# techUK data centre programme

## COVID-19: Overview of footfall and transport patterns

## Summary for DCMS, April 2020

*techUK is committed to working with members and non-members as we seek to support the entire sector throughout the COVID-19 pandemic via informed engagement with Government. We are publishing this content openly in order to facilitate that engagement and in the spirit of collaboration across the sector. Based on feedback from the sector we will continue to refine this material, which should not be regarded as definitive.*

### Summary

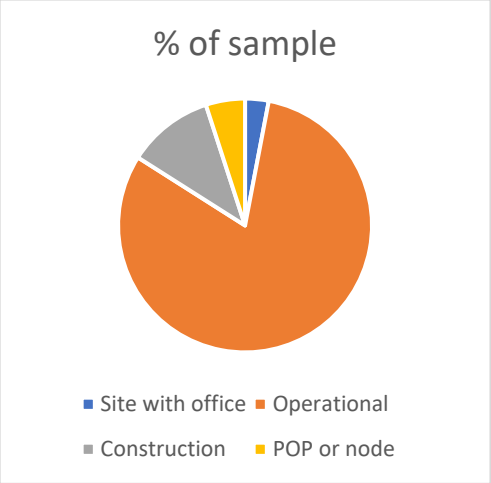
The daily footfall to a site is the number of people accessing that site, whether employees, contractors or customers. We collated footfall data from operators and collected observations on staff travel patterns across the sector. Numbers vary by site function, by stage of development and by business model. Footfall to operational data centres is relatively low, averaging around 30 a day under normal conditions, and operators are further reducing this in response to COVID-19 by restricting customer access and limiting activity to essential tasks. Footfall required for critical running of operational sites is very low, at around 11, but it is unlikely that this can be sustained long term without increasing the risk of outages or operational failures of some kind. These figures do not include disaster recovery (DR) scenarios where large numbers of staff may need to be mustered at short notice.

On construction sites daily average footfall was significantly higher, at nearly 200. Sites that incorporated offices or that were on office campuses had the highest footfall, but also the greatest capacity for reduction.

Only a minority of people travelling to data centres do so by public transport but again this varies by role, by type of site and by location. The percentage using public transport is further reducing as operators are providing additional private transport for employees to limit routes for infection, and this is reflected in the numbers.

### Sample

Our sample comprised mainly operational sites, which made up 81% of the dataset, followed by construction sites at 11%. Points of presence – POPs – comprised 5% and sites incorporating offices within DC premises (or vice versa) made up 3%. Within these categories there is considerable variation. Operational sites range from colocation to enterprise. Construction sites include early stage projects with low footfall to final fit out and also vary significantly in scale. POPs are connection nodes and may be housed within larger data centres or near to internet exchange points. We would not usually class POPs as data centres in their own right but some are operated independently and have a dedicated footfall.

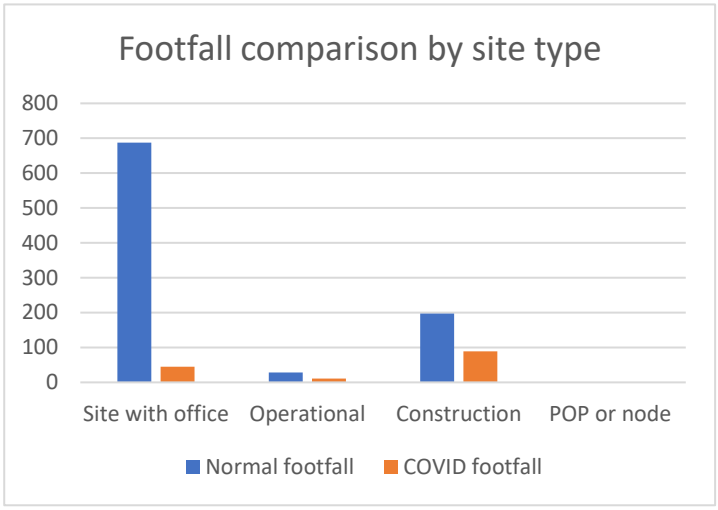


**Footfall comparison by type of site**

Sites with offices reported the highest footfall, averaging over 600, although the sample was very small, and there was wide variation, most likely because some sites were data centres that accommodated business management and administrative functions (footfall around 100) and others were data centres that were part of much larger office premises with footfall over 1000.

