

**Testing strategy for compliance with  
remote gambling and software technical  
standards**

**Consultation**

**December 2015**

# 1 Introduction

- 1.1** This consultation is about changes we are proposing to our [Testing strategy for compliance with remote gambling and software technical standards](#) (Testing Strategy). The Testing Strategy sets out our requirements for the timing and procedures for testing referred to in licence condition 2.3. It provides a way to assess compliance with the [Remote gambling and software technical standards](#) (RTS). This consultation is the first full review of the Testing Strategy since its initial publication in August 2007.
- 1.2** The last few years have seen a change within the remote gambling environment, driven by the growth in online gambling, innovation and the increased availability and take-up of new channels through which consumers can take part in gambling (eg mobile devices). In parallel to these developments, our regulatory remit increased following the implementation of the Gambling (Licensing and Advertising) Act in November 2014. There are now nearly 150 additional operators subject to our licensing and regulation and in total almost 700 licensed operators in the remote sector.
- 1.3** The complexity of the online gambling market and growth in our regulatory sphere have reinforced the need to ensure that the standards set out within the Testing Strategy remain clear, transparent and promote an efficient and effective approach to regulation. We intend to update the Testing Strategy to:
- ensure that gambling is conducted in a fair and open way
  - ensure the Testing Strategy reflects industry and international best practice
  - deliver an effective and proportionate regulatory framework
  - align our requirements with those of other regulators (where appropriate) and reduce the incidence of cross-jurisdictional testing inconsistencies
  - set out a minimum standard of testing for games and software updates.
- 1.4** This consultation of the Testing Strategy will be followed by a wider review of the RTS, scheduled for consultation in 2016. Further details of the RTS review will be published next year.

## 2 Background

- 2.1** Sections 89 and 97 of the Gambling Act 2005 (the Act) enable the Commission to:
- set technical standards for remote gambling systems and gambling software
  - make arrangements for the administration of tests of compliance with standards
  - provide for the enforcement of standards and submission to tests.
- 2.2** Condition 2.3 of our [Licence conditions and code of practice](#) (LCCP) requires gambling software and remote licence holders to comply with our RTS and our requirements for testing procedures and their timing. These requirements are set out in the Testing Strategy, which was first published in 2007, updated in 2008, 2012 and 2013 and most recently updated in July 2015 to reflect the changes in the [Security Audit Advice Note](#)<sup>1</sup>. The most recent changes will take effect in April 2016.
- 2.3** The implementation of the Gambling (Licensing and Advertising) Act in November 2014 made it a requirement for gambling operators that transact with or advertise to British consumers to be licensed by us. Condition 2.2.1 came into effect from 31 March 2015 and requires licensed operators to source gambling software only from software businesses licensed by us. These changes have led to a significant increase in the number of operators and suppliers that must comply with the standards set out within our Testing Strategy.

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<sup>1</sup> The strategy has been updated to reflect changes made to the Security Audit advice note<sup>1</sup> and arrangements for transitioned games following the implementation of Gambling (Licensing and Advertising) Act in 2014.

- 2.4** The changes we are proposing are set out in Section 3 below. If implemented, these changes will remove some requirements for external retesting of minor updates, reducing unnecessary regulatory burden on the industry while maintaining game fairness and integrity. The consultation also includes proposals to introduce formal monitoring of game performance; an area made even more complex with the growth of B2B supplied gaming content. We know that some operators already have monitoring processes in place but in other cases, these processes are missing or inadequate.
- 2.5** We are working with members of the International Association of Gaming Regulators (IAGR) to define an agreed minimum scope for external Random Number Generator (RNG) and game testing. The aim is to develop a standard that will meet the fairness testing requirements of all participating jurisdictions which should improve testing standards and reduce duplication. We intend to recognise and accommodate testing to the aligned standards (known as the Multi-Jurisdictional Testing Framework) within the revised Testing Strategy. Details of this work will be published separate to this consultation.

