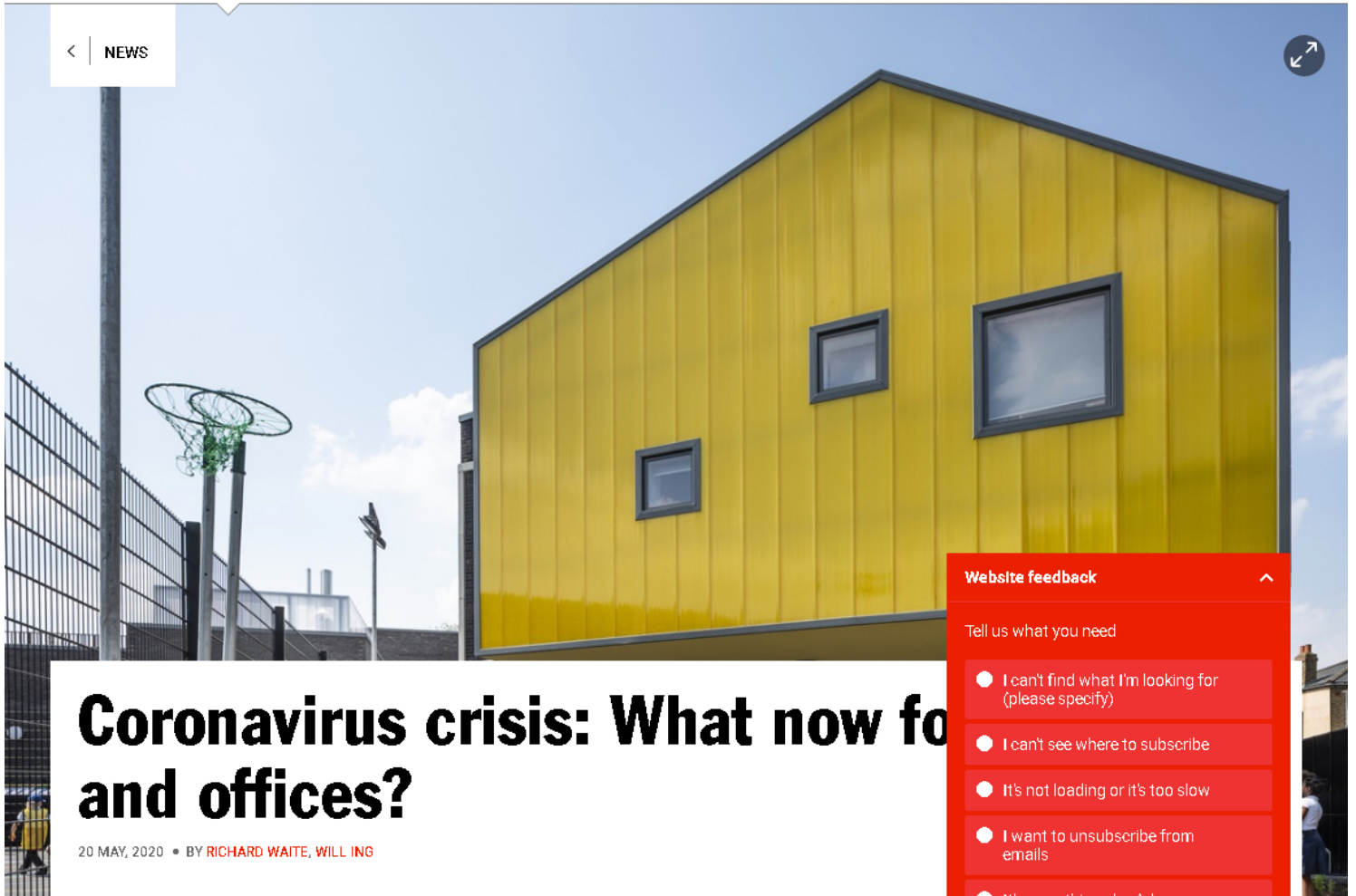# AJ Architects' Journal

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Coronavirus crisis: What now fo and offices?

