

CAA Engagement Assessment

Title of airspace change proposal	E-7 Wedgetail
Change sponsor	Ministry of Defence
Project reference	ACP 2020-24
Account Manager	[REDACTED]
Case study commencement date	14 January 2025
Case study report as at	3 March 2025

Instructions

In providing a response for each question, please ensure that the 'status' column is completed using the following options:

- YES
- NO
- PARTIALLY
- N/A

To aid the SARG Lead it may be useful that each question is also highlighted accordingly to illustrate what is:

resolved YES not resolved PARTIALLY not compliant NO

Executive Summary

The sponsor of this airspace change, the Ministry of Defence (MoD), proposes the introduction of non-segregated airspace in the form of 21 x E-7 Operating Areas from Flight Level (FL) 270-350 in Class C airspace within the London and Scottish Upper Information Regions (UIRs). The majority of the areas are located over the sea. The MoD propose that these Areas be used by the E-7 Airborne Early Warning (AEW) Wedgetail aircraft to enable airborne surveillance of UK airspace, allowing the Royal Air Force (RAF) Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) force to conduct training and operational tasks. The intention is for the Operating Areas to be tactically controlled by Air Traffic Control (ATC).

The MoD intend for the E-7 AEW Wedgetail to replace the now obsolete E-3D Sentry which flew in circular orbits or between 2 x orbits in a racetrack pattern. The E-7 Wedgetail is fitted with an advanced Multi-role Electronically Scanned Array (MESA) Radar and to optimise its performance the aircraft needs to fly in long straight legs of approximately 100 nautical miles (NM). The sponsor proposes making best use of some of the existing orbit areas, but their airspace change incorporates the creation of dedicated new Operating Areas geographically placed, wherever possible, in the vicinity of the E-3 Operating Areas with for the most part only one of the 21 proposed areas to be activated at any one time.

The extant E-3 operating areas will remain in place as the existing orbit areas may still be utilised by NATO/visiting forces partners.

Targeted engagement was conducted with a limited stakeholder audience. No changes were made to the design of the operating areas on account of stakeholder feedback; however, feedback has resulted in Letters of Agreement being created and/or updated.

The CAA has assessed this airspace change proposal as a Level 3 change to be progressed in accordance with CAP 1616h Airspace Change Process, version 5.

PART A – Summary of Airspace Change Process to date	
A.1	Airspace change proposal public view
A.2	Stage 1 DEFINE Gateway
A.2.1	Not applicable. This is a Level 3 change.
A.3	Stage 2 DEVELOP & ASSESS Gateway
A.3.1	Not applicable. This is a Level 3 change.
A.4	Stage 3 CONSULT Gateway
A.4.1	Not applicable. This is a Level 3 change.
A.5	Stage 4 UPDATE & SUBMIT
A.5.1	The sponsor was required to re-submit some engagement evidence to enable regulatory assessment to commence, as the original data appeared to have been corrupted. New corrected versions were submitted.

PART B – Consultation Assessment	
B.1	AUDIENCE
B.1.1	Did the consultation target the right audience?
	The sponsor conducted targeted engagement with external stakeholders:
	1. Air Navigation Service Provider (ANSP) NATS.
	2. The British Gliding Authority (BGA).
	3. Internal MoD stakeholders via Defence Airspace and Air Traffic Management (DAATM) namely:

- HQ1 Group (Operating Authority for the E-7 Wedgetail).
- 11 GpA7
- Military Aviation Authority (MAA)
- Swanwick Military ATC (78 Sqn).

Due to the very limited stakeholder audience for this airspace change proposal (ACP), the sponsor was asked by the CAA to provide additional detail within their Engagement Strategy as to how they had identified their stakeholder audience and the reasons for excluding particular stakeholder groups.

The sponsor explained their rationale within Engagement Strategy V2.0 and concluded that the ACP would have no impact on stakeholders other than NATS, the BGA and the MoD. Although the sponsor did not set out their rationale for targeted engagement with the selected group of stakeholders within their final submission, the sponsor has responded to a CAA request by signposting to the rationale set out within their Engagement Strategy. This approach has been accepted.