## 3 Proposals

### General risk and compliance assurance activities

- 3.1** We propose to make a number of changes to Table 5 of the Testing Strategy, *General risk and compliance assurance activities*. Table 5 lists the testing requirements and associated risks linked to various elements of game development. Each technical requirement is scored based on the visibility of compliance and impact of any non-compliance. The table uses a colour coding system to indicate those areas that can be tested in-house and those that require external testing. Licensed operators that declare adherence to the best practice requirements set out in Section 6 of the Testing Strategy do not have to seek external testing for changes coded as yellow or green. Operators that do not have in-house development, testing and release processes comparable to Section 6 and/or have not provided the declaration must seek external testing assurance for all aspects of the RTS. Where an operator's internal development, testing and release processes do not meet those set out in Section 6, it would have to seek external testing assurance for all updates.
- 3.2** We propose to simplify Table 5 of the current Testing Strategy by removing the yellow shaded risks and instead using *green* and *red* shading to illustrate the areas that can and cannot be tested in-house. We also propose to update Table 5 to include new requirements, such as RTP monitoring and to:
- cross-reference Table 5 with all the requirements set out in the *Remote gambling and software technical standards*
  - set out information in a clear and accessible format. This may, for example, involve providing a more extensive list of practical examples for each area of risk.

#### Question

- 1. To what extent do you agree or disagree with our proposed amendments to Table 5?**

## Testing requirements (major/minor updates)

- 3.3** We propose to streamline the existing testing and certification process by relaxing the requirements for re-testing of minor updates to previously tested products. The current Testing Strategy requires licensees to retest all updates that affect game fairness, critical files or relevant digital signatures. This captures updates that might affect critical files (and therefore digital signatures) but have no impact on the outcome or fairness of the game. For example, when an operator updates a mobile operating system, players might experience issues with interoperability with new functionality. The operator will need to release updates that might fix the functionality but which have no impact on the game outcome or fairness. We recognise that the current requirement to retest updates deemed low risk can create additional costs and cause time-to-market delays.
- 3.4** So we propose to introduce a new, simplified approach to testing which will create more flexibility and allow for more in-house testing of minor game updates. To support this approach and to help licensed operators to decide whether an update should undergo independent external retesting, we propose adoption of standard definitions of major and minor updates. A major update will be defined as **any software update which may affect the fairness of a game**. Fairness elements would include any change to the RNG functionality, scaling and mapping, or changes to game rules that impact fairness or return to player percentages (including how the rules are implemented within the software). Any update which does not come within the definition of major can be dealt with as a minor update (requiring internal testing only).
- 3.5** In Table 1 of this consultation, we have set out the high-level, principles-based approach we intend to take to defining major and minor updates. These definitions are supported by non-exhaustive examples of major and minor updates. The Table will be included in the revised Testing Strategy to assist operators when making their internal assessments as to whether an update constitutes a major or minor change.
- 3.6** If we allow operators to perform minor updates without seeking external compliance reassurance, there is an increased risk of inadequate fairness testing. We will continue to require assurance that adequate internal and independent testing is taking place and will expect operators to adhere to the good practice indicators (Section 6 of the Testing Strategy) and supply the information promptly if requested. The system controls set out in Section 6 of the Testing Strategy are likely to already be in place in well-run software development companies. They are also required as part of the ISO 27001 certification and so should be familiar to licensed operators. We propose that assurance will be primarily provided through annual audits conducted by one of our approved test houses (paragraph 3.34).
- 3.7** This proposal does not affect the requirement for operators to submit software for external testing for all new games (or updates to existing games when changes affect game fairness, see paragraph 3.4) and to submit the test reports to us prior to release. However, where the existing requirements do apply, we propose to streamline the submission process for operators through our new eServices solution, further details of which are provided from paragraph 3.31.

**Table 1:**

<b>Major update – non-exhaustive examples</b>
<p><b>High level principle:</b>  A major update, which will require external re-testing by an independent test lab, is any software update which may affect the fairness of a game. Fairness elements would include any change to the RNG functionality, scaling and mapping, or changes to game rules that impact fairness or return to player percentages (including how the rules are implemented within the software).</p>
<ol style="list-style-type: none"> <li>1. <b>Issue:</b> Inefficient logging issues causing performance impact on the game and CPU due to load.  <b>Fix:</b> Amended how the game symbol arrays were constructed, allowing for faster game and reduced CPU load.  <i>Although no rules were changed the software implementation of the rules has changed requiring independent testing.</i></li> <li>2. <b>Issue:</b> Bonus round win calculation update for rarely encountered scenario.  <b>Fix:</b> Correct calculation in line with game design and stated rules.  <i>This example represents an update required due to the incorrect rules implementation coding of the original release.</i></li> <li>3. <b>Issue:</b> RNG seeding functionality has newly discovered weaknesses.  <b>Fix:</b> Recode the RNG to use a different seeding process.  <i>Any change to the RNG functionality would be considered major.</i></li> </ol>
<b>Minor update – non-exhaustive examples</b>
<p><b>High level principle:</b>  All updates which do not fall within the definition of a major update can be dealt with as minor updates.</p>
<ol style="list-style-type: none"> <li>1. iOS Updates – Sound not working on <i>Supplier X</i> Games <ol style="list-style-type: none"> <li>a. <b>Issue:</b> On latest iOS – The sound doesn’t play for spinning games when compared to previous iOS on Apple mobile devices.</li> <li>b. <b>Fix:</b> - Changes to the sound format to support the latest iOS.</li> </ol> <p><i>This change only impacted the games sound functionality. None of the game logic/math was impacted.</i></p> </li> <li>2. Display of game character hat colour and background graphics requires a change due to expiring IP rights.</li> <li>3. <b>Issue:</b> RNG logging not detailed enough for debugging purposes.  <b>Fix:</b> Add enhanced RNG logging to record the status of system variables to assist debugging.  <i>This change did not in any way alter how the RNG functions for its primary purpose, it added some logging functionality only.</i></li> </ol>

