

SINGLE STOREY HOMES



The Bungalow is Back

A staple of Britain's housing stock, single storey homes are not to be sniffed at

Think 'bungalow' and images of suburban streets lined with squat brick boxes spring to mind. The single storey home has, however, undergone somewhat of a reinvention in the 21st century. Individually designed new build bungalows are no longer box-like — the challenge of creating a home all on one storey has flexed the creative muscle of many a house designer and architect, spurring on some very inventive results (the above examples are case in point). For those tackling a project on an existing bungalow,

the appeals — typically detached and located over a large plot — are being married with clever design solutions too. The result: the bungalow is no longer boring. "The quintessential British bungalow owes its initial roots to India, first introduced in the 17th century as spacious residences and official lodgings for the British Raj. But the modern bungalow has lost none of its appeal," adds PAD Studio architect Darren Bray (who provides his guide to extending a bungalow on page 201). "It provides simple, flexible housing, lends itself to families and those looking to retire, and

offers good value for money in an ever-inflated market. Even the planning minister Brandon Lewis has promoted the bungalow as one solution to future housing in the UK. This is why us architects see potential opportunities to extend and stamp our mark on these British gems." So what are the benefits of living in a single storey home? Well let's start with ridge height: a bungalow can be one means of gaining planning for a new home in an area where a two storey home would otherwise be rejected. "A planning restriction imposing a single storey ridge height — typi-

cal on infill plots and other sensitive areas where impact needs to be constrained — is often viewed as an obstacle," says HB&R's Content Director, Michael Holmes. "But it can be an opportunity. With clever design a bungalow can be anything but boring, and a height restriction need not be a significant limit on volume." Another obvious benefit is accessibility. A single storey house should be a home for life, without requiring substantial work, or without an entire floor being made redundant. This is particularly true if a bungalow is built in accordance with the Lifetime Homes standard (a set of 16 design criteria for creating an accessible home). The possibility of accessing the garden from every key room, including bedrooms, is another enviable opportunity. **Design Considerations** Single storey homes do bring a unique set of challenges however, and the floorplan does, arguably, have to work much harder than that of the multi storey home. For starters, separating the living areas from the sleeping quarters is one issue. It goes without saying that, within a typical two storey build, the latter spaces are arranged on separate levels.

This physical separation has a psychological impact: the staircase becomes a transition space, which defines the bedrooms from the living areas. It also acts as a physical barrier between those more private spaces and areas designated for guests. (This is perhaps why the dormer bungalow is so popular; providing all the benefits of a single storey home, with the addition of a separate sanctuary tucked under the eaves.) So how do you separate these areas? It could be as simple as arranging the living areas at the back, with bedrooms to the front and a spacious entrance hall in-between, or an L-shaped layout with defined wings dedicated to each. But it does need thought. "Another key to successful single storey house design is to ensure efficient circulation and flow without wasting too much space, and to make the most of natural light — both are easier to achieve with a more open plan layout," adds Michael Holmes. Introducing daylight can be a particular challenge, too. How do you avoid a deep floorplan whereby rooms at the centre are starved of natural light? Fortunately, good design has again come to the fore here. L-shaped designs, courtyard arrangements, staggered and elongated floorplans

Single Storey Success **1:** An elongated floorplan draws influence from agricultural forms and allows principal rooms to take advantage of the views, by Simon Winstanley Architects; **2:** A single storey home self-built for under £100k; **3:** A low-profile home in Skye, by Dual-chas Architects, nestles into the landscape; **4:** A timber frame bungalow by Anderson Orr; **5:** This York self-build lies low among neighbours, and maintains privacy thanks to its inward-looking courtyard have provided a successful means of taking advantage of daylight. While rooflights, glazed links and sunpipes are welcome allies for those introducing light from above in existing and new build bungalows alike. "Opportunities to have vaulted ceilings and rooflights throughout the main living areas, creating spacious, light-filled interiors is a real attraction for those seeking a single storey home," adds Michael Holmes. "It is also important to have a clear vision for the building's style and form, and there are many options to consider." Turn overleaf for Michael's guide to getting this right. ➔

IMAGE: ANDREW LEE

CLOCKWISE FROM TOP LEFT: JOHN COCHRANE, ANDREW LEE, DARRIN CHUNG, JEREMY PHILLIPS

Extending a Bungalow: The Designer's Guide

Extending a single storey home is not without its challenges. Step in architect Darren Bray, who shares his words of wisdom



IMAGES: C/O PAD STUDIO



DARREN BRAY
Architect Darren is Associate Director of award-winning PAD Studio and a visiting tutor to Portsmouth School of Architecture

As traditional building stock go, bungalows do not perhaps lend themselves so readily to being extended as compared with their two storey counterparts. There are some particular design challenges to address prior to taking on such a project: for instance, how do you deal with and extend a low roofline, potential reduction in natural daylight from a deeper plan, and importantly, how do you achieve appropriate massing? These issues can seem daunting, but can be overcome with clear, simple, creative devices which can unlock potential.