20 MAY, 2020 • BY RICHARD WAITE, WILL ING

COMMENT

The prime minister has announced he wants to 're-open society' and release schoolchildren and those unable to work remotely from their enforced Covid-19 lockdown. How will design play a part in allowing a phased return for employees and pupils, and what are the longer-term implications?

Over the coming weeks, the AJ will be looking at how the coronavirus crisis is impacting on the design of every major sector in which architects are involved – from homes and hospitals to city planning.

However, the first phase of the government's plan to ease the 'stay-at-home' lockdown restrictions has implications for two of these sectors in particular: schools and offices. Most have been closed since mid-March and returning to 'business as usual' will not be quick (even if it is still desirable). Trying to maintain social distancing – which the government insists must remain in place – will certainly cause some head-

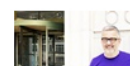**Emerging practice offers free concept design in inverted contest**

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scratching.

The challenges are clearly different for schools and for offices. Measures needed to try to enforce social distancing and stringent hygiene practices or controls for inquisitive, roaming young children are not the same as those required for a commuter travelling to central Manchester or London's Square Mile.

The former includes immediate questions of what is appropriate in terms of safety – at least 18 local authorities are refusing to reopen their schools on 1 June – combined with the short-term complexities of altering timetables to stagger school use.
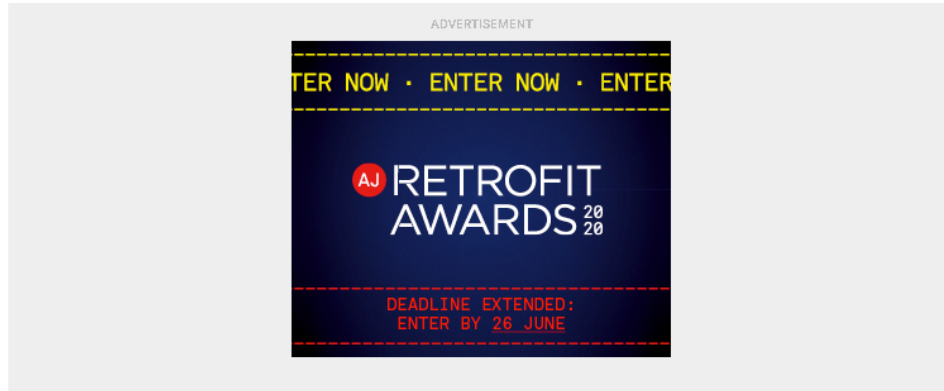
For the latter, meanwhile, there are bigger, existential issues at play. Will companies still look to have large, centralised offices and workplaces now that home working has been shown to be effective? Will we see a return to office layouts that are more closed and compartmentalised than those to which we have become accustomed?

We talk to education and commercial experts to unpick the potential issues for both sectors and, in turn, the profession.

Schools

First steps

The government's guidelines for schools on managing a phased, post-lockdown return of pupils are, if not fully comprehensive, surprisingly in-depth and wide-ranging.

A central plank is to minimise 'contact and mixing'. This, the government says, will be achieved by both changing school environments – potentially a design issue, involving classroom layout and the innovative use of other spaces – and by rethinking the daily timetable. Headteachers are being asked to stagger break times, as well as the times that children start and leave school, to reduce the numbers of pupils moving at the same time.

In terms of layout, the new guidance states that children should always be 2m apart when in the classroom, and the usual classes halved in size. They should also be kept together in 'bubbles' (with their teacher) throughout the day. This would be made possible by keeping the numbers of children down through a phased return, starting on 1 June. In primary schools, only nursery pupils and those in Reception (aged 4-5), Year 1 (aged 5-6) and Year 6 (aged 10-11) would go back initially.