4. Multiple minor issues in one update:
  - a. display of bonus round animation on screen
  - b. stake selection dialog in Firefox browser– not displaying fully
  - c. URL to lobby for home button required adding
  - d. button display on screen slightly out of alignment.

**Fix:** Most of these defects are visual issues with the game which would not mislead players/produce incorrect payouts or maths changes etc. *Given this example contains multiple minor updates, collectively they could fall into the major update definition; where doubt exists, consultation with the original test lab would be expected.*

## Gambling platform/RNG changes

- 3.8** In some instances, an update will be made to a remote gaming system (RGS) or an RNG, which could affect hundreds of games served by a single RNG or residing on an RGS. In this scenario, re-testing all games would not be proportionate. Instead, we propose that a representative sample of the games is retested to ensure the update to the gaming system, or RNG change, has not affected their operation. We do not propose to define a sample within the revised strategy although we expect it to be wide enough to include each game type and generation. Licensed operators, in consultation with test houses, should decide what constitutes a suitable representation on a case-by-case basis.

## New channel testing

- 3.9** We propose that the revised Testing Strategy should clarify the requirements for the roll-out of existing games onto new channels. For example, where a game originally released as a flash game is redeveloped as HTML 5 or as a native mobile app, the new channel will require independent external testing. Although some new channels do not require the game engine to be modified, there are sufficient customer fairness aspects accompanying the release of a new channel to warrant external assurance. Recent examples of game software faults reported to us show that bugs are often limited to a particular channel despite the fact the game engine has not changed. The burden imposed from the testing of new channels is minimal as it is only a subset of the tests that would be conducted for a new game.
- 3.10** A new section on *channel testing* will be included within the revised Testing Strategy. We propose to use the operating system for which the channel is developed to distinguish between channels, for example iOS, Android, Windows and HTML. Where a version is designed to work on a variety of devices or browsers, we propose that testing should be of the most commonly used devices and browsers and the test report should identify which were used.

## Game designs using database tables for prize structure

- 3.11** Some games are designed with the prize table and symbol distribution stored in a database rather than being hard-coded in the game code. This represents an additional risk to game fairness given the ease with which these database tables can be altered. We propose to address this risk by introducing a requirement that the annual audit should assess the controls over the configuration and updates to these database tables. The purpose of the assessment would be to identify if controls are adequate to:
- Prevent incorrect configuration of games
  - Prevent unauthorised table updates and
  - Maintain an audit trail of changes to the database tables

## Live dealer studios

- 3.12** The current Testing Strategy does not address the fairness assurance of live dealer operations. The primary fairness focus in the Testing Strategy is on the pre-release testing of gambling software. In contrast, for live dealer operations, the fairness is controlled by people, physical equipment and processes; the procedures in place, site security and supervision by cameras and licensed managers are assessed through audit.
- 3.13** We obtain a fairness assurance from live dealers during the licensing stage. We are aware that many of these live dealers are also licensed in other jurisdictions where annual audits are required. Given the defined scope of a live dealer operation, we propose that audits performed for other jurisdictions should suffice for our assurance requirements. For ongoing fairness assurance of live dealer operations, we propose to accept an independent audit previously conducted for another jurisdiction. If none exists, we will require an independent audit against similar live dealer standards, for example those of Alderney or the Isle of Man. We will set out proposals for what we mean by similar standards when we consult on updates to the RTS during 2016.

