

Second consultation on coexistence of new services in the 800 MHz band with digital terrestrial television

Response by Vodafone to the Ofcom consultation

17 April 2012

1 Introduction

The prevention and mitigation of interference to digital terrestrial television reception is a fundamental aspect of successfully bringing the 800 MHz band into use by mobile services. Vodafone welcomes the joint decision of Government and Ofcom that this should be managed jointly by the 800MHz licence holders, through a body known as MitCo. Vodafone wants to see an independent and decisive MitCo established. Vodafone believes that, to successfully accomplish its tasks, the organization of MitCo will need to fulfill a number of key objectives:

- Its work will need to match the speed of the most rapid licence holder to roll out a network.
- It should minimise the potential for consumer dissatisfaction.
- The way that it operates will need to prevent “leakage” of sensitive roll-out plans between licence holders.
- There need to be mechanisms to refine the objectives and KPIs of MitCo in the light of experience.

However, in this consultation, these objectives seem to have got lost in a wealth of detail - such as the reliability of postal delivery services and voting arrangements for committees. In particular, Ofcom has not paid sufficient attention to the experiences of TV consumers when they interact with MitCo. Under the current proposals, a large number of consumers who contact MitCo for support will be told that it is not allowed to assist (see Q7.5). This could tarnish the reputation of OFCOM and government, as well as MitCo and the licence holders.

As Ofcom recognizes, the assumptions used in the cost estimates are generally conservative, so the estimated cost of consumer support elements are likely to be ample. However, it is not clear that all necessary elements of consumer support have been identified by Ofcom. On balance, we believe that the budgeted £180 million will be sufficient, but MitCo and its Supervisory Board need some flexibility in how these funds are spent, to deliver the policy objectives set by Government.

Vodafone believes that all vulnerable consumers should be offered additional support, regardless of the nature of their DTT reception system. Support will be given with fitting internal filters, and all customers will receive assistance with platform swaps, but there do not appear to be any proposals to provide support to vulnerable customers with external amplifiers or communal antenna systems.

This consultation contains detailed proposals for the targets for the operation of MitCo, in particular KPIs and “operational conditions” (i.e. sanctions for non-compliance). The KPIs generally seem arbitrary - there is no explanation of why or how they were derived. The “operational conditions (i.e. sanctions) are not proportionate – they would be applied automatically, regardless of whether MitCo or an operator was at fault, and some could be applied to all operators when only one was at fault.

In this consultation, Ofcom gives undue attention to the risks of gaming, disputes and deadlock between various parties. While this aspect is necessary, it is more important to

create an environment that fosters collaboration. We believe this can best be achieved through some changes to the proposed membership and functions of the Supervisory Board.

2 Response to specific questions

7.1: Do you agree that it is best to seek to establish MitCo in advance of the auction for later transferral to 800 MHz licensees?

Yes.

For MitCo to be prepared for a rapid roll-out by one or more licence holders, it will need to start its work in earnest as soon as the licences are awarded. This means that it will need to be established as a legal entity and start some of its key tasks in advance of the licence award (even if major contracts are not placed until afterwards):

- Recruitment of key staff.
- Development of interference prediction software for an operational environment.
- Defining specifications and issuing tenders for filters.
- Defining requirements for delivery services and contact centres.

It would be difficult to establish the Supervisory Board before the licence award, unless a way can be found for the views of potential licence-holders to be represented. It should also not be necessary, because at this time MitCo will be controlled by Government.

7.2: Do you agree with our initial views on MitCo's constitution and governance?

Vodafone does not have a strong view about the way that MitCo is constituted, provided that this fulfils the requirements for efficient operation and smooth transfer of ownership following the licence award. A limited company is likely to be most suitable for this purpose.

In addition to the factors listed in para. 7.42, the following should also be considered:

- The stewardship of the £180 million funding
- What approval MitCo would need to undertake additional mitigation tasks beyond those explicitly defined by KPIs, if they were found to be necessary or beneficial.

The fourth bullet of para. 7.42 highlights an important issue – the possibility of misalignment of interests between licence holders. Vodafone agrees that MitCo should have an independent Chairman in order to minimise this risk. However, the role should be positive - to build good working relationships between the licensees through MitCo and to ensure that its resources are shared equitably between them - rather than negative (to overcome deadlock through a casting vote). If the Chairman finds that MitCo is operating to the detriment of one licensee, he can of course report the matter to Ofcom.

