

RESPONSE OF KINÉIS AND OPEN COSMOS

to Ofcom's consultation 'Future use of 2GHz MSS': proposals for the use of 1980–2010 MHz and 2170–2200 MHz from May 2027

18 August 2026

1 INTRODUCTION

- 1.1 This response is submitted jointly by Kinéis and Open Cosmos (together, the “**Respondents**”) to Ofcom's consultation of 16 June 2026, *Future use of 2GHz MSS* (the “**Consultation**”),¹ concerning the authorisation of the 1980–2010 MHz and 2170–2200 MHz frequency bands (the “**Band**”) beyond 13 May 2027. References to paragraphs are to the Consultation. No part of this response is confidential, and it may be published in full.
- 1.2 Kinéis is a European-owned mobile-satellite operator that provides mobile satellite services for IoT, maritime data and location services thanks to its 25-satellite constellation together with a worldwide ground-station network. Kinéis services serve business, government and scientific users, including critical infrastructure, environmental monitoring, utilities, transport, agriculture and maritime sectors, where resilient low-data-rate connectivity delivers significant public-interest benefits. Kinéis responded to Ofcom's July 2025 Call for Input (the “**CFI**”).²
- 1.3 Open Cosmos is a UK-headquartered satellite company that designs, builds, launches and operates satellite missions and shared constellation infrastructure. Following its 2025 acquisition of Connected, it is deploying software-defined S-band IoT payloads across its missions.
- 1.4 The Respondents compete in the satellite IoT market. They respond jointly because the questions raised in the Consultation in respect of narrowband IoT access to the Band are common to the sector and are evidenced by multiple independent operators.

2 EXECUTIVE SUMMARY

- 2.1 The 2 GHz MSS band is a strategic asset for resilient and sovereign satellite connectivity infrastructure. Satellite narrowband IoT is a mature and distinct use of the Band, with demonstrated demand in the UK and Europe across industrial and public-interest applications, including utilities, agriculture, logistics, environmental monitoring, maritime safety and critical-infrastructure resilience. The relevant policy distinction is between narrowband and broadband use of the Band, 3GPP NTN NB-IoT also supports basic messaging to standard devices.
- 2.2 While Ofcom notes the existence of alternative spectrum bands for IoT services, the Respondents do not consider these bands to be effective substitutes for future MSS-IoT growth. Existing MSS allocations below 1 GHz face inherent capacity limitations, increasing spectrum occupancy and growing interference constraints in some regions. Access to the 2 GHz MSS band is therefore sought not as a replacement for existing VHF/UHF MSS resources but as a necessary complement enabling the continued expansion of MSS-IoT services beyond the scalability limits of current sub-1 GHz spectrum. In addition, the Band uniquely benefits from a harmonised MSS allocation, 3GPP Release-17+ NTN standardisation (bands n255/n256), growing ecosystem support and prospective UK-EU regulatory alignment. **2 GHz does not replace UHF/VHF; it complements existing MSS resources whose long-term scalability is limited.**
- 2.3 Narrowband IoT requires little spectrum and shares well. Narrow blocks of multiple 200 kHz duplex channels³ per operator permit several operators to share a 2×5 MHz block. This is recognised by Ofcom (paragraphs **3.24 to 3.25** and **6.8**), by the European Commission,⁴ by the RSPG and the Commission's supporting study,⁵ and has been implemented by the ACMA in Australia.⁶ This demonstrates that shared narrowband MSS access is not merely theoretical but already operationally achievable under an established regulatory framework.
- 2.4 Accordingly, Ofcom should secure a dedicated multi-operator narrowband IoT allocation, ideally through at least one shared 2×5 MHz block. Ofcom should also preserve the ability to expand narrowband IoT spectrum resources in the future should demonstrated market demand, spectrum utilisation and service growth justify additional capacity for MSS-IoT services. While access to guard bands may provide an additional source of capacity in the future, such access should not be considered an equivalent substitute. The practical feasibility of guard-band operation remains dependent on demonstrating sustainable coexistence with adjacent systems and on ensuring that any technical conditions imposed to protect neighbouring networks do not unduly constrain MSS-IoT

¹Ofcom, Future use of 2GHz MSS: Proposals for the use of 1980–2010 MHz and 2170–2200 MHz from May 2027, 16 June 2026.