This and many of the other proposals outlined in the government document *Coronavirus (Covid-19): Implementing Protective Measures in Education and Childcare Settings* (*see key points*) had already been predicted by architects before they were officially announced earlier this month (AJ 11.05.20 'Coronavirus: Can primary schools adapt to a post-lockdown world?').

Helen Roberts, a partner at Feilden Clegg Bradley Studios, forecast that a gradual return with fewer pupils in school would be a sensible first step and 'not so difficult to implement'. Before the protective measures were announced she said: 'It may require one class to be spread over two rooms, or for children to take it in turns to come to school for a morning or an afternoon. And a building that is not fully occupied with other

years will afford at least some short-term spatial planning opportunities – staff availability and numbers allowing, of course.'

Philip Marsh, co-founder of dRMM, whose team has been working on the soon-to-complete Wintringham Primary Academy in St Neots, Cambridgeshire, agrees: 'Although there are issues and concerns with schools returning, it makes sense to start the process and to have a gradual transition that can be implemented and then expanded as additional years return.'

However, serious concerns about the strategy persist. First and foremost, this is about the welfare of pupils, their families and school staff – and, related to that, is how to provide enough space to cope with social distancing. This is going to be felt particularly acutely when the whole school is back.

Sue Emms, a principal at BDP, thinks schools will have to be creative to solve this issue, given there will be little likelihood of them reducing density levels by adding extra space. She says: 'Additional space could be provided by "bolt-on" modular temporary classrooms but, given the amount required, is this really a feasible solution for all schools across the country?'

She suggests 'more radical opportunities' should be considered, for example using or repurposing other underused spaces in local communities. She adds: '[Could] the infant section of a primary school move and be set up in community centres, public libraries, village halls, leisure centres or places of worship? This too will have challenges and will need careful thought to resolve WC provision, safeguarding issues and external play space.'

Tom Coward, a director and co-founder of AOC Architecture, as well as father of two and the husband of a primary school deputy head, agrees that 'bolt-on' classrooms are unfeasible. He says: 'To reduce infection risk, schools need to reduce density and there is no space or money to double the space standards currently afforded [in the] short term, or likely [in the] long term.

'So what are the options for a London primary school on a tight site? Initial thoughts are about continuing to use the new infrastructure just gained – the virtual classroom. In a pupil-centred learning culture, there is much to be gained in continuing to use tailored home learning for some of the curriculum.'

Kingswood Prep

Solutions – looking beyond tomorrow

The 'protective measures' outlined in the guidance say schools should be looking to teach children outside

more often. Even so, Marsh thinks the government could be pushing harder for a 'forest school' approach.

Tom Waddicor, an associate at Maccreanor Lavington Architects, agrees. He believes playgrounds and exterior space will become 'ever more valuable in schools' and sees this as an opportunity 'for a new wave of innovative outdoor classrooms'. He says: 'If this becomes the summer of the outdoor classroom, shade may be more important than staying dry. It might be time the Australian covered outdoor learning area (COLA) enters the lexicon of UK schools – and that would be no bad thing in my opinion.'

Meanwhile, Curl La Tourelle Head Architecture, having seen makeshift tents being used in Denmark, has come up with a concept idea for new pop-up classrooms 'using marquees and portable bathroom facilities from outdoor festivals that would otherwise be dormant during the current pandemic'.

Curl La Tourelle Head Architecture's plans to use tents to house classrooms outside

The practice claims these could be set up on playgrounds, football pitches and pedestrianised areas, and even in parks that neighbour schools.

Should Covid-19 or similar virus threats persist, much longer-term implications for school design include: minimising the number of doors, thereby reducing the touching of door handles; distributing lockers throughout the school, and even outdoors; and taking lessons from the hospital sector to select materials and surfaces that are easier to clean or are otherwise resistant to bacteria and viruses.

Is it all just too soon?

