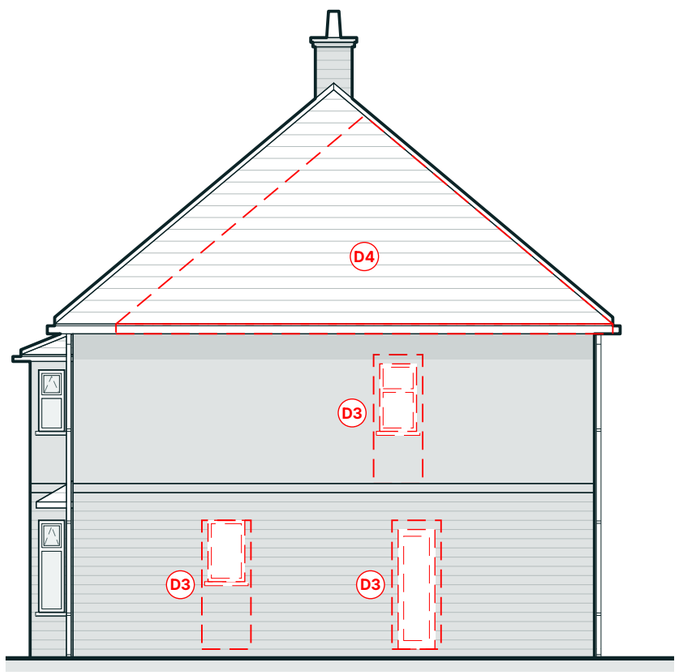
NOT TO SCALE



3 EXISTING REAR ELEVATION (NORTH)

From the garden, as it is

NOT TO SCALE



4 EXISTING SIDE ELEVATION (EAST)

The old side wall, as it is

NOT TO SCALE

WHAT COMES OUT

- **D1** The back wall opened up into the new rear extension, its window with it. A beam goes over, its end in the party wall (SK-01, note 3).
- **D2** The back part of the hall wall taken out, so the kitchen opens to the dining room. A beam goes over to carry the first floor wall above (SK-04); its back end sits on the D1 beam.
- **D3** Openings formed in the old side wall into the side extension: two on the ground floor, one on the first, where the side door and two windows are now.
- **D4** Most of the hipped end of the main roof taken off, with its back hip and the eaves and gutter along the old side wall: the back slope is carried on over the side extension (SK-05).

Every opening is formed under temporary props, to our design; the props are not shown. Lintels and beams to our calculations.

KEY

- Existing wall, staying
- Existing wall coming out
- Window or door coming out
- Existing wall, in elevation
- Coming out, in elevation
- Opening light: lines meet on the hinge side, seen from outside
- Obscure glazing
- Neighbouring house
- Boundary
- Party wall line
- Stair: arrow points up
- 1 Elevation marker

NOTES

Illustrative only: not to scale and not a design; no sizes on purpose. The proposal: SK-03 to SK-06. The rules: SK-01.

Rev	Date	Description	By
P01	27 Nov 2026	Illustrative sample	HSE

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01483 363308
House Structural Engineers is a trading name of PF & Co Holdings Ltd, registered in England and Wales, company number 16649319. Registered office: 2 Queens Drive, Guildford, GU2 9PP.

JOB	SAMPLE
PROJECT	Illustrative sample
ADDRESS	An invented house, for this sample
CLIENT	Not a real client