²Kinéis, response to Ofcom's Call for Input: Future use of the 2 GHz MSS band (published 6 October 2025), available on the Ofcom CFI webpage.

³ This figure does not account for operational guard band.

⁴European Commission, COM(2026) 311 final, 27 May 2026 (the “EC Proposal”), recital 7 and Explanatory Memorandum, including its summary of the IDATE and Detecon supporting studies.

⁵RSPG Opinion RSPG24-007 Final (February 2024); Detecon for the European Commission, Study on Mobile Satellite Services (MSS) in the 2 GHz band in the EU (Publications Office of the EU, 2025).

⁶ACMA (Australia), Allocation design and technical matters for the 2 GHz MSS band (2024–2025): a 2×5 MHz narrowband set-aside with EIRP limits referenced to 3GPP NTN NB-IoT.

operations. Access to guard bands should therefore be regarded as a complementary capacity mechanism that may be explored once operational compatibility has been satisfactorily demonstrated.

- 2.5 Narrowband IoT should not be viewed as competing with D2D services. These services address distinct market needs and can coexist within the band. While D2D serves human communications, narrowband IoT supports low-power sensors, infrastructure monitoring, environmental applications and industrial assets.
- 2.6 The interim period must open the Band rather than freeze it. The Respondents support the proposed extension of the incumbents only in conjunction with a genuine additional-user access route, extending to pre-commercial and early commercial narrowband services and operational from 14 May 2027.
- 2.7 Fees must not foreclose narrowband IoT. Interim fees for additional users should be cost-based; long-term fees for a narrowband IoT lane should not be benchmarked to terrestrial mobile or broadband direct-to-device (“D2D”) opportunity cost, which would sterilise a spectrally efficient, high-social-value use.

3 THE PROPOSED INTERIM ARRANGEMENTS (QUESTIONS 1 TO 8)

Question 1 — options for managing the Band after 13 May 2027; whether any options have been overlooked

- 3.1 We agree that clearance of the Band (options one and two) would be inefficient and disruptive, and that a short-term extension (option three) is a reasonable basis for planning.
- 3.2 Two matters merit greater prominence. First, additional-user access should be an integral condition of any extension rather than a parallel possibility. Second, Ofcom can already signal a long-term narrowband IoT enabler – a shared block and potential additional access to structured guard-band access – so that UK-relevant IoT investment can proceed during the interim period. Hence, Ofcom must signal now that narrowband IoT will be considered as a distinct service category in the long-term framework.

Question 2 — the proposed short-term transition period authorising Viasat and EchoStar

- 3.3 We agree in principle: continuity of the European Aviation Network and of existing IoT services protects users and avoids disrupting abruptly current and legacy users while ensuring visibility regarding the future transition of spectrum use.
- 3.4 Our support is conditional upon: (i) the extension being strictly without prejudice to the long-term award; (ii) a firm and simultaneous commitment to additional-user access (see Question 7); and (iii) transparency as to actual UK utilisation of the Band by sub-band, (iv) implementation of mechanisms enabling unused spectrum resources to be made available to authorised additional users where this can be achieved without harmful interference, so that unused capacity can be identified and made available.

