



Vodafone Response to Ofcom Consultation: Evolution of the Shared Access Licence Framework

Call for Input



Introduction

Vodafone welcomes the opportunity to comment on Ofcom's Call for Input on the evolution of the Shared Access Licence (SAL) framework. We are a user of SALs and, to a degree a competitor to the SAL regime, given that we provide Mobile Private Network (MPN) solutions using both SALs and spectrum acquired via auction. It is important that a level playing field is maintained, in particular that the costs of administering SALs is borne by the licensees, but conversely that licensing revenues don't outstrip Ofcom's costs. As we set out in our response, we have some concerns that this is not currently the case.

There is a need for the administration process for SALs to be improved, but care is needed not to over-engineer the licensing administration. In particular, it is important to recognise that spectrum is merely a piece in the jigsaw of deploying applications, and any licensing regime must take account of the needs of application design, planning and landlord approvals (where relevant), and equipment delivery and commissioning timelines. Networks do not dynamically appear, and deployers need spectrum certainty before committing investment resources.

Answers to questions

1. How do you think demand for Shared Access is likely to change in future and why; which use cases do you think are likely to emerge or grow, and which decline?

We believe that (once the incumbent usage of the 1800MHz band is set to one side), the dominant usage of SAL are the provision of MPNs and provision of community Fixed Wireless Access (FWA) services.

MPN is very much a nascent market, that we expect to grow significantly in the future. However, it is unclear at this stage the extent to which this market will be addressed by dedicated spectrum via SAL, versus network slices provided on public 5G networks, versus Wi-Fi-based solutions using license-exempt bands. We would argue that dedicated spectrum via SAL represents the least spectrally-efficient mechanism for satisfying MPN demand, but it will remain an important implementation option.

We are unsure of the future demand for FWA in the existing SAL bands, particularly when competing against fibre alternatives. However, the SAL framework will also include mm-wave, and we can foresee a situation where there is demand in these higher bandwidth frequency bands.

2. Are there elements of the current framework that complicate the use of Shared Access licences for specific use cases?

The main complications with the current framework are as a result of the somewhat "clunky" application process, which we are pleased to hear that Ofcom is addressing. Our main usage of SALs has been for MPN



solutions: in this situation we typically have a prospective customer who is interested in adopting an MPN, and it simply doesn't work from a commercial standpoint to have to wait 4-6 weeks before we can tell them whether we will be able to secure the spectrum to deploy. Our experience is that the Spectrum Information System (SIS) is of limited use because areas where there is seemingly no usage are in fact unavailable for SAL, and the option to pick up the phone to ask Ofcom doesn't seem to be available. This is inefficient for everyone – we have had situations where we have applied for licences to determine if we can provide an MPN capability for a prospective customer, but not carried them forward to paying/issuing of the SAL because by the time we have confirmed availability the customer has lost interest. The streamlined system really needs access to mapping as to whether an application for SAL is likely to be accepted, rejected, or would depend on the specific technical characteristics.

Additionally, there needs to be recognition that MPNs tend to be subject to competitive tenders, meaning that multiple prospective providers will be devising solutions for a given customer. Even with a streamlined application system, Ofcom needs to recognise that it may receive multiple applications for spectrum to serve the same customer, with only one of those applications progressing to requiring a SAL. Note that although Ofcom may not have experienced this situation so far, it will become increasingly common as the MPN market evolves beyond first adopters. As we have highlighted, as used to be the case with telephone numbering, there needs to be a system where a hold can be placed on the spectrum, with the SAL ultimately being issued to whichever provider is awarded the contract. Measures need to be taken to ensure that the successful tender is not determined by who was quickest to access the Ofcom SAL application system.

3. Do you have any comments on the power restrictions currently in place, particularly in urban/high density areas, under the Shared Access licence?

4. Do you have any comments on the exceptions process, and how some of its benefits could be maintained within more standardised and automated assessments?

On the whole, we consider that Ofcom's current approach is sensible, i.e. restrict urban deployments to low power applications, unless an exception can be objectively justified and won't dramatically restrict future deployments by third parties. However, we note that this does highlight the contradiction in Ofcom's thinking: on the one hand, SALs are priced at a level to recover just Ofcom's administrative costs, on the basis that there is no excess demand – but if Ofcom is constraining the usage of medium power SALs in urban areas because it is concerned about excluding future usage, then inherently there **is** potential excess demand and hence Administered Incentive Pricing (AIP) should be applied.

We therefore believe that the fees payable in such circumstances should equate to the number of low power SAL users that are potentially excluded. If not this, then at the least Ofcom's administrative costs in evaluating the specific exception should be recovered on a time/resource basis. Given these costs are incurred regardless of whether the medium power SAL is ultimately awarded, evaluating an exception should be subject to an application fee rather than one only imposed if the exemption is granted.



5. Do you have any views on whether and how the coordination approach should be modified?
6. Do you have views on whether newer or emerging technologies can support coexistence between additional users in the band, and if so, how?