### Questions

- 2. To what extent do you agree or disagree with our proposal to enable licensed operators to carry out minor updates without the need for external testing?**
- 3. To what extent do you agree or disagree with the suggested definition of major updates?**
- 4. Are there any other examples of major updates which you think should be included in Table 1?**
- 5. Are there any other minor updates which you think should be included in Table 1?**
- 6. To what extent do you agree or disagree with our proposal that a representative sample of games is tested following an update to an RGS or RNG?**
- 7. To what extent do you agree or disagree with our proposal to add a new section on *New Channel Testing* to the Testing Strategy?**
- 8. To what extent do you agree or disagree with our proposal to focus on the operating system to identify those channels that require testing?**
- 9. Do you have any further comments concerning the proposals on major/minor updates?**
- 10. To what extent do you agree or disagree with our proposal to recognise live dealer audits previously conducted for and accepted by another jurisdiction?**
- 11. If a live dealer is not already subject to audit, what standards should we consider adopting for our live dealer audit requirements?**

## Live return to player (RTP) monitoring - identification of potential game faults in operation

- 3.14** The focus of the current Testing Strategy is on the pre-release and update testing of gambling products to ensure they are fair for players. Licensed operators must ensure that any game variant testing they conduct, either internally or externally, is fit for the purpose intended. In particular, consumers should be confident that any advertised return to player (RTP) percentages are not misleading. The RTP should provide a reliable indication of the amount of money that a licensed operator will pay out in winnings as a percentage of the wagers it receives.
- 3.15** Beyond pre-release and update testing, there is an ongoing responsibility on licensed operators to ensure that their products are fair and open. Remote gambling operators keep a central record of all gambling transactions and this information can be used to monitor the performance of games to ensure they are behaving in accordance with the rules.
- 3.16** In the competitive remote casino market, an RTP overpayment fault on a game with an RTP of 95% or more can quickly result in loss for the operator. Operators will therefore monitor games for overpayments. They are likely to run reports at the player account level to identify anyone with a disproportionately large gambling account balance compared to deposits. This could indicate that the player has exploited a game error.
- 3.17** What is less evident are operators monitoring a game's RTP for underpayment to consumers. In one recent example reported to the Commission, a game was running at a notably deficient RTP for months before it was deactivated and fixed.
- 3.18** We want to ensure sufficient monitoring is in place for both *under* and overpayments. Both represent a deviation from the advertised gambling rules and prizes. We know that many licensed operators are already addressing this but there appears to be a range of different approaches. Some of these leave consumers exposed to potential errors for longer than reasonably necessary.
- 3.19** We propose to amend the Testing Strategy to include a requirement that providers monitor every channel for a game to check that RTP performance is as expected. The main form of monitoring will be to calculate the actual RTP and compare that figure against the expected (advertised) RTP<sup>2</sup>. Monitoring should not be so aggregated that it hides errors at a lower level. For example, if an operator monitors a game's actual RTP by looking at all markets and channels together, they might miss an error that only exists in the mobile version of the game.
- 3.20** We propose that RTP monitoring should take into account the specific game's volatility to ensure more accurate monitoring is in place. Games of chance will always have a degree of tolerance between the actual and expected RTP. Every game's design will detail mathematically (according to its volatility) what that tolerance should be for the volume of plays achieved.
- 3.21** It is acknowledged that before meaningful conclusions from RTP measurements can be made, sufficient gameplay must have occurred. However, monitoring should be based on the minimum reasonable volume of play so that games are not left for months before measurements are performed. The most reliable performance monitoring will consider the actual volume of play for a game. This means each game will have different frequencies for monitoring depending on its popularity and turnover. An alternative approach is to put all games on the same monitoring schedule (for example monthly). The problem with such an approach is that a popular game, played by thousands and generating millions of games in a short timeframe, might not have errors detected for a whole month rather than being identified more quickly.

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<sup>2</sup> If the mathematical design of a game results in a theoretical RTP of 95% then a simple calculation performed using the 'win' and 'turnover' amounts generated by the game will yield the actual RTP% (win / turnover).