SKETCH — A3 LANDSCAPE

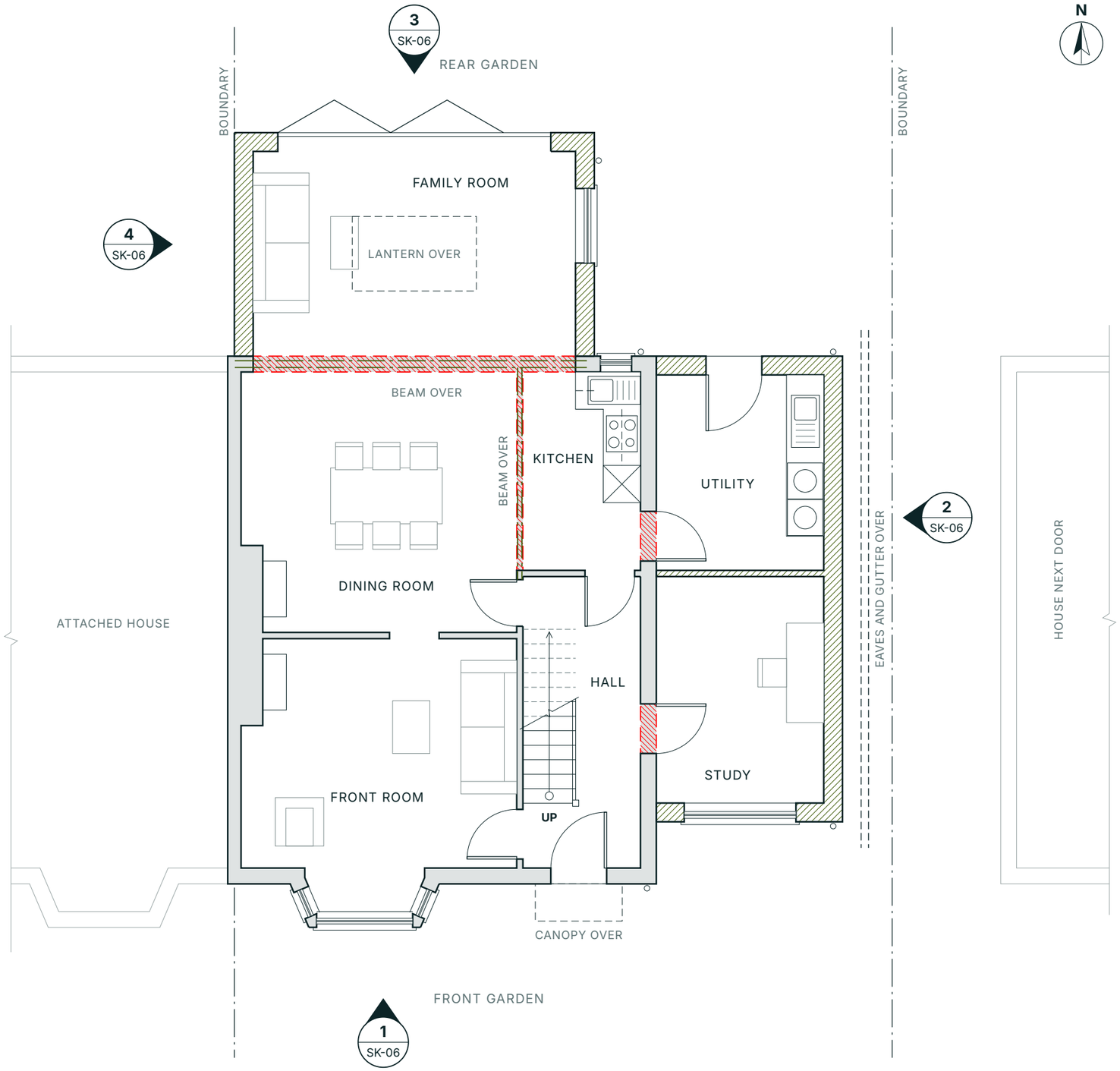
Existing plans and elevations, showing demolition

DRAWN	CHECKED	APPROVED
HSE	Sample	Not a design

SCALE AT A3	DATE
Not to scale	27 November 2026

STATUS	SUITABLE FOR
S2	Information

DRAWING NUMBER	REVISION
SK-02	P01



1 PROPOSED GROUND FLOOR PLAN

The house, both extensions and the neighbours either side

NOT TO SCALE

KEY

- Existing wall
- New wall
- Existing wall coming out
- Beam over (new)
- Over: lantern, canopy, wall units
- Eaves and gutter over
- Neighbouring house
- Boundary
- Stair: arrow points up
- Downpipe
- 1 Elevation marker

NOTES

Illustrative only: not to scale and not a design; no sizes on purpose. The architect's scheme, redrawn by us to show where our work and the rules apply.

Rules SK-01. The house as it is, and what comes out: SK-02. First floor SK-04. Roof SK-05. Elevations SK-06.