Question 3 — the proposed three-year fixed duration of the interim authorisation

- 3.5 We support the proposed three-year fixed period. It protects current users, limits the period during which prospective users are excluded and enables an earlier long-term decision, while the exceptional two-year extension provides an adequate backstop should the European process take longer than anticipated.
- 3.6 We believe certainty matters more than duration. Ofcom should publish now a timetable for consulting upon and concluding the long-term framework within the three-year period, such that awards complete before the interim authorisation expires. Regulatory certainty is fundamental to satellite investment cases, a point made in by the respondents previously. **Ofcom should seek to complete the long-term award process sufficiently early to avoid any regulatory cliff-edge between the interim and long-term authorisation frameworks.**

Question 4 — authorisation by way of a CGC licence, licence exemption and Aircraft Radio licence

- 3.7 We do not object to the proposed package, subject to two points: the amended Exemption Regulations should be drafted so that additional companies and frequencies can be added expeditiously (thereby enabling option (ii) under Question 7); and the frequencies specified should reflect the incumbents’ actual operations rather than the full 2x30 MHz by default.

Question 5 — the alternative approach of licensing the satellite operators

- 3.8 We are neutral as between the two mechanisms. Any such licence should permit leasing and partial (frequency or geographic) trading so that third-party access remains possible; should carry a fixed expiry; and should neither create any expectation of long-term rights nor permit the concentration of holdings in advance of the long-term award.

Question 6 — the approach to fees for the interim period

- 3.9 As between the two options for the incumbents, we express no strong preference. Given the acknowledged uncertainty as to opportunity cost (paragraph 5.25), we would caution against setting high interim fees.

- 3.10 Narrowband users are expected to share well and there should not be excess demand. Therefore, fees for additional users should be cost-based and proportionate and reflect the limited bandwidth requirements (for example, 2×200 kHz to 2×1 MHz), low duty cycle characteristics and high spectral efficiency of narrowband MSS-IoT services. The European Commission's supporting studies record that national fee structures for the Band have diverged widely, and narrowband IoT business cases – predicated on low-cost devices and monthly service fees of a few euros – are viable but fee-sensitive. High interim fees would deter precisely the innovation the Consultation seeks to enable.

Question 7 — enabling additional users during the interim period, and the preferred mechanism

- 3.11 We support this proposal. It is, in our view, the most significant near-term element of the Consultation, and the Respondents intend to seek access. Such access should support meaningful operational demonstrations, pre-commercial deployments and commercial beta services capable of validating coexistence arrangements and future business cases. Its scope must extend beyond the Innovation and Trial framework to pre-commercial ("beta") and early commercial narrowband services, as paragraph 5.29 recognises; the respondents' position is that testing in the Band must be facilitated over the 2027–2032 period.
- 3.12 Either mechanism is workable. We have a modest preference for direct, time-limited licences (option (i)) because they are quicker and provide higher certainty as to the interference environment, provided that a standing application route with a published decision timeline is established; option (ii) is acceptable if amendments to the Exemption Regulations can be effected rapidly.
- 3.13 We encourage Ofcom to consult on the mechanism this year, as planned, and to have it operational by 14 May 2027 so that no authorisation gap arises.

Question 8 — other views on the authorisation of Viasat and EchoStar during the interim period

- 3.14 In light of publicly announced transactions concerning the incumbents' spectrum rights, including the acquisition of EchoStar's 2 GHz MSS spectrum access rights noted at paragraphs 3.38 and 6.20, Ofcom should clarify the treatment of any change of control or assignment of interim authorisations, and should confirm that interim access confers no advantage in the long-term process.
- 3.15 Interim authorisations should carry a utilisation-reporting condition, to inform both additional access and the long-term decision.

4 THE LONG-TERM AUTHORISATION FRAMEWORK (QUESTIONS 9 TO 11)

Question 9 — technical and operational implications of the four long-term approaches