- 3.22** The level of granular data typically stored for remote gambling should mean accurate RTP analysis is possible. This further reduces the need to wait for extended play before measuring RTP. When measurements are performed on combined activity (all bet levels together<sup>3</sup>) the results for the lower bet levels are drowned out by the larger bet levels. Measuring each bet level independently will be less volatile, potentially allowing for reduced volume requirements before accurate measurements can be made.
- 3.23** It is already a requirement for operators to display the game rules, prizes and likelihood of winning to players via the game rules and help screens. Some games of chance are so complex that to explain the likelihood of winning each prize in an easily comprehensible way is not feasible. In these cases, operators state the RTP% as an indicator of the game's overall player return. In some jurisdictions, such as Italy, it is a requirement for operators to publish the previous month's actual RTP for each game. Even in the terrestrial gambling market some jurisdictions require gaming machines to display the cumulative turnover and win amounts. This primarily facilitates accounting functions though it also informs players about the actual game performance. Displaying a game's actual RTP gives consumers the ability to verify its performance. This might serve to both alleviate player concerns about unfairness as well as highlight potential game faults.
- 3.24** While not required by us, some remote operators voluntarily elect to show this information to players, for example their top five 'hot' or 'not' slot games based on recent play. However, in these examples there is not usually any information explaining the period of time or volume of play sampled for in the live display. There is a risk that, without contextual supporting information, players may be misled into thinking the games are paying out more (or less) long term than is actually the case. It may perpetuate player misunderstanding on how games of chance perform. We are interested in understanding whether a new requirement to display actual game RTP might increase openness, focus attention on potentially faulty games, and therefore reduce their impact. Alternatively, we could set requirements about how the information should be presented where it is voluntarily displayed.
- 3.25** Where there is more than one party involved in supplying a game to consumers, for example a game developer, platform supplier and a B2C operator, the contracts between the parties should set out who is responsible for RTP monitoring. The contracts should also identify how issues will be dealt with eg under what circumstances will a game be removed and how will other potentially affected parties be notified.
- 3.26** Consumers are concerned with the fairness of games and often game faults are identified as a result of their complaints. Monitoring processes should include adequate investigation of consumer complaints (especially where a game attracts more than the normal level of complaints about fairness) and ensure consumers can be provided with clear, detailed explanations of how their performance compares with the game's expected behaviour. It is not sufficient to notify players that the games have passed the regulator's required testing standards as this does not acknowledge that errors can evade testing.
- 3.27** Operators are already required to ensure they put into effect written procedures for handling customer complaints and disputes. This does not go into detail about the nature of each complaint and what the operator's response should be. We are considering whether complaints about game fairness require specific conditions or guidance, to ensure they are appropriately investigated by operators. Where warranted this might include looking into a consumer's transaction and that of the game in general to determine if there is any basis in the complaint that warrants further investigation.

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<sup>3</sup> Bet level/stake value – for example on a typical slot game this would mean that 1 credit per line bets are considered independently to the 2,5 and 10 credit per line bets.

## Questions

12. To what extent do you agree or disagree with our proposal to include a requirement in the Testing Strategy that operators must monitor the ongoing performance of games?
13. To what extent do you agree or disagree with our proposal that each channel for a game is independently monitored?
14. To what extent do you agree or disagree with our proposal that a game's volatility is taken into account to refine the acceptable tolerance?
15. To what extent do you agree or disagree with our proposal that RTP monitoring should be based on volume of gameplay?
16. To what extent do you agree or disagree with the proposal that monitoring should be conducted at a more granular level (eg monitoring the results of each bet level?)
17. To what extent do you agree or disagree with our proposal that operators should be required to display a game's actual RTP?
18. Are there any additional requirements for third party responsibility in this area?
19. Do you have any further comments about the proposals on RTP monitoring?

## In-house development, testing and release – good practice

- 3.28** Under the present Testing Strategy, licensed operators that intend to carry-out in-house testing must declare that they meet the best practice requirements set out in Section 6 (see paragraph 3.1). Table 1 details the changes we propose to make to major and minor updates. We have also set out our proposals to introduce requirements for all operators who want to test gambling software in-house and who manufacture or modify gambling software (specifically games and RNGs) to adhere to Section 6 in the revised strategy. Under the new proposals, operators will still be required to maintain accurate records of game and software updates, which will be subject to an annual audit (paragraph 3.34).
- 3.29** The current version of Section 6 emphasises key aspects of the development, testing and change control processes as providing evidence of good practice in games development, testing and release. We propose to retain the current specification of good practice set out in Section 6 and extend it to include further guidance on the change-management controls that licensed operators should have in place.
- 3.30** In Table 2, we have set out the current descriptors of good practice and proposed new descriptors. We have also identified which of the current descriptors we intend to retain. As mentioned above, allowing greater flexibility to make minor changes in-house without external retesting places more responsibility on the operator. The suggested additions in Table 2 will provide further assurance that internal controls are in place to mitigate the risk of inadequate testing. Having these structured controls in place will also facilitate the annual audit where operators that develop, test and release gambling software will need to evidence that they have sufficient controls in place.