We note that our perception is that the majority of current SAL holders are not adopting innovative technologies, rather are utilising those developed for public mobile services in adjacent bands. As these technologies implicitly assume exclusive spectrum for the licensee, they are not designed with a mindset of multiple coexisting networks sharing the same spectrum (in contrast to Wi-Fi, for example). This implies that Ofcom is correct to adopt an approach of managed coordination rather than dynamic spectrum sharing via sensing or databases.

Nonetheless there may be opportunities to increase re-usage levels. We note the application form for SALs is relatively simple when compared, for example, with the Innovation and Trial licences, which require applicants to give more detail on spectrum usage characteristics. We do not believe it would be proportionate to require this level of detail on all SAL applications, but it may be appropriate to have default values, with the ability for applicants to over-ride these to give additional information about their proposed usage.

7. Please outline any comments on the current licensing process (e.g. ease of application, time taken, the information we require).

Please see our response to Question 2 on the application process.

As the volume of SALs increases, and in particular with usage in the mm-wave bands, we also believe that consideration needs to be given to ongoing administration issues. It is inefficient for both Ofcom and licensees that each SAL results in annual invoices being issued.

We think that there needs to be an evolution towards the approach used for fixed link licences: in this model, Vodafone receives a single invoice in April each year which details all of the fixed link licences held and associated fees, with payment being taken in advance as a lump sum¹. Where new licences are issued during the year, we pay retrospectively for the part-year. Where licences are relinquished, a credit/rebate is made on the following year's bill. We believe that Ofcom must allow this facility to be available for SALs on request: otherwise there is every likelihood of both Ofcom and the licensees' administration teams being overwhelmed servicing individual invoices for relatively trivial amounts of money. Indeed, there is a danger that a material proportion of Ofcom's administration costs are in issuing individual invoices against each deployment.

¹ Where the total invoice amounts to >£100k, Ofcom allows this fee to be paid in 10x instalments. We believe the same arrangement should apply for SALs.



8. Do you have any comments on the suitability of available spectrum for your use cases?

Vodafone has no comments on this question.

9. Do you have any comments on equipment availability limiting deployment options in 3.8-4.2 GHz?

Equipment availability is dictated by the market for it. We are aware that some current equipment has tuning range limitations, in large part dictated by the fact it was designed for the 3GPP-standardised public mobile scenario. This situation should improve over time as stakeholders demand that equipment covers the whole band. However, it would be unfair on Ofcom's part to require that early deployers replace their kit: as the band fills up, new deployers will need to accept that unless they can source equipment that can work up to the 4.2GHz limit, their spectrum options will be limited.

10. Do you have any other general comments on the Shared Access framework?

Whilst supporting the concept of SALs, we remain unconvinced that the charging regime for SALs is correct. As we identified in our response to Q3/4, some of the administration policies for SALs tacitly acknowledge that there could be excess demand. This is backed up by material in the Call For Inputs around equipment capability causing congestion in the 3.8-4.2GHz band. Ofcom's well-established approach to addressing excess demand is the application of AIP, yet in the narrow case of SALs, it sticks to a mantra of licence fees simply recovering Ofcom's administration costs. We believe that this exception is in the interests of fostering innovation, but SAL applications do not have a monopoly in fostering innovation – there are highly innovative technologies in terrestrial and satellite fixed links, and public mobile access is arguably the greatest generator of innovation across all spectrum usage. So why are SALs singled out for special treatment and being subject only to administration fees? Not only could one SAL foreclose the licensing of another one, but SALs as a whole foreclose dedication of bands for e.g. mobile usage². We are yet to see any Ofcom analysis to prove that there is no excess demand and hence SALs should be exempted from AIP.

If, however, we accept that AIP shouldn't apply and fees should instead be based on cost-causation of Ofcom's administrative overheads, then it is clear that the current structure does not reflect how these costs are incurred. We accept that there is need to strike a balance between simplicity of fee design and accurately reflecting cost causation. However, it is difficult to explain how Ofcom's costs to renew an existing licence can be the same as its costs to issue a new one (the costs for which involve Ofcom having to assess coexistence with other users), as is implied by the current fee structure. Further, it is difficult to justify that the costs of assessing coexistence rise linearly with bandwidth – the probability of there being a coexistence

² For example whilst Vodafone hasn't made an argument that the 3.8-4.2GHz band be used for public mobile, we are aware that other stakeholders have suggested that it be considered.



issue will increase, but can Ofcom justify that it costs twice as much to consider a 200MHz licence as it does a 100MHz one? Administration-based fees are not about providing incentives to use an efficient amount of spectrum; that is the role of AIP.

We are also concerned that the fee levels may not accurately recover the costs incurred by Ofcom. How do the volumes of SALs awarded compare with those anticipated when the fees were set? Are Ofcom covering the costs of awarding SALs, is there a surplus, or is there a shortfall? There is a paucity of evidence. We would expect the SAL fee “pot” not just to cover the incremental costs of administering SALs, but also a fair share of meeting Ofcom’s operational overheads – otherwise existing licensees are subsidising new entrants using SALs.

Finally, although we warmly welcome Ofcom’s efforts to optimise the application process, we trust that the cost of any IT development associated with the administration will be borne by the SAL fees rather than being taken from the wider spectrum budget.

Vodafone UK
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