- 4.1 **Option A (filings-led)** would, in Ofcom's words, open "the band to those who meet the conditions of a general licence exemption authorisation", subject to international coordination under the framework of Article 9 of the ITU Radio Regulations. If such coordination cannot be completed, our understanding is that new entrants would operate on a non-interference, non-protection basis with respect to senior filings. This risks delivering the whole Band to the most senior filing holder, foreclosing in-band competition. Such an outcome would risk limiting competition and market diversity despite the very limited spectrum requirements associated with MSS-IoT services.
- 4.2 **Option B (status quo with trading)** entrenches a 2009 allocation; trades would be likely to concentrate value in broadband D2D, with no assurance for narrowband IoT.
- 4.3 **Option C (a UK-led award)** is workable only if the award design protects a narrowband IoT lane by way of a dedicated shared lot or set-aside. An undifferentiated auction of wideband lots would price out narrowband users while incurring the guard-band losses Ofcom itself identifies (Consultation, footnote 52).
- 4.4 **Option D (alignment with the European Union)**, as regards the band plan and technical conditions for the narrowband lane, is low-regret and captures ecosystem and scale benefits irrespective of which operators hold the wideband lots.
- 4.5 Across all options, narrowband IoT coexistence is tractable – low EIRP and very low duty cycles – and a technical envelope referenced to 3GPP NTN NB-IoT, as adopted by the ACMA, simplifies coexistence analysis. This is consistent with Ofcom's own assessment that IoT services require only limited spectrum resources and are particularly suited to shared access arrangements

Question 10 — the optimal long-term approach; alternatives not considered

- 4.6 The optimal approach is, in our view, a hybrid: partial alignment with the European Union (Option D) as to segmentation and technical conditions; UK discretion as to users (elements of Option C); and, in all scenarios, a dedicated shared narrowband IoT allocation of 2×5 MHz authorised for multiple providers supplemented where

appropriate by structured access to guard-band resources once coexistence and operational viability have been demonstrated (paragraphs 6.8 and 6.10).

The Respondents emphasise that guard-band access should not be considered an equivalent alternative to a dedicated narrowband allocation. Depending on the technical constraints required to protect adjacent systems, guard-band operation may become subject to limitations on power, bandwidth utilisation or network deployment that materially reduce its usefulness for operational MSS-IoT services. For this reason, access to guard bands should be regarded as a complementary capacity mechanism rather than a substitute for dedicated MSS-IoT spectrum.

The initial 2x5 MHz allocation should be regarded as a minimum enabling resource. Should utilisation levels, service adoption and demand for MSS-IoT connectivity increase materially over time, Ofcom should retain flexibility to designate additional narrowband resources within the Band.

- 4.7 The alternative not fully articulated in the Consultation is to treat narrowband IoT as a managed, multi-operator lane rather than as a residual of the wideband contest. Ready templates exist: the EC Proposal contemplates NB-IoT sharing of a 2x5 MHz block, narrow blocks of up to 1 MHz and bids for less than a paired 5 MHz block, and the Commission's supporting study analysed a narrowband "spectrum park", since implemented in Australia.
- 4.8 Long-term authorisations for the IoT lane should run for at least 15 years or, if shorter, should incorporate strong renewal provisions securing service continuity, reflecting constellation investment cycles and consistent with the majority of CFI respondents (paragraphs 3.17 to 3.18).
- 4.9 International regulatory developments. The proposed narrowband IoT allocation would be consistent with the direction of international regulatory studies under WRC-27 Agenda Item 1.12, which is examining additional MSS spectrum opportunities for low-data-rate NGSO mobile satellite systems. Ofcom has recognised the relevance of these studies to the future MSS environment. Establishing a dedicated MSS-IoT access mechanism in the 2 GHz band would therefore represent a low-regret approach aligned with the anticipated long-term evolution of satellite IoT services.