**Table 2:**

<b>Good practice descriptor</b>	<b>Current</b>	<b>Retain</b>	<b>New</b>
<b>Development process</b>			
Source code should be held in a secure environment with version control	Yes	Yes	
An audit log of all accesses to program source should be maintained	Yes	Yes	
Old versions of source code and the dates they were retired should be retained Access to source code by developers should be well controlled and based on a minimum access required for the job approach	Yes	Yes	
Source code should be accompanied by appropriate technical documentation suitable for independent review			Yes
All source files should contain sufficient commenting to explain file/class/function purpose			Yes
Source code should be sufficiently legible and structured to permit static code analysis and for the review of its functionality to be conducted with confidence			Yes
Access to platform source code should not be granted to those working only on game specific development	Yes	Yes	
Changes to critical modules should be peer reviewed by appropriately skilled but independent in-house developers/testers to ensure all changes made are appropriate and in line with the change documentation- any suspicious or unauthorised changes must be explained	Yes	Yes	
<b>Testing process</b>			
Logically separate development and testing environments	Yes	Yes	
Separate staff for development and testing	Yes	Yes	
Testing should not be performed by anyone involved in the game's development	Yes	Yes (see below)	
There should be policies and processes for ensuring:			
<ul style="list-style-type: none"> <li>Adequate testing and change control mechanisms and authorisations are in place for the migration of new or modified software into the operational environment and</li> </ul>	Yes	No	
<ul style="list-style-type: none"> <li>Appropriate testing, planning and migration control measures should be carried out when upgrading patches or new software versions to ensure the overall security of the operational environment is not adversely impacted</li> </ul>	Yes	No	
<b>Change management</b>			
All RNG/game new releases and changes should be supported by a change management plan which should: <ul style="list-style-type: none"> <li>Be documented</li> <li>Be managed by someone with the necessary proficiency and expertise to oversee the change and make decisions</li> </ul>			Yes

<ul style="list-style-type: none"> <li>• Ensure adequate testing, change control mechanisms and authorisations are in place for the software migration into the operational environment</li> </ul>			
All RNG / game new releases and changes should be recorded in a log			Yes
Accompanying any RNG / game change, the change documentation must record: <ul style="list-style-type: none"> <li>• Game number/RNG identifier</li> <li>• Delivery channel</li> <li>• Unique change ID</li> <li>• Description of change</li> <li>• Whether the modification is classified as major or minor</li> <li>• Justification for classification</li> <li>• For minor changes: confirmation they have been internally tested and the changes documented</li> <li>• For major changes: confirmation of adequate external testing house assessment</li> <li>• Relevant manager's authorisation for change</li> <li>• Other particulars as required by the licence holder's internal change management requirements.</li> </ul>			Yes

**Questions:**

**20. To what extent do you agree or disagree with proposed changes to Section 6 of the Testing Strategy?**

**21. Do you have any further comments about the proposed amendments to Section 6?**

## eServices solution

**3.31** In August 2015, we published our intention to temporarily remove the requirement for licensed operators to submit quarterly Remote Gaming Information (RGI) spreadsheets pending the outcome of this consultation. We advised that this dispensation did not affect the requirement for operators to submit for external testing software for all new games (or updates to existing games when changes affect game fairness) and to submit the test reports to us prior to releasing the game.

**3.32** The revised Testing Strategy will require operators to submit details of new RNGs, new games and major updates through our secure operator portal: eServices. The portal, currently used for submission of the quarterly regulatory returns and security key events, will feature a new *Games Testing* section. The games information to be recorded in eServices will broadly achieve the same aim as the RGI spreadsheets but will request only approximately one third of the fields that were required by the RGI. Its purpose is to record details of games offered, who supplies them and the testing particulars such as date of the test and details of the testing provider. Personal Management Licence (PML) holders will be expected to verify the accuracy of the information provided on a quarterly basis.

**3.33** The industry has suggested that because a great deal of gambling content is supplied via B2Bs, they should be able to supply us with the required testing information once. This would avoid each B2C which runs the game duplicating the B2B's submission. eServices will include a facility for gambling software / B2B operators to add new games and the associated test reports. Once uploaded via the B2Bs, B2C operators will be able to link to these uploaded games without the need to upload them again. A procedural plan of the new submission process and eServices portal will be annexed to the revised Testing Strategy.