7.3: Do you have any views on the proposed approach to the Supervisory Board?

The composition and operation of the Supervisory Board need to be aligned with its responsibilities. In this consultation, Ofcom seems to envisage the Supervisory Board as largely a body to monitor the compliance of MitCo to numerical KPIs. This does not require a Board of the size that Ofcom has proposed, and the proposed frequency of meetings is likely to discourage people of sufficient seniority from taking on these roles.

The Supervisory Board needs to include stakeholders' representatives, but it also needs to have sufficient independent membership that it does not just vote along 'stakeholder' lines. Under Ofcom's current proposals, the voting membership comprises four members with a broadcasting perspective (3 representatives and the consumer interest advisor) three with a mobile perspective and one technical/audit advisor (who might well refrain from voting on matters outside these domains).

Vodafone suggests that at least two independent voting members should be added to the Supervisory Board, who would be able to consider issues on their merits. However, we would not expect the full Board to need to meet as often as Ofcom envisages; instead, we anticipate that the routine assessment of fulfilment of KPIs could be delegated to a small subcommittee of the Supervisory Board or senior members of the secretariat.

We believe that a key task of the Supervisory Board should be to review the effectiveness and appropriateness of the KPIs, as well as to assess compliance.

7.4: We propose that the 50% gain share be split between 800 MHz licensees based on the volume of spectrum they hold in the 800 MHz band. Do you have any comments on this proposal?

The proposal on the division of the gain share between licensees seems equitable from the perspective of the source of the funding. However, it results in a dilution of more than six in the return to a licence holder of savings from implementing network-based mitigation, which may not provide enough incentive for all licensees to undertake this.

In its response to the previous consultation, Vodafone proposed a mechanism for licensees to receive funding for network-based mitigation, based on the cost saving to MitCo in consumer based mitigation, which would be economically efficient. However, in the proposals in the current consultation, a licensee would only see the benefit of network based mitigation through the gain share, which would be deferred and diluted by a factor of six (assuming three licensees of 2 X 10MHz and a gain share of 50%). It should also be noted that the cost of applying network-based mitigation is likely to be higher for the bottom blocks – in both cost of implementation and potential impact on network performance.

The current Ofcom proposals therefore do not provide an economically efficient incentive for licensees to implement network-based mitigation.

The willingness of operators to implement network-based mitigation will be dependent on equity in the cost/benefit trade-off. According to the current consultation document (Table 5.2), the number of households for each of the 10MHz blocks is roughly equal. However, in previous Ofcom studies¹, the number of households affected by the lowest block was roughly four times that of the other two blocks. This is not discussed in the current consultation, and it is not obvious why the “changes to key parameter values” described in Section 5 would have had this result.

7.5: Are the information parameters defined above and in Annex 5 sufficient to allow MitCo to accurately and reliably forecast the scale and scope of households affected by DTT interference?

We expect that both licence holders and broadcasters have an incentive to ensure that MitCo has the data necessary to fulfil its task, so we do not believe that this needs to be specified in detail. However, the list in Annex 5 appears to be comprehensive, with one important exception:

Nearly 90% of households who might experience interference will have an RF amplifier between the antenna and the TV receiver. However, Ofcom “cannot say with any degree of certainty whether failure is due to amplifier overload, due to breach of DTT receiver C/I threshold, or both”². This is an important factor, because interference due to breach of DTT receiver C/I can be remedied by a filter fitted before the TV set, by the householder, but

¹ Technical analysis of interference from mobile network base stations in the 800 MHz band to digital terrestrial television; Ofcom; 10 June 2011.

² Email from Ofcom, 11 April 2012.

interference due to amplifier overload will require involvement of a third party, either an aerial installer or the owner of a communal antenna system.

A substantial proportion of this group of householders are likely to contact MitCo at some point, and many will need a house visit to determine eligibility, but this does not seem to have been included in Ofcom's cost estimates. The majority of these householders will be told that they are not eligible for support, often for technical reasons that they do not understand. This is likely to create a very negative perception of MitCo.

7.6: Do you agree the KPIs related to MitCo's activities are appropriate and robust?