For some architects, however – and, indeed, for the teaching unions – the government's back-to-school plans have simply come too early and do not sufficiently protect either the children or the staff.

Chris Boyce of Assorted Skills + Talents, who has worked on more than 40 schools during his career says: 'The only way to beat this virus is not to go back to school and for human contact to be minimised for all of us. We have to get the R rate down to 0.1/0.2 or less.

'The virus needs us – without a host, it dies after only a matter of days. But can we do this with a government set on ensuring we put the most-mobile and least-hygienic group of humans – children – back into the classroom?' He adds that the three primary school years selected to return include the children who are 'the hardest to manage and predict', as well as 'the least-affected upper years'.

Boyce says: 'Kids are not predictable and, from my experience over the years (and as a father of five), this issue won't just be spatial – distancing in class will be impossible to deal with for most schools, as the [National Union of Teachers] has stated already. We just can't rush this, and children really don't need to be in school now anyway.'

Jude Harris, director at Jestico + Whiles, is also sceptical: 'There remains the real risk that parents will vote with their feet, particularly those with children from different year groups, and the anticipated "half-size" classes may not need to accommodate as many pupils as is being suggested.

'The focus should be on how schools can adapt to continue providing an effective learning environment for children, which may need to be shared between home and school for some time yet. Schools need time to plan for this eventuality from September onwards, and how they can provide this dual offer.' *RW*
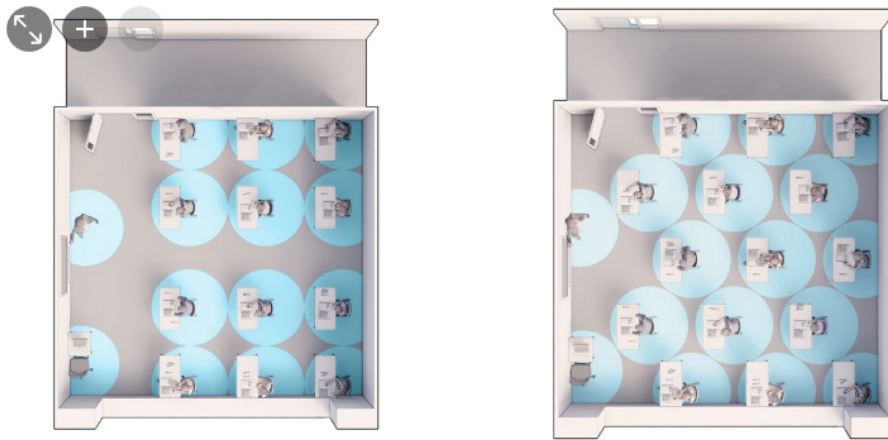
Proposed classroom layouts by Jestico+Whiles: distanced classroom layout12 pupils / 55m² classroom (left); distanced classroom layout 15 pupils / 55m² classroom (right)

Government's post-lockdown 'protective measures for education'

> Classes should have no more than 15 children per group with one teacher – and they should stay in this 'pod' all day

> Classrooms should be organised to maintain 'space between seats and desks where possible' keeping pupils 2m away from each other

> Where this is not possible – for example, for early-years and primary-age children, schools should 'work through a hierarchy of measures' including frequent hand cleaning and good respiratory hygiene practices

> Schools should consider one-way circulation or dividers in the middle of corridors to keep groups apart. Lessons, breaks and lunch times should be staggered so 'all children are not moving around the school at the same time'

> Timetables should be revised so assemblies, drop-off and collection are also staggered and organised to minimise adult-to-adult contact – 'parents cannot gather at entrance gates or doors'

> Unnecessary items, such as soft furnishings and toys, should be removed from rooms

> Unnecessary travel on buses, coaches or public transport should be reduced where possible

Offices

First steps

Offices have now been closed for almost two months and, while the government has begun easing its lockdown, most office workers have much more time working from home ahead of them.