## Annual audit

**3.34** To retain assurance that games are appropriately tested and deployed in the live environment, we propose that the revised Testing Strategy should require certain holders of gambling software, remote bingo, casino or virtual betting operating licences to undergo an annual audit by one of our approved test houses. The purpose of the annual audit will vary in accordance with operators' licensed activities and Table 3 provides an overview of the audit scope for different licensed operators. More generally, the audit will:

- check a randomly selected sample of minor updates to confirm that they did not require external testing (applicable to those responsible for the development, testing and provision of remote games including virtual betting events or RNGs. This would usually mean the gambling software or B2B operator but could also mean a B2C operator if they develop, test or release remote games or RNGs themselves)
- confirm that licensed operators have adhered to required change controls (applicable elements as updated in Section 6 of the revised Testing Strategy, see Table 2 above)
- provide a snapshot of available games
- confirm operators have in place effective RTP monitoring processes.

**3.35** The audit would also review the availability of rules to player. This would involve comparing the player facing rules for the tested game with those for the live game to ensure accuracy. We know that player facing rules are often held/hosted separately and there are instances when incorrect game rules are linked, impacting on game fairness. We might deem it appropriate to widen the scope of the annual audit where we have concerns about a particular operator's compliance record; for example demonstrated non-compliance with other aspects of the RTS/LCCP such as financial limits or auto-pay requirements.

**3.36** The nature of the audit will be adjusted for those operators that develop and update games and software, and those that simply make games available to customers (and do not facilitate the development or updating of games or software in-house). RTP monitoring, for example, will mainly apply to operators that host production games and are responsible for making the game available.

**3.37** An operator that has updated games will be expected, as part of its audit, to submit details of all minor updates. Major updates which incorporate changes to critical file will have been externally tested by an approved test house. To facilitate the random sample, it should also be prepared to provide source code to the approved test house on request. An operator that has not updated games in-house but is licensed to provide facilities for remote bingo, casino and virtual betting will be expected to have sufficient assurance that the games it has made available have been developed and tested to the required standard. To demonstrate such assurance the operator should request and retain testing evidence from the supplier for each game offered on their behalf.

**3.38** If an operator does not develop or update games in-house, the annual audit will focus primarily on whether the operator has adhered to the required change controls (Section 6). The test house will not, in this instance, sample minor updates and request details of source code. Instead the audit will be based on a randomly selected sample of the major updates listed within an operator's change management records and will require the operator to submit copies of relevant test reports on request.

**3.39** This consultation seeks views on whether the revised Testing Strategy should specify the size of the sample to be used in audit. We propose this should be based on a sliding scale where the sample is determined by the volume of games that an operator has developed/updated.

**3.40** Where an operator has arrangements in place with multiple test houses, the test houses will audit only those games that they have previously certified. Unless they can access the source code to assess the detail of the updates and compare with the change documentation, test houses will not be expected to sample minor updates to games certified by other test houses.

**3.41** We know that the remote gaming sector has quite a complex structure, within which we license:

- B2B suppliers, which provide gaming platforms (eg remote gaming system or RNG) and gaming software to third parties (B2Cs)
- B2Cs which manufacture /adapt games (under their own gambling software licence) and those that only make available games supplied and maintained by third party gambling software providers / B2Bs.
- Licensed gambling software developers.

**3.42** In developing these proposals for audit we have tried to take account of this structure. All licensed operators are accountable and should be aware of their responsibilities and obligations under our LCCP but equally, we have tried to be proportionate and to minimise the likelihood of duplicate auditing or reporting. In Table 3 we have summarised these requirements.

**Table 3**

Party	Audit required (yes/no)	Content of audit
B2B	Yes	<ul style="list-style-type: none"> <li>• Independent verification of games provided on behalf of licensed B2Cs</li> <li>• Confirm adherence to required change controls (Section 6)</li> <li>• Randomly selected sample of minor updates</li> <li>• Availability of rules to player (if applicable)</li> <li>• Confirm effective RTP monitoring in place</li> </ul>
B2C	Yes (modified)	<ul style="list-style-type: none"> <li>• Independent verification of games made available</li> <li>• Randomly selected sample of minor updates (if applicable, this would generally mean if you hold gambling software and you engage in manufacture/adaptation of gambling software (specifically games and RNGs) and you make the decision about whether changes are major/minor. This would generally mean you submit the product for testing by an external test lab</li> <li>• Confirm adherence to required change controls (Section 6). If applicable, see above.</li> </ul>