No.

Many of the proposed KPIs are neither 'SMART³' nor 'smart'. There is no explanation for the values proposed for the KPIs, and many of them seem to be arbitrary and out-of-line with similar targets set for equivalent purposes in other industries. The desire to make the KPIs measurable and time-framed has resulted in them not being relevant to the overall outcome, nor achievable. Many of them seem more relevant to a postal delivery operator than an entity with the task of mitigating interference.

It will certainly be possible to refine the parameters of the KPIs in the light of experience. It should be one of the tasks of the Supervisory Board to keep the KPIs under review, and make changes when appropriate - but it is still necessary to have an initial set of KPIs. The proposals in this document are a first step towards the development of a suitable set of initial KPIs, provided that the shortcomings are addressed that are described below and elaborated in the annex to this response.

1) It is unclear why information and filters need to be sent to every house in a geographical area, instead of the households on the TV licensing database; any household which does not have a TV licence should not have any need for, or expectation of, receiving any support for mitigation of interference.

2) MitCo will need to acquire an address database from a third party, and will use a specialist company for delivery of information and filters. Ofcom cannot define KPIs which are higher than the service standards for these third parties, which are very likely to be less than 99.9% in combination.

3) The definition of household needs further clarification, especially in respect of sanctions for non-compliance with 'KPI standards'. In particular, problems with a single defective communal antenna system, which may serve many households, should not trigger sanctions on future deployment of base stations.

4) The operational condition for KPI 2 (ii) would require base stations to transmit at a power of 64dBm. However, many base stations will not be capable of transmitting at this power.

5) The target time in KPI 4 of eight working days for a platform swap is unreasonably short; it will need to include at least the following steps:

- A MitCo representative will need to make an appointment for a home visit, to assess whether a platform swap is needed (for example, is the affected set a primary one, and has a filter been tried) and which alternative platforms are available.
- The householder will need to decide which of the alternative platforms is preferred.
- The householder may need to sign an agreement with the alternative platform provider, even if there is no charge for the service.
- The alternative platform provider will need to make an appointment for the installation of the system.

³ Specific, Measurable, Achievable, Relevant and Time-framed.

7.7: Do you agree that the KPI for incentivising and measuring the proactive supply of DTT receiver filters to households affected by interference should be based on an assessment of the outcomes rather than the activities performed by MitCo?

Yes, but see the comments on KPIs in response to question 7.6

7.8: Do you agree with the approach we have outlined for incentivising KPI achievement and managing cases of non-compliance with KPIs?

The consultation document does not contain any analysis to justify the values of the KPIs. Given the arbitrary nature of the KPIs, it is unduly heavy-handed to automatically impose sanctions (i.e. operational conditions) if they are not met. Instead, it should be the responsibility of the Supervisory Board to consider whether sanctions are appropriate.

To provide confidence to licence holders, it is important that sanctions are not imposed for exceptional events (for example, a single faulty communal antenna system that may serve many households), and they should not be imposed on all licensees for problems caused by one of them. Some “operational conditions” are not related to the KPI that has not been met, and seem more like punishments than measures to avoid cases of interference or consumer dissatisfaction.

7.9: Do you agree with our proposed approach for managing MitCo’s performance against other elements of service delivery that are not captured by KPIs?

Vodafone agrees that there are aspects of MitCo’s performance that will need to be reviewed by the Supervisory Board, for which KPIs cannot be set. However, as the Supervisory Board is independent, it should decide for itself how to do this.

7.10: Do you think a hard or soft limit should be set in relation to platform changes? Do you have any other comments in relation to the platform change cap?

It is essential that the limit for platform changes is a soft limit. The households needing a platform change represent the ‘tail’ of the statistical distribution of impact on TV reception, and the data is not sufficiently robust to define a value with sufficient confidence. A hard limit could have serious unintended consequences, such as preventing the completion of network roll-out.

The consultation document seems to assume that the need for a platform change can be identified with certainty over the telephone. In practice, this will often require a visit to a home by a MitCo employee, and even then this may not be possible (for example, has a filter for a masthead amplifier been fitted correctly?).

7.11: Do you agree with the requirements we propose to place on licensees to address interference after MitCo closes?

Yes.

8.1: Do you have any views on the nature or detail of the requirements we propose may be necessary as set out in this Section??