While there are reports of a 'significant recession' upon us, the government's recently published guide, *Working Safely during Covid-19 in Offices and Contact Centres*, is clear: 'Everyone should work from home,

unless they cannot work from home'. Government is expected to change this advice to allow the phased return of office workers at some point, but the relative success of home working means this comes towards the bottom of a long list of other priorities for easing lockdown.

However, the 32-page guide still provides a valuable taste of what working in an office in the later stages of the pandemic could look like. It will be useful, too, for the handful of architecture staff, such as model makers, who genuinely cannot work from home and have already returned to the office.

The key takeaway is that social distancing of 2m is to be followed 'wherever possible'. The addition of those two words is an acknowledgment that it will be tricky for these rules to apply at building entrances, stairs and lifts. But desks, the guide says, should be surrounded by tape indicating a 2m distance, while signage should indicate one-way passages around the buildings.

The government guide is a challenge to the increasingly high-density office space most of us are used to. Arjun Kaicker, the co-head of analytics and insights at Zaha Hadid Architects (ZHA), points out that the average density of offices is just $9.6m^2$ per person, having fallen almost 20 per cent over the last decade from $11.8m^2$ in 2009, according to statistics from the British Council for Offices. And it is mathematically impossible to maintain 2m distancing per person with anything less than around $14m^2$.

'Typical open offices may need to reduce the amount of staff on a floor by 30-50 per cent to physically accommodate social distancing,' he says. 'This may be accommodated by leaving every other desk empty, including leaving empty desks closest to the main corridors, and creating one-way, single-file circulation. In the longer term, organisations may need to completely replan their space with larger desks and wider corridors.'

It is highly probable that when homeworkers do return to offices, it will be in stages or groups; the government guidance already suggests staggering work times to reduce congestion during rush-hour windows, given particular concerns about mass commuting on public transport.

Helen Berresford, head of interior design at Sheppard Robson, says she is working with 'numerous major occupiers' about what a return to the office could look like. '[We] have found that the occupancy rate will be around 20 per cent when initially returning to the office – this will be the baseline upon which working-from-home strategies, shift working and operational changes can be established.'

Designing offices for a pandemic

With hundreds of commercial schemes on the drawing board nationwide, architects do not have long to think about what a post-pandemic office looks like.

'I've been asked by our client on an ongoing commercial office project in the City of London if we could look at ideas for post-pandemic office designs,' says Brandon Buck, associate principal for corporate and commercial at Perkins & Will.

'This particular client is asking us to specifically consider the implications of social distancing on the design to minimise the spread of the virus – whether that be less hot desking or fewer open-plan spaces.'

An obvious starting point for post-pandemic offices is touch-free technology. According to Kay Sargent, global director of workplace at HOK, 'companies are starting to realise that they will have to implement artificial intelligence and ambient-technology solutions to reduce the number of touchpoints in work environments and create autonomous, hands-free office spaces.

'These solutions – previously seen as a luxury – will become essential requirements of the modern workplace as the cost of implementing technologically enabled, hands-free solutions is minimal compared with the price of having to shut down a business due to contamination,' she explains.

Workplace design experts ThirdWay's Hybrid Working concept: suggested practical measures included social distancing marking, technology assessments, on-site adaptations, furniture removal, temporary signage for one-way systems and lift protocols

Ventilation is another area to which developers should give more thought. Dominic Bettison, a director at WilkinsonEyre, says there is likely to be 'an increasing emphasis on designing ventilation systems that use higher quantities of fresh air'. He adds that underfloor air supply, which actively pulls pollutants up and away for extraction, is likely to become popular with the more speculative office developments in the future.

Designing for social distancing is tougher, though, as nobody is quite sure how offices will be occupied in the future. 'My hope is that a vaccine will be developed that will allow for high-density offices to thrive again,' says Buck. 'We all miss going to the office and interacting with our colleagues. Collaboration is a key part of architectural design – and other fields, too.'