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SKETCH — A3 LANDSCAPE

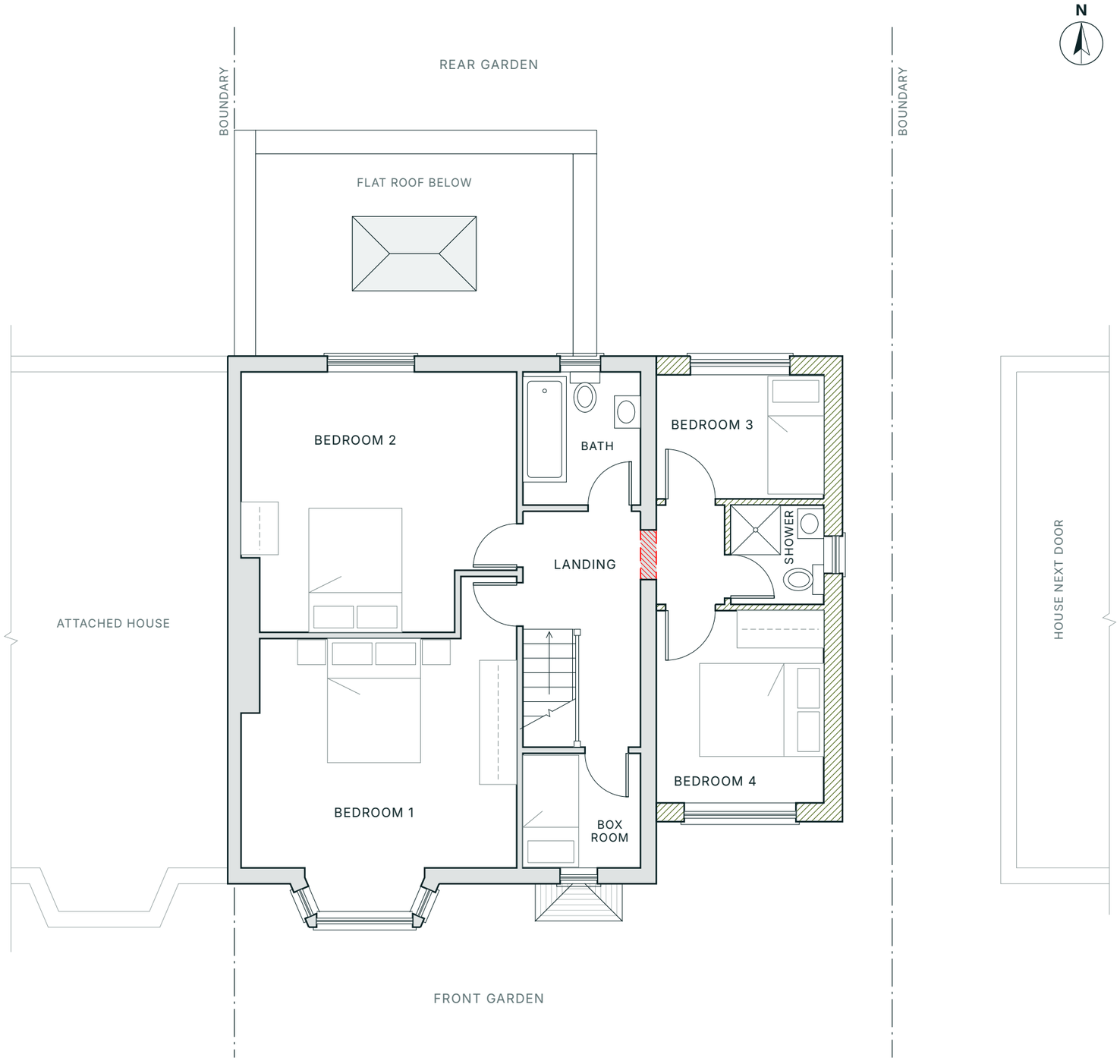
Proposed ground floor plan

DRAWN	CHECKED	APPROVED
HSE	Sample	Not a design

SCALE AT A3	DATE
Not to scale	27 November 2026

STATUS	SUITABLE FOR
S2	Information

DRAWING NUMBER	REVISION
SK-03	P01



1 PROPOSED FIRST FLOOR PLAN

The first floor, with the roofs below seen from above

NOT TO SCALE

KEY

- Existing wall
- New wall
- Existing wall coming out
- Roof below: tiles
- Roof lantern below
- Neighbouring house
- Boundary
- Stair: arrow points up

NOTES

Illustrative only: not to scale and not a design; no sizes on purpose. The architect's scheme, redrawn by us to show where our work and the rules apply.

Rules SK-01 (the side window: note 4). The house as it is: SK-02. Ground floor SK-03. Roof SK-05. Elevations SK-06.