In general, the provisions seem a reasonable implementation of the proposals in Section 7; they therefore need to be reviewed in the light of comments made on these proposals in the consultation. They will need to be drafted more carefully for licence conditions. In particular, Ofcom needs to consider how obligations on MitCo can be imposed through a licence, when a single licensee does not control MitCo.

Ofcom should also consider whether the current level of detail needs to be contained in licences. In particular, if MitCo is established by Government in advance of the auction, the obligations of MitCo could be defined in its establishing documents.

As explained above, Vodafone believes that “operational conditions” (sanctions) should not be applied automatically, but should be considered and approved by the Supervisory Board.

3 Representations on the impact assessment

Paragraph 2.21 states that the consultation document as a whole comprises an impact assessment. The whole of this consultation response constitutes representations on the impact assessment in accordance with Section 7 (7) a) and b) of the Communications Act 2003.

In particular, the document does not provide any assessment of the on the trade-off between the impact on consumers and network deployment of the selection of values (percentages and time intervals) for the proposed KPIs.

Annex Detailed comments on the proposed KPIs

| Standard | Reporting requirement(s) | Operational Conditions | Comments | Proposals |
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| <p>KPI 1 1(1). The licensee must ensure that, prior to switching on a base station, 99.9% of households forecast to experience interference to their reception of DTT services within a 2 km radius of that base station are sent information at least one calendar month, and no earlier than three calendar months, in advance of the date on which that switch on is planned</p> | <p>1(2) The licensee must report its progress against this Standard to the Supervisory Board at two weekly intervals during the three calendar month period immediately prior to the date on which the licensee intends to switch on its base station.</p> | <p>1(3) The licensee must, in the event that it has not complied with the Standard set down in this KPI by the date on which it intends to switch on its base station, delay switch on of that base station until such time as it can satisfy the Supervisory Board that that Standard has been met.</p> | <p>MitCo will need to acquire an address database from a third party, and will use a specialist company for delivery of information and filters. Ofcom cannot define KPIs which are higher than the service standards for these third parties, which will be less than 99.9% in combination.</p> <p>It is unclear why information and filters need to be sent to every house in a geographical area, instead of the households on the TV licensing database; any household which does not have a TV licence should not have any need for, or expectation of, receiving any support for mitigation of interference.</p> | <p>Ofcom should specify that the information should be sent to all addresses in a particular the database – and leave it to the Supervisory Board to define performance criteria. It will probably do this by reviewing a draft contract with a subcontractor to MitCo.</p> <p>The “Address Point” as mentioned in paragraph A5.5 appears to be suitable for this purpose (but it is a product of Ordnance Survey, not Royal Mail).</p> |
| <p>KPI 2 2(1) The licensee must ensure that no more than 10% of households forecast to experience interference to their reception of DTT services within a 1.5 km radius of that base</p> | <p>2(2) The licensee must report to the Supervisory Board, four weeks after the switch on of a base station: (a) the number of requests that it has received from households</p> | <p>2(3) The licensee must, in the event that it has not complied with the Standards of this KPI: (a) undertake a “testing phase” before switching on any further base stations in the same DTT</p> | <p>2 (1): This KPI is inconsistent with the statement in para. 7.92, because it implies that more than 90% should receive a filter prior to interference occurring.</p> | <p>2 (1): The term ‘forecast to experience interference’ needs to be defined properly, because the intended meaning does not seem to be the plain English one.</p> |