		<ul style="list-style-type: none"> <li>• Independent verification of game testing assurance (where games are provided by a third party)</li> <li>• Availability of rules to player</li> <li>• Confirm effective RTP monitoring processes in place</li> </ul>
(Gambling Software licence only)	Not subject to audit but product will still require independent testing in line with usual game release processes	

- 3.43** We expect to receive the final audit report direct from the approved test house. However, it will be the licensed operator’s responsibility to ensure that the report is submitted to us within the agreed timescales (as set out in Table 4). We have staggered audit submission dates to prevent a bottleneck of submissions during a particular period. This approach should also ease the pressure on test houses, which will be required to undertake a considerable volume of audits for multiple licence holders during a short period.
- 3.44** We propose to group licensed operators into four ‘submission pools’. The composition of each pool will be based on the need to ensure a balanced spread of submissions throughout the year. There will be a period of four weeks from the end of the submission date to complete and submit the annual audit to us.

**Table 4 – Audit submission deadlines**

<b>Submission pools</b>	<b>Audit Period (12 months)</b>	<b>Deadline for submission of annual audit to Commission</b>
<b>Pool 1</b>	<b>June – May</b>	<b>Before second Monday of June</b>
<b>Pool 2</b>	<b>September – August</b>	<b>Before second Monday of September</b>
<b>Pool 3</b>	<b>December – November</b>	<b>Before second Monday of December</b>
<b>Pool 4</b>	<b>March – February</b>	<b>Before second Monday of March</b>

- 3.45** We propose that the new annual audit requirement will come into force three months after we publish our response to this consultation. We expect to publish in spring 2016 and that implementation of the changes will not be before July 2016.
- 3.46** By way of illustration and based on an implementation date of July 2016, the first tranche of submissions would be due from operators in Submission Pool 2 in September 2016, and would cover the period September 2015 - August 2016. The timescales we adopt will be designed to give operators sufficient time (from Spring 2016) to align their processes with the updated good practice requirements.

**Questions:**

- 22. To what extent do you agree or disagree with our proposal to introduce an annual audit to monitor compliance with the testing requirements and good practice?**
- 23. To what extent do you agree or disagree with our proposals about the scope of the annual audit?**
- 24. To what extent do you agree or disagree with our proposals to stagger the audit dates throughout the year?**
- 25. Are there any other potential regulatory impacts of the proposals in this document that we have not identified?**



## 4 How to respond

- 4.1** Please complete the responses template provided and send by email to: [consultation@gamblingcommission.gov.uk](mailto:consultation@gamblingcommission.gov.uk) . Further information and assistance is available from our consultation co-ordinator at the same email address. If you are not able to use the template provided, please indicate clearly the questions or issues to which your comments refer.

Alternatively, responses can be sent by post to:

Jamie Wall  
Gambling Commission  
Victoria Square House  
Victoria Square  
Birmingham B2 4BP

- 4.2** The closing date for receipt of responses is 11 February 2016.
- 4.3** When responding, please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of an organisation, please make clear who or what that organisation represents. If responding as an individual, please mention your own interest.
- 4.4** Please note that responses may be made public or published in a summary of responses to the consultation unless you state clearly that you wish your response or name to be treated confidentially. Confidential responses will be included in any statistical summary of numbers of comments received. If you are replying by email or via the website, unless you specifically include a request to the contrary in the main text of your submission, we will assume your consent overrides any confidentiality disclaimer that is generated by your organisation's IT system.
- 4.5** Any information or material sent to us and which we record may be subject to the Freedom of Information Act 2000 (FOIA). Our policy on release of information is available on request or by reference to our website [www.gamblingcommission.gov.uk](http://www.gamblingcommission.gov.uk). We will treat information marked confidential accordingly and will only disclose that information to people outside the Commission where it is necessary to do so in order to carry out our functions or where we must comply with the requirements of FOIA and must consider requests for information made under the FOIA on a case-by-case basis. Therefore when providing information, if you think that certain information may be exempt from disclosure under the FOIA, please annotate the response accordingly so that we may take your comments into account.
- 4.6** All information provided to us will be processed in accordance with the Data Protection Act 1998. However, it may be disclosed to government departments or agencies, local authorities and other bodies when it is necessary to do so in order to carry out our functions and where we are legally required to do so.

**Gambling Commission December 2015**

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**Keeping gambling fair and safe for all**

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