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SKETCH — A3 LANDSCAPE

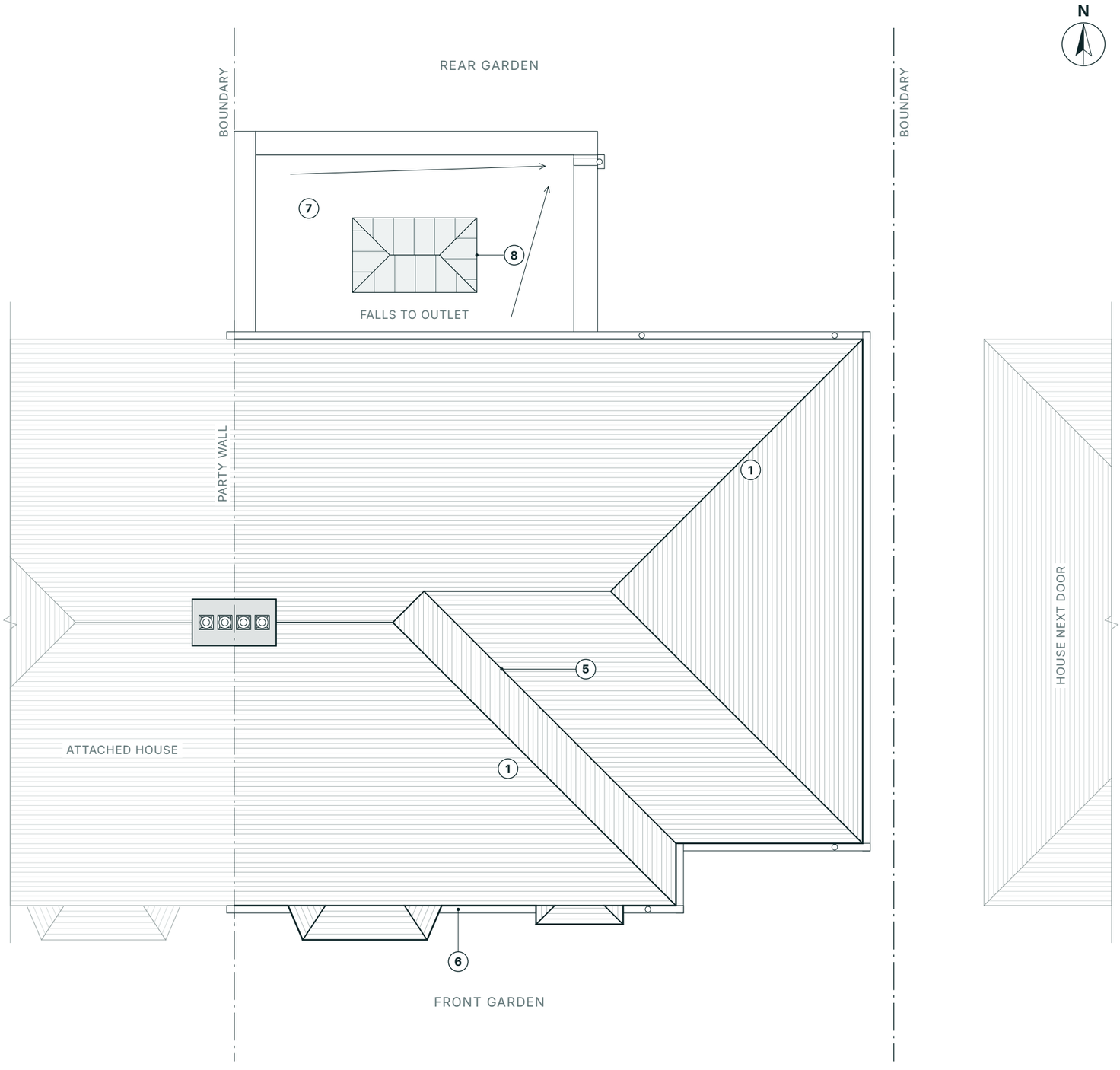
Proposed first floor plan

DRAWN	CHECKED	APPROVED
HSE	Sample	Not a design

SCALE AT A3	DATE
Not to scale	27 November 2026

STATUS	SUITABLE FOR
S2	Information

DRAWING NUMBER	REVISION
SK-04	P01



1 PROPOSED ROOF PLAN

The main roof carried on over the side extension, its ridge set down; the flat roof and lantern

NOT TO SCALE

KEY

- Pitched roof: tile courses
- Roof lantern
- Downpipe
- Fall of the flat roof
- Party wall line
- Neighbouring roof
- Boundary

MATERIALS

1. Plain clay roof tiles, to match existing
5. Lead-lined valley and flashings
6. Half-round gutters, round downpipes
7. Flat roof covering, parapet and coping
8. Roof lantern

NOTES

Illustrative only: not to scale and not a design; no sizes on purpose. The architect's scheme, redrawn by us to show where our work and the rules apply.

Plans SK-03 and SK-04. Elevations SK-06. The house as it is: SK-02.