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| <p>station should request that a filter be sent to them within one calendar month following the activation of a base station.</p> | <p>seeking a filter; (b) the number of households that it forecast might experience interference to their DTT services; and (c) the number reported under (a) expressed as a percentage of the number reported under(b). (d) whether or not, in its view, it has met the Standard specified for this KPI.</p> | <p>transmitter region, whereby the licensee must: (i) four weeks prior to the date on which it intends to switch on a further base station permanently, ensure that members of the public who are within an 1.5 km radius of that base station are informed in writing that the licensee will be commencing a “testing phase” and the date, time, duration and purpose of the test; (ii) where it provides information under (i), ensure that such information also includes contact details for itself, and for the Contact Centre, and make it clear to members of the public that, should they experience interference to their DTT equipment during the “testing phase”, they may contact either the licensee or the Contact Centre and report such interference; (ii) switch on the further base station at the transmission limit of 64dBm for a period of fifteen minutes, commencing at a time chosen by the licensee during the hours of 7am – 6pm. (b) commence the “testing phase” from the date on which it reports to the Supervisory Board that it has not met the Standard for this KPI, and continue to operate the “testing phase” for each further base station for a period of one month, from the date on which the failure was reported to the Supervisory Board, or until the</p> | <p>2 (3): This KPI may not be achieved for many reasons unrelated to interference. For example, an article in a local newspaper or rumours may prompt people to request a filter that they do not need. A single faulty large communal antenna system may the 10% threshold – and filters sent to these households would be unlikely to solve the interference. What is the purpose of having a contact centre if members of the public are advised to contact the licensee as an alternative? 2 (3) (ii): This operational condition would require base stations to transmit at a power of 64dBm. However, many base stations will not be capable of transmitting at this power.</p> | <p>The definition of household needs further clarification, especially in respect of sanctions for non-compliance with ‘KPI standards’. In particular, problems with a single defective communal antenna system, which may serve many households, should not trigger sanctions on future deployment of base stations. 2 (3): An operational condition should not be imposed if the KPI is not achieved due to factors outside the control of MitCo or the licensee. In most cases, a sufficient remedy for this KPI would be to require MitCo for a period to deliver filters to all households ‘forecast to experience interference’. 2 (3) (ii): If this provision is needed, it should be for the maximum power available from the base station.</p> |
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| | | next time that the licensee is due to report to the Supervisory Board again, whichever is longer. | | |
| <p>KPI 3</p> <p>3(1)The Licensee must ensure that:</p> <p>(a) where a filter has been sent to a household that is forecast to, or is, experiencing interference to its DTT services:</p> <p>(i) at least 91% of filters are delivered to the household within two working days of the household notifying either the Licensee or the Contact Centre of the interference;</p> <p>(ii) at least 98% of filters are delivered to the household within four working days of the household notifying either the Licensee or the Contact Centre of the interference; and</p> <p>(iii) at least 99.9% of filters are delivered to the household within five working days of the household notifying either the Licensee or the Contact Centre of the interference</p> | <p>3(2)The Licensee must report to the Supervisory Board at the end of each calendar month as to:</p> <p>(a) the number of instances that month where a household has notified it, or the Contact Centre, that that household is experiencing (or has experienced) interference during the course of that calendar month, with reference to the relevant main DTT transmitter coverage area;</p> <p>(b) in relation to each notification received under (a), the time period in which that household was sent a filter, relative to the date on which the notification was made;</p> <p>(c) the percentage of filters that were sent:</p> <p>(i) within two working days;</p> <p>(ii) within four working days; and</p> <p>(iii) within five working days.</p> | <p>3(3) As set out under KPI 2(3) above.</p> | <p>The KPI is contradictory to the reporting requirement as to whether it relates to sending or delivery.</p> <p>If this KPI is not met, this will most likely be due to a failure by a supplier or subcontractor to MitCo. This is out of the control of a licensee.</p> <p>The licensee may be unable to meet this KPI due to <i>force majeure</i>, such as bad weather.</p> | <p>It is not proportionate to impose a testing phase for base stations on a licensee as a result of a failure to meet a KPI for delivery of filters.</p> |
| <p>KPI 4</p> <p>4(1) The Licensee must ensure that, where it is arranging for households to have a platform change, 99.9% of such changes are completed within eight working days from the date on which the Licensee has been notified itself, or been advised by the Contact Centre, that such a platform change is required.</p> | <p>4(2)The Licensee must report to the Supervisory Board each calendar month as to:</p> <p>(a) the number of instances that month where a household has requested a platform change, with reference to the relevant main DTT transmitter coverage area;</p> <p>(b) the date on which the request was made;</p> <p>(c) the date on which the platform change was made; and</p> <p>(d) the percentage of</p> | <p>4(3) As set out under KPI 2(3) above.</p> | <p>The target time of eight working days for a platform swap is unreasonably short; It will need to include at least the following steps:</p> <ul style="list-style-type: none"> - A MitCo representative will need to make an appointment for a home visit, to assess whether a platform swap is needed (for example, is the affected set a primary one, and has a filter been | <p>Ofcom needs make a proper assessment of the steps needed to make a platform swap, and the time needed to complete each of them.</p> <p>Ofcom should note that the number of platform swaps in a month will normal be substantially below a thousand, which makes a criterion of 99.9% reported monthly meaningless.</p> |