Michael Squire, founder of Squire & Partners, goes further, claiming that the notion of a post-pandemic office design is folly: 'There is a presumption that people's habits of a lifetime are going to change on account of a virus, which is unlikely to be with us for more than a maximum of two years.

'The last pandemic to affect the world on this scale was over 100 years ago,' he adds. 'I don't think, after proper reflection, people will be changing the design of buildings to cope with the next pandemic.'

Buck's solution is to look at how offices can be designed for a 'normal' open-plan mode that encourages interaction, but also have the ability to 'rapidly reconfigure during a pandemic to allow for distinct workspaces and circulation routes.'

Longer-term impacts – will offices even be needed?

It is unclear when or whether offices will be able to bustle at their full, super-dense capacity again. It is also uncertain whether businesses and employees even want to go back to the old model of working. Lockdown has prompted what ZHA's Kaicker calls an 'enormous global experiment in home working'.

'People have found online working relatively good,' remarks David Weatherhead, a London-based design principal at HOK. 'We always knew the tech was there but, actually, it works.'

As a return to offices is phased and the near-term future for office workers is likely to involve a combination of home and office working, this could be the longer-term outlook too.

'[More homeworking] could level the playing field for people with young families or elder relatives to care for, and staff with disabilities,' says Kaicker. 'It could also improve satisfaction and productivity among those staff members whose natural work style or personality better suit home working.'

Businesses will then be able to choose between having lower-density office spaces or downsizing to reduce the cost of rent – either way, the purpose of an office will subtly change.

Harry Badham, UK-based local head of development at AXA IM Real Assets – the investment manager behind skyscrapers such as PLP Architecture's 22 Bishopsgate – says offices will become 'an agora rather than a workhouse'. He says: 'The core, city-centre office will continue to become smaller but more valuable, as it functions primarily as a place for meeting and collaboration, a centralised forum for clients and customers.'

Tim Gledstone, partner at Squire & Partners, agrees: 'Offices will become clubhouses for organisations rather than places for desk-based work. People will only travel to do what they're not able to do at home. A visit to the office will be a chance for a more-immersive brand experience – dwell time and tempo will be different: more relaxed, social, collaborative and enjoyable.'

In the view of Berresford from Sheppard Robson, this change is probably more of an 'accelerated evolution' than a revolution in office design, as 'workplace values that were evident before the pandemic [are] more quickly embraced'.

Although the pandemic throws up a number of immediate and more long-term design quandaries, the biggest impact for architects and developers working on offices will likely be the economic fall-out. Fewer clients wanting to commit to office projects means less work for the profession.

'I'm genuinely concerned about office occupiers having had long-term damage done to themselves, because that is not great for the demand side,' says Basil Demeroutis, founder and managing partner of

developer FORE Partnership. 'I don't think there is a way to sugar-coat that – that is bad news for the industry. But these kinds of things are good, so far as they push innovation.' *WI*

The government's guide to 'Working safely during Covid-19 in offices and contact centres'

> Everyone should work from home unless they cannot do so (this is likely to be eased at a later date)

> Everyone must maintain social distancing in the workplace, wherever possible

> Firms should stagger arrival and departure times at work to reduce crowding into and out of the workplace

> Non-essential movement around buildings should be discouraged, for example by restricting access to some areas

> One-way flows should be implemented, similar to those used in supermarkets

> Maximum occupancy for lifts should be reduced and clearly marked with tape. Hand sanitiser should also be provided for lift users, and use of stairs encouraged

> Floor tape or paint should be used to mark areas to help workers keep a 2m distance

> Businesses should avoid hot desking but, where this is not possible, workstations and equipment must be cleaned between use by different staff

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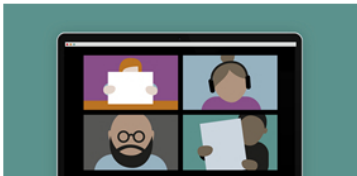PDF, SIZE 2.7 MB

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