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SKETCH — A3 LANDSCAPE

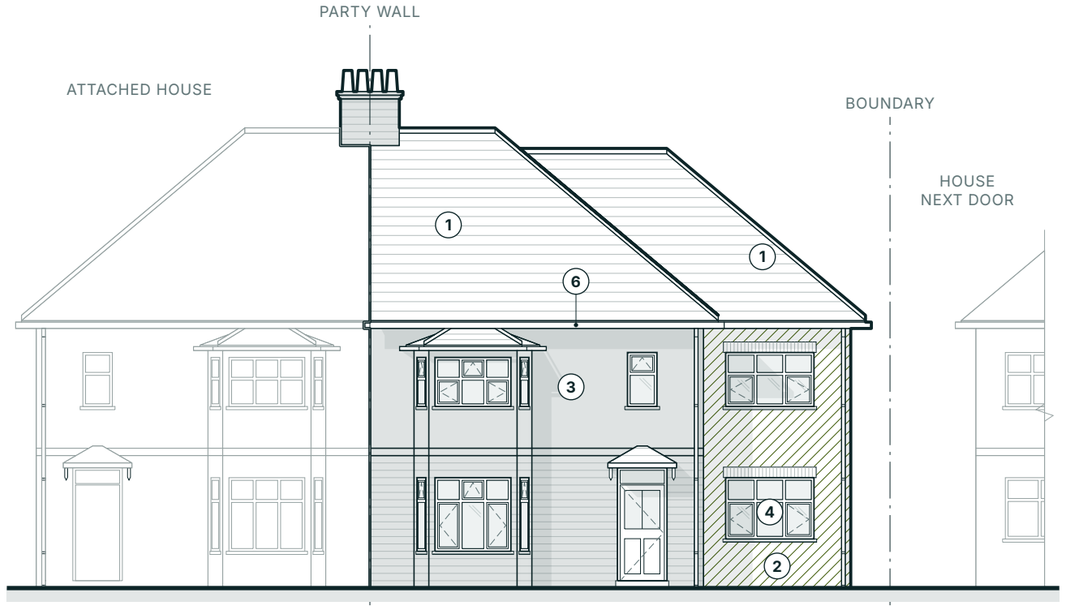
Proposed roof plan

DRAWN	CHECKED	APPROVED
HSE	Sample	Not a design

SCALE AT A3	DATE
Not to scale	27 November 2026

STATUS	SUITABLE FOR
S2	Information

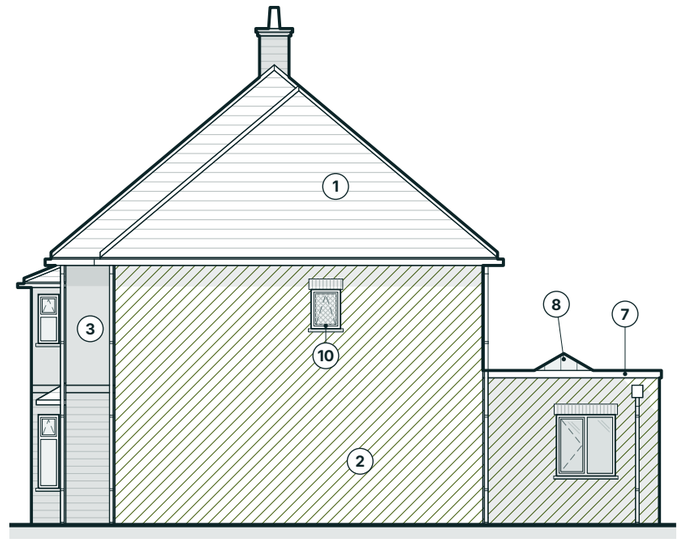
DRAWING NUMBER	REVISION
SK-05	P01



1 FRONT ELEVATION (SOUTH)

From the street

NOT TO SCALE



2 SIDE ELEVATION (EAST)

Facing the house next door

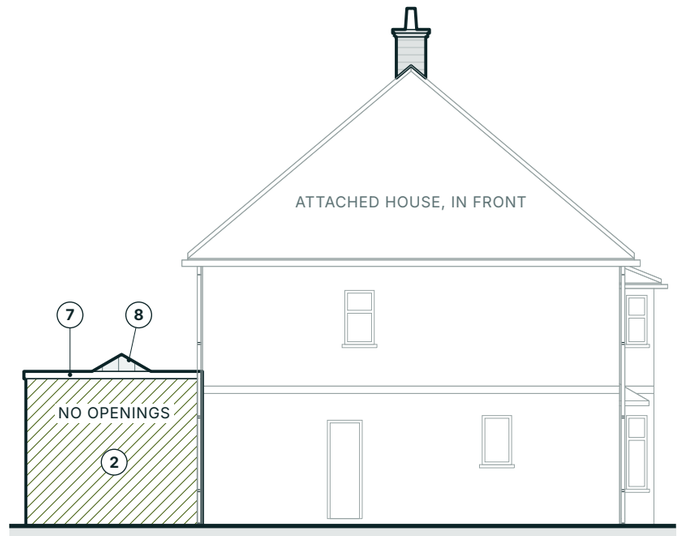
NOT TO SCALE



3 REAR ELEVATION (NORTH)

From the garden

NOT TO SCALE



4 SIDE ELEVATION (WEST)

Facing the attached house

NOT TO SCALE

MATERIALS

1. Plain clay roof tiles, to match existing
2. Facing brick, to match existing
3. Painted render, to match existing
4. Casement windows, to match existing
6. Half-round gutters, round downpipes
7. Flat roof covering, parapet and coping
8. Roof lantern
9. Glazed folding doors
10. Obscure glazing

KEY

- Existing wall
- New wall
- Opening light: lines meet on the hinge side, seen from outside
- Obscure glazing
- Neighbouring house
- Boundary
- Party wall line

NOTES

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Plans SK-03 and SK-04. Roof SK-05. The house as it is: SK-02.

The side extension's one side window is small and obscured (SK-01, note 4).