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| | households for which the platform change was completed within eight working days from the date on which that vulnerable consumer made such requests. | | <p>tried) and which alternative platforms are available.</p> <ul style="list-style-type: none"> - The householder will need to decide which of the alternative platforms is preferred. - The householder may need to sign an agreement with the alternative platform provider, even if there is no charge for the service. - The alternative platform provider will need to make an appointment for the installation of the system. | This KPI should (after improvement) presumably also apply to improvements to DTT receiver equipment. |
| <p>KPI 5</p> <p>5(1) The Licensee must ensure that, where it is arranging the installation of filters for vulnerable consumers:</p> <p>(a) 99.9% of such installations are completed within eight working days from the date on which the Licensee has been notified itself, or been advised by the Contact Centre that such an installation is required; and</p> <p>(b) 98% of such installations are completed on the first visit by the trained technician.</p> | <p>5(2)The Licensee must report to the Supervisory Board each calendar month as to:</p> <p>(a) the number of instances that month where a vulnerable consumer has requested the installation of a filter, with reference to the relevant main DTT transmitter coverage area;</p> <p>(b) the date on which the request was made;</p> <p>(c) the date on which the filter was installed;</p> <p>(d) the percentage of vulnerable consumers for whom the filter installation was completed within eight working days from the date on which that vulnerable consumer made such requests; and</p> <p>(e) the number of visits that a trained technician was required to make in order to successfully install a filter.</p> | 5(3) As set out under KPI 2(3) above. | <p>It is likely that more than 0.1% of vulnerable people will not wish or be able to make an appointment within eight working days.</p> <p>It appears that Ofcom envisages that vulnerable people will be provided with support for the installation of an internal filter, but no assistance if a filter is required ahead of a RF amplifier or in case of a communal antenna system.</p> | Ofcom needs to refine this KPI so that it achieves the desired objectives without unintended consequences. |

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| <p>KPI 6 6(1) The Licensee must ensure that it has put in place adequate arrangements with regard to the provision of information, filters and platform changes, such that no more than: (a) 5% of households who are entitled to request a filter, and have done so, complain, either to the Licensee or to the Contact Centre, that they have not received a filter within five working days of making the request; (b) 5% of vulnerable consumers who have requested the installation of a filter complain that either: (c) they have not received the installation of a filter within nine working days of making the request.</p> | <p>6(2) The Licensee must report to the Supervisory Board every two calendar weeks as to: (a) the number and nature of the complaints that have been made over that two week period; (b) the number of those complaints as a percentage of the total number of households that are potentially within the scope of KPI 6(1)(a)-(c).</p> | <p>6(3) The Licensee must, in the event that it has not complied with the Standard of this KPI for the month in which it is reporting: (a) reduce its in-block transmission level by 6 dB until such time as the Supervisory Board is satisfied that the Licensee is able, for the time being, to meet the required Standard. (b) provide, or arrange to be provided, a written apology to each vulnerable consumer who has had to wait longer than eight working days before a trained technician first attended their house to install a filter or make a platform change or who has had to have more than one visit from a trained technician in order to have a filter installed or platform change made.</p> | <p>This KPI is very susceptible to campaigns, possibly with malicious intent. It is totally unclear how widespread the requirement to reduce in-block transmission level is intended to be (i.e. a cell, a DTT transmitter region, or the whole country).</p> | <p>It is not proportionate to impose an operational condition of a 6dB reduction in transmit power for failure to meet a KPI for non-delivery of filters. It would harm mobile customers more than it would prevent interference.</p> |
| <p>General Comments</p> | | | | |
| | | | <p>It is surprising that there is no KPI addressing the accuracy of forecasting of households that might be subject to interference.</p> | |
| | | | <p>In various parts of the KPIs, the terms “sent”, “delivered”, “informed in writing” and “provide” are used, apparently interchangeably</p> | <p>The same word should be used throughout – preferably ‘sent’ - unless a different meaning is intended.</p> |