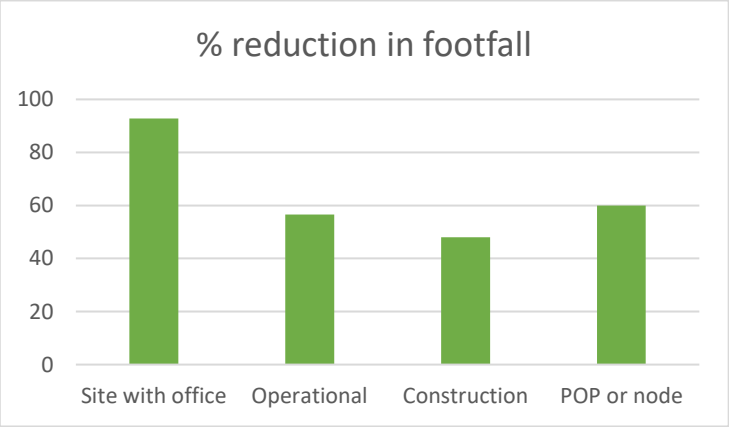
Construction sites had the next highest footfall at 197 on average, which is again to be expected because of the large construction teams needed for these complex projects. Again there was a lot of variation from 10 for an early stage project to over 200 on larger sites approaching completion. The sample also included different size projects.

Operational site footfall is relatively, but again the same pattern of variation is present. The largest sites, with multiple customers, have daily footfall well into the hundreds. Enterprise sites are likely to report lower numbers because the data centre is dedicated to a single operator rather than accommodating multiple customers. The smallest sites and POPs are often managed remotely much of the time. There was a high level of reporting from smaller sites which may push average numbers down slightly, but not by more than a few units.




Operators were also asked for current or planned footfall under the COVID regime. Sites with offices showed the largest reduction at 93% on average, leaving only 7% of the normal daily footfall frequenting site. Moreover, the figures were consistent across the board.

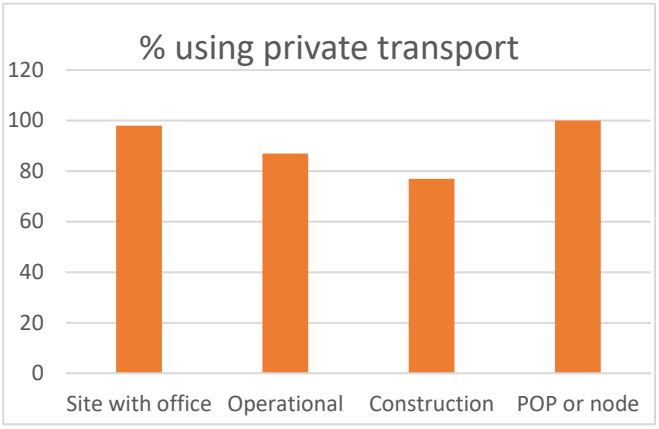
Within the operational sites and POPs the reduction in traffic varied between 30% and 70% and averaged 57%. We expected, and saw, higher drop off in retail colocation sites as restrictions on customer access were being introduced. One caveat: in some cases it was not entirely clear whether the COVID footfall represented what operators were already doing or what could be done.




The most interesting figures relate to construction sites where the average reduction in staff was 48%. However, this top line number disguises wide variation - from 100% to zero. Some sites, having infection among the workforce, have ceased activity but may well re-start. Other operators have sites running normally with full, or almost full complement. In some cases, operators have rearranged access into segregated round-the-clock shifts to meet social distancing requirements and/or have reduced numbers to limit infection routes. All operators engaged in construction projects are mindful that supply chain issues or infection or subcontractor availability (or all three) could

interrupt or delay progress before too long. Footfall to construction sites is therefore vulnerable to change and should only be regarded as a snapshot in time.

**Travel patterns**




Operators provided estimates of staff travel patterns. Not all had full transparency of travel modes particularly for construction sites so estimate are involved. As expected, travel mode varied by occupation, by location and by facility function. Within inner city locations up to 80% of those in management, support, technical and cleaning roles used public transport but the position was reversed for engineers, suppliers, contractors and other technical staff obliged to visit multiple sites. However, the majority of data centres are not handily located and moreover antisocial shift patterns mean that the majority of staff do not use public transport – 87% of operational staff and 98% on sites incorporating offices. Construction sites showed the highest proportion of staff arriving by public transport at 23%. All visits to POP sites were by private vehicle, most probably because a single individual may service multiple sites.

We thought these figures looked rather high and on further questioning it emerged that operators have already taken steps to reduce dependence on public transport, hiring private vehicles and taxis in an effort to limit routes for infection. The numbers, therefore, may not represent normal operating conditions.

We did not ask for location details or try to map journeys. Data centres in the UK are heavily clustered so, if it proves necessary, it would be feasible to identify local areas where data centre related movements are likely to be concentrated.

**Other considerations**

Reviewing data from operators always gives rise to additional questions. One relates to the length of time that sites can function under a regime where access is restricted. Running a skeleton crew can only be sustained for so long. Moreover, there may be crisis points where large numbers of staff are needed urgently on site to handle an emergency such as disaster recovery (DR). DR, together with associated movement, is very hard to predict but still has to be accommodated in resilience planning. Finally, data infrastructure is dynamic, and operators are not simply keeping static systems ticking over – they are working hard to keep pace with expanding demand. So maintaining the status quo means accommodating growth.

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