Question 11 — further factors relevant to the longer-term UK authorisation

- 4.10 **Social value and resilience.** The UK Government's 2026 National Risk Register⁷ highlights the UK's growing reliance on infrastructure in orbit and identifies disruption to space-based services as a growing threat to UK national security. UKSA identifies satellite connectivity as enabling IoT sensor networks specifically, including for persistent monitoring and supply-chain resilience where terrestrial connectivity is poor or unavailable⁸. EUSPA's market and user-technology reporting identifies satellite IoT as critical for wider European institutional, governmental and commercial users. In the UK context, these services can support environmental monitoring, utilities management, water and energy infrastructure, transport resilience, maritime operations, agriculture and monitoring of assets beyond the reach of terrestrial connectivity. The reports also note the robustness of lower-frequency bands for resilient satellite communications; independent analysts project tens of millions of satellite-connected IoT devices by 2030 in a multi-billion-euro market.⁹
- 4.11 **Infrastructure resilience.** MSS-IoT services contribute directly to the resilience of critical infrastructure and essential services by providing connectivity independent from terrestrial communications networks. This capability is particularly relevant for the UK, given the importance of maritime zones, rural territories, environmental monitoring requirements and distributed utility networks.
- 4.12 **Competition and growth.** A multi-operator IoT lane adds in-band competition and enables new UK services at minimal capacity cost. MSS-IoT services also support the digitalisation of infrastructure, utilities, logistics, environmental services and industrial monitoring across the UK, contributing to productivity gains and more efficient operation of critical assets. Ofcom has also recognised that IoT services may productively use guard-band resources where coexistence can be demonstrated. Such resources should nevertheless be viewed as supplementary capacity rather than a replacement for dedicated MSS-IoT spectrum allocations.
- 4.13 **Fees.** Administered incentive pricing for a narrowband IoT lane should not be derived from terrestrial mobile or broadband D2D opportunity cost (paragraph 6.33); shared narrowband access should be priced on a cost-oriented, per-MHz basis.
- 4.14 **Technology neutrality and timing.** 3GPP NTN NB-IoT should be adopted as the baseline, with a defined compatibility path for other low-data-rate waveforms meeting agreed masks and key performance indicators. The narrowband IoT decision should not be deferred pending WRC-27, whose outcomes are uncertain and, in any event, years from usability.

⁷Cabinet Office, A Guide to the 2026 National Risk Register (2026).

⁸ UK Space Agency, Unlocking Space for Business programme, updated 10 July 2025.

⁹EUSPA, EU Space Market Report 2026 (Issue 1) and GNSS and Secure SatCom User Technology Report (Publications Office of the EU); market projections: IoT Analytics; Global Market Insights.

5 **IMPACT ASSESSMENTS (QUESTION 12)**

- 5.1 The assessments should quantify the indirect consumer and citizen benefits of a narrowband IoT lane – including benefits to UK critical national infrastructure, maritime operations and resilience of services operating outside terrestrial coverage footprints – rather than treating IoT as incidental to D2D and in-flight connectivity.
- 5.2 The impact assessment should also explicitly consider the contribution of multi-operator narrowband access to innovation, competition, SME participation (i.e. assessing the effect of fee design on SMEs and new entrants) and efficient spectrum utilisation (including potential conversion of guard-band “efficiency loss” into productive use), consistently with Ofcom’s duty to encourage investment, innovation and growth.

6 **CONCLUDING REMARKS**

- 6.1 A dedicated 2x5 MHz shared narrowband IoT allocation represents a low-risk, spectrum-efficient and high-public-value regulatory intervention capable of enabling multiple innovative MSS providers leveraging only a small fraction of the overall 2 GHz MSS resources. For the respondents, access to the 2 GHz MSS band is not a substitute for existing VHF/UHF MSS resources but a necessary complement supporting future growth beyond the long-term scalability limits of current sub-1 GHz allocations. The Respondents therefore encourage Ofcom to recognise MSS-IoT as a distinct service category, to establish a dedicated access path for narrowband IoT services, and to regard any future use of guard-band spectrum as a supplementary capacity mechanism rather than a substitute for dedicated MSS-IoT spectrum access.
- 6.2 The Respondents would welcome the opportunity to discuss this response with Ofcom and to provide further technical or market evidence on request.
- 6.3 Contact points: Kinéis contact: Assia Bahri, Head Regulations and Spectrum Affairs; Open Cosmos contact: James Cemmell, Vice President Institutional Partnerships.