Extending the Roofline

One of the largest challenges faced is how to extend the roofline. The flat roof is one of the simplest solutions, but it needs to be handled carefully so that it does not look out of context. The most successful way in which a new flat roof element can be added is as a stand-alone element, with the new roof slid under the existing eaves. The flat roof can be a simple single form with a very small parapet that drops down at the eaves junction to allow for rainwater outlets.

It is also possible to join a new flat roof at the same level as the existing eaves, but this can be difficult to achieve structurally and the join inevitably looks awkward. What's more, inserting such an element as a self-supporting structure simplifies the requirement for support within the existing building, therefore removing or lessening any further structural implications.

Flat roofs don't have to be the only type employed. Mono-pitch roofs can be used to fall toward the existing eaves of a bungalow and can also prove a benefit in increasing the area of glazing. Ideally these will sit ➤

A New Addition

The owners of this bungalow in rural Hampshire were keen to replace an existing PVCu conservatory with an extension which would provide a better relationship with the garden. PAD Studio's response was for the removal of the rear wall – and its tiny windows – and for the addition of a pavilion-style extension, with the flat roof ensuring this new element maintained a low profile, subservient to the main house. Large sliding doors and modern bay and corner windows have been incorporated into the south-west-facing extension to bring in natural light, maximise solar gain and to take in the views

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SINGLE STOREY HOMES EXTENDING A BUNGALOW

independently of the existing bungalow roof and have a distinct and different roof pitch — this way they're seen as a new form rather than trying to fit with what's already there.

Joining the New with the Existing

One key consideration is how the new addition should be joined with the old — and this is both a structural and aesthetic issue. To begin, if the new extension is designed to enlarge an existing space, perhaps creating an open plan kitchen/dining area, then attention needs to be given to how this large opening between new and old will be supported. In a project which PAD Studio worked on (page 201), once the rear wall was removed, a new structural steel beam was introduced to support the edge of the existing roof. This not only supported the roof but also took the ends of the new flat roof joists which had been introduced. Whatever the solution, a structural engineer should be consulted early on in the proceedings.

There are a number of 'creative stitches' that architects rely on too in our quest for joining the present to the past. These include secret gutters, rooflights, flat roofs and glazed links; they all act as the structural glue that sticks these two forms together.

The secret gutter can be an extension of the flat roof essentially, but it may be at a lower level, formed in timber and covered with a waterproof membrane. The gutter can be set just below the existing roof eaves line of the bungalow, to take the rainwater from the main roof as well as the new flat roof.

Construction

This also leads on to a question regarding construction. On the very same project, we decided early in the process that our new addition would be timber frame, for both walls and roof. This gives many advantages: you have one trade to build the structure, it's lightweight, provides a quick, dry construction, and it's easy to adapt.

The foundation for any such extension should be straightforward, depending on ground conditions, when using timber frame; typically a simple cast in-situ concrete raft slab can be employed. This has the advantage of being independent from the existing bungalow, and is ideal as it removes issues with applying further loads to existing foundations.

Introducing Natural Light

Incorporating large doors and windows are obvious ways of introducing daylight, but



rooflights should also be considered, particularly those at the junction between the existing property and the extension — they work wonders in blurring the connection between old and new.

If you're considering a rooflight between the old and new structure, then it's generally easier to add this into a new flat roof. This is straightforward with timber frame and can be incorporated into the new timber joist structure. If you choose to employ a glazed link, then one successful solution is to potentially use a very thin structural glazing system that can be supported by thin steel channels, inserted into existing masonry and bolted to the existing structure.

Material Matters

It's critical when you are looking to extend a bungalow that you consider the impact additional floor space will have on the existing environment and the overall massing of the house. We may still use our rolls of tracing paper at PAD Studio at concept stage, but once we get into the process of creating the detail, we always model our projects at an early stage. This allows us to test whether an idea will work, its massing and if it sits in its context; it's a very useful tool.

Consider the choice of materials to any new addition carefully, too. There is nothing worse than trying to match existing materials like brickwork and not quite achieving a successful match. It is far better to have a natural break when joining elements, either in materials or via a glazed element. Indeed, when taking on such projects, remember you are adding something of the 21st century — make sure you celebrate that fact.

The humble bungalow must be handled with care. It's been around since the 17th century and will continue to be part of our housing stock for many centuries to come. **H**

A Contemporary Replacement

The brief the owners of this 1980s bungalow presented Jonathan Dale and colleague Rob Harwood of Jane Duncan Architects with, was threefold: they wanted a space which would serve as a family room; a boot room; and finally room to incorporate a small swimming pool. They also wanted to maximise views from the master bedroom too. And so, a dated conservatory — "which was too cold in the winter, and too hot in the winter," as architect Jonathan Dale describes — made way for a striking new addition. The render and glazed extension has not only provided plentiful space, but its modernist flat roof doubles as a show-stopping terrace for the master suite to enjoy. Steel frame was the construction system of choice, allowing for the large spans of glazing to be achieved. Rendered blockwork finishes the build

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