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SKETCH — A3 LANDSCAPE

Proposed elevations

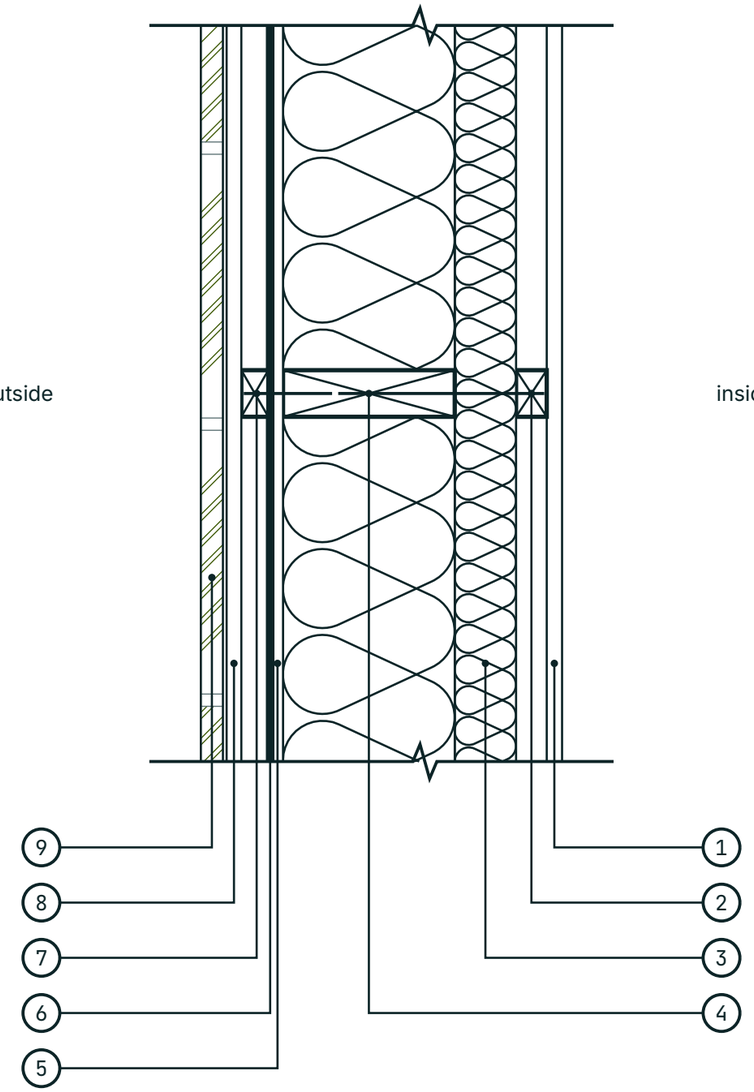
DRAWN	CHECKED	APPROVED
HSE	Sample	Not a design

SCALE AT A3	DATE
Not to scale	27 November 2026

STATUS	SUITABLE FOR
S2	Information

DRAWING NUMBER	REVISION
SK-06	P01

outside



inside

SK-07 EXTERNAL WALL - PLAN SECTION THROUGH A STUD

Option A, the side extension's external wall, on plan through a stud; outside on the left. Illustrative: not to scale, not a design, and with no sizes on it on purpose. AD B Vol 1 is Approved Document B, Volume 1; AD C is Approved Document C.

1. Fire-rated plasterboard, taped and skimmed. Within 1000 mm of the boundary the whole wall, slips to plasterboard, needs 30 minutes from each side, loadbearing, integrity and insulation, shown by a test, a design standard or an assessment (AD B Vol 1, paragraph 11.8, Table B1 item 5, Table B2; Appendix B, B1 and B2). Building Control agrees the evidence first (the report's part 4).
2. Treated service battens; cables and boxes stay in this zone.
3. Insulation board and the vapour control layer, to the architect's specification.
4. Studs: size, grade and centres to our calculations; the insulation between them to the architect's specification.
5. Sheathing board, nailed to our calculations: the frame's bracing.
6. Breather membrane (AD C, paragraph 5.17), lapped shingle fashion to its maker's instructions.
7. Treated battens, as the slip system requires: the vented, drained cavity (AD C, paragraphs 5.17 and 5.27).
8. The slip system's carrier board, fixed as its certificate.
9. Clay brick slips, bonded and pointed. One third-party certificate for the whole system; its outer surface class B-s3, d2 or better from its classification report (AD B Vol 1, paragraph 11.8 and Table 10.1).

For your architect to draw in. Not for construction: an illustrative sample.

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STRUCTURAL DRAWING — A3 LANDSCAPE

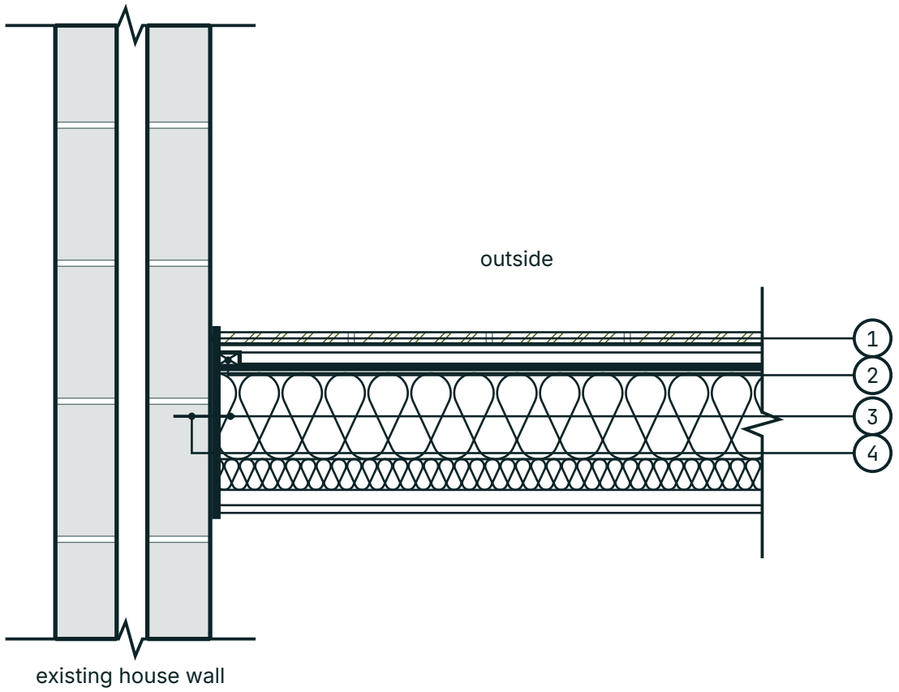
Option A external wall: plan section through a stud

DRAWN	CHECKED	APPROVED
HSE	Sample	Not a design

SCALE AT A3	DATE
Not to scale	27 November 2026

STATUS	SUITABLE FOR
S2	Information

DRAWING NUMBER	REVISION
SK-07	P01



SK-08 JUNCTION - A NEW WALL AGAINST THE HOUSE, ON PLAN

On plan; the new wall's outside is up the page. A principle for your architect and the frame supplier. Illustrative: not to scale, not a design, and with no sizes on it on purpose. AD B Vol 1 is Approved Document B, Volume 1.

1. Movement joint between the slips and the existing brick, sealant on a backing rod, with a vertical flashing or membrane lapped behind the slips to weather the junction.
2. Closing the end of the vented cavity (AD B Vol 1, paragraph 5.18(a)): a vertical cavity barrier with evidence of E 30 and I 15 from each side (5.20), such as the slip system's tested closer. AD B Vol 1 lists simple forms, such as timber at least 38 mm thick, which do not necessarily achieve that performance (5.21); we prefer a closer with its own test evidence, and agree any listed form with Building Control. It is fixed mechanically (5.22), so that the frame's shrinkage does not make it ineffective (5.23).
3. End stud fixed to the house with stainless ties in vertical slots, so the frame can shrink and settle past the brickwork; movement allowance to the frame supplier's shrinkage figure; DPC between timber and masonry. Fixings to our calculations.
4. The house's cavity wall, kept; it becomes an internal wall. Where openings are cut in it, close its cavity round each one (AD B Vol 1, paragraph 5.18(a); under Diagram 5.3 the closer needs no specific fire performance).

Not for construction: an illustrative sample.

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JOB	SAMPLE
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STRUCTURAL DRAWING — A3 LANDSCAPE

Junction: a new wall against the house

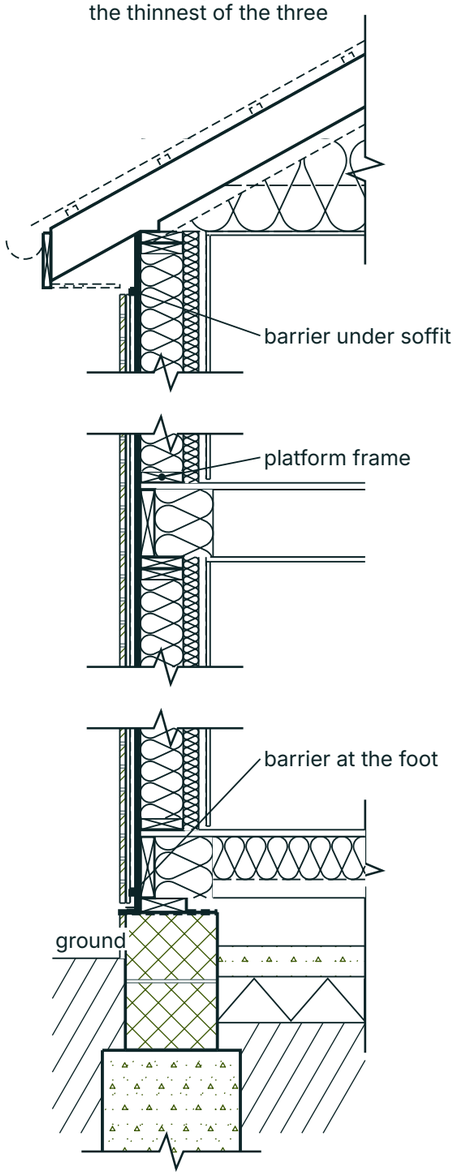
DRAWN	CHECKED	APPROVED
HSE	Sample	Not a design

SCALE AT A3	DATE
Not to scale	27 November 2026

STATUS	SUITABLE FOR
S2	Information

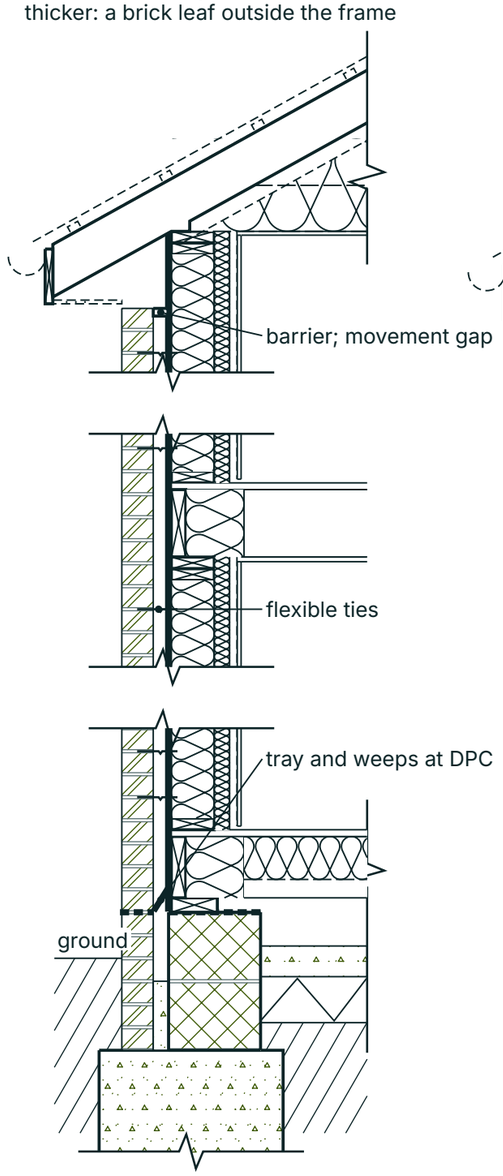
DRAWING NUMBER	REVISION
SK-08	P01

A: TIMBER FRAME, CLAY BRICK SLIPS
the thinnest of the three



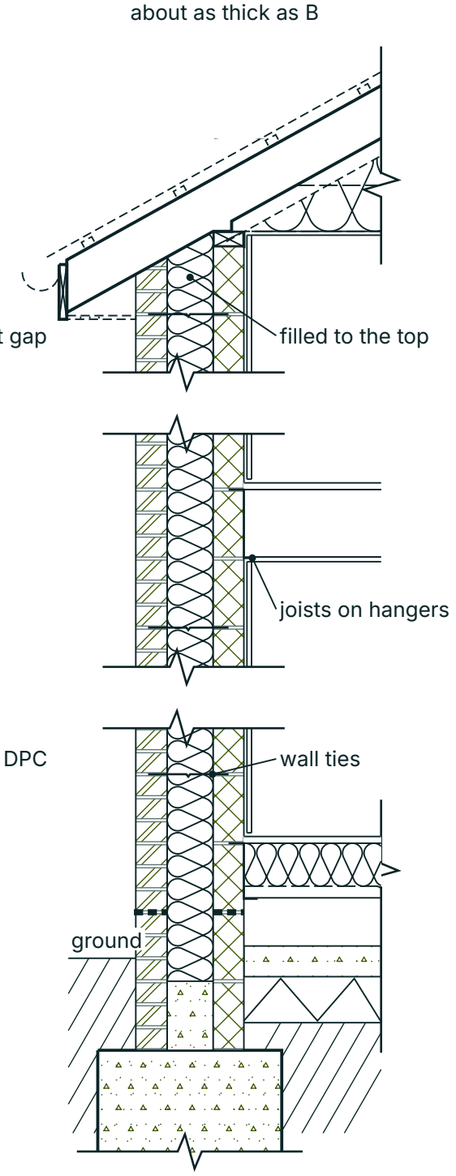
clay slips on adhesive
slip carrier board
battens: vented cavity
breather membrane
sheathing board
studs, insulation between
insulation board, joints taped
battens: service zone
plasterboard

B: TIMBER FRAME, BRICK OUTER LEAF
thicker: a brick leaf outside the frame



brick outer leaf
drained cavity, flexible ties
breather membrane
sheathing board
studs, insulation between
insulation board, joints taped
battens: service zone
plasterboard

C: BRICK AND BLOCK
about as thick as B



brick outer leaf
full-fill cavity insulation
block inner leaf
plaster dabs
plasterboard

SK-09 EXTERNAL WALL OPTIONS COMPARED - TYPICAL SECTIONS

For comparison only. Each option cut between studs from the foundation to the eaves, the storeys broken out; outside on the left. Build-ups under each section run outside to inside; insulation and vapour control to the architect's specification. Illustrative: not to scale, not a design, and with no sizes on it on purpose. AD B Vol 1 is Approved Document B, Volume 1.

A: as SK-07 and SK-08.

B: brick and frame move differently: gaps under sills, at the eaves and round services to the frame supplier's shrinkage figure; flexible ties fixed to the studs; trays and weeps at the DPC and over openings; a foundation wide enough for the brick leaf.

C: trays, weeps and DPCs; ties to the tie maker's spacing; tied to the house; beams on padstones.

Fire. A and B: cavity barriers at the edges of the cavity and round openings (AD B Vol 1, paragraph 5.18(a)), E 30 and I 15 from each side (5.20). C is two leaves of brick or concrete, each at least 75 mm thick, so Diagram 5.3 applies: close the cavity round openings, and at the top unless it is fully filled; those closers need no fire rating. All three, within 1000 mm of the boundary: REI 30 from each side for the whole wall (Table B1 item 5, Table B2), shown by a test, a design standard or an assessment (Appendix B, B1 and B2) and agreed with Building Control (the report's parts 3 and 4).

Foundations, frames, ties, lintels and beams to our calculations.

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STRUCTURAL DRAWING — A3 LANDSCAPE

External wall options compared: typical sections

DRAWN	CHECKED	APPROVED
HSE	Sample	Not a design

SCALE AT A3	DATE
Not to scale	27 November 2026

STATUS	SUITABLE FOR
S2	Information

DRAWING NUMBER	REVISION
SK-09	P01