Engagement was conducted with **NATS** acting as the umbrella organisation for Prestwick Air Control Centre (ACC) covering the Prestwick Upper Information Region (UIR); Swanwick ACC covering the London UIR and Shanwick Oceanic Control Centre covering the Shanwick Oceanic Flight Information Regions (FIR) and Control Areas (CTA). The sponsor expected a negative impact as amendments to routings would be required but aimed to reduce impact via extensive engagement.

The sponsor assessed that the majority of the General Aviation (GA) community would not be impacted due to the proposed E-7 operating levels being at Flight Level (FL) 270 – FL350, but that gliders might be infrequently impacted. There are two Temporary Reserved Areas (TRA) (Gliding) in Class C airspace south of RAF Lossiemouth in the vicinity of one of the operating areas with vertical limits Surface to Unlimited (Scottish Areas North and South). The sponsor engaged with the **BGA** at stage 3 anticipating a negative impact but aiming to agree shared use of the airspace. The BGA were expected to act as an intermediary on behalf of their members.

Regarding the **NATO E-3A** community, the sponsor explained within their Strategy that NATO E-3A operations in extant UK E-3 areas will continue until 2035 and co-ordination of any E-7 and E-3 areas being activated on the same day will be managed by the Quarterly E-3/E-7 NATO Planning Meeting and Weekly NATO co-ordination meetings. These meetings are attended by Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) as the MoD representative.

Neutral impact was anticipated for:

- Eurocontrol, who the sponsor engaged with at stage 2 as an interested party regarding the impact of the ACP on flow control to/from Europe. Eurocontrol advised that any modelling on flow control would be impractical to achieve as the areas are non-segregated and would be managed tactically by ATC as the extant E-3 areas.

No impact was anticipated for:

- Airlines (as the proposed airspace is not segregated and any conflicts would be managed tactically by ATC as per extant

	<p>procedures)</p> <ul style="list-style-type: none"> • Aerodromes (E-7 operating levels are well about the operating heights of Aerodromes and their associated airspace) • Local communities (E-7 operating levels would result in no change to noise or air pollution) • Environmental stakeholders (no impact on noise, negligible increase in CO2 emissions and fuel burn due to tactical management by ATC as per extant procedures and no impact on air quality, tranquillity and biodiversity as the proposal does not impact airspace below 7,000 ft.)
B.1.2	Please provide a summary of responses below
	<p>The sponsor received a response from each of their 3 targeted stakeholders, NATS, the BGA and the MoD. The sponsor has submitted raw engagement evidence in the form of email correspondence which has been reviewed by the CAA.</p> <p>Engagement elicited qualitative rather than quantitative feedback. Qualitative feedback is discussed at B5.4 below, together with the sponsor's response.</p>
B.2	APPROACH
B.2.1	<p>Did the change sponsor consult stakeholders in a suitable way?</p> <p style="text-align: right; background-color: #00b050; color: white; padding: 5px;">Yes</p>
	<p>The sponsor conducted formal engagement by email. This approach was supplemented by meetings held to discuss issues including Letters of Agreement. An opportunity to submit written responses and request hard copies of the engagement documentation was given and a postal address provided. Considering the very limited stakeholder audience, the sponsor's engagement approach was suitable.</p>
B.2.2	<p>What steps did the change sponsor take to encourage stakeholders to engage in the engagement activity?</p> <p>An email was sent to the BGA on 17 July 2024 reminding them that the engagement period was due to end on 31 July 2025. By the time this prompt notification was issued, the MoD had already provided their response to the engagement materials and NATS had already requested, and been granted, an extension to the engagement period.</p>
B.2.3	<p>Was the change sponsor required to respond to any unexpected events and/or challenges?</p> <p style="text-align: right; background-color: #00b050; color: white; padding: 5px;"></p>
	<p>None have been mentioned by the sponsor, and none have been identified during the assessment of this proposal.</p>
B.3	MATERIALS
B.3.1	<p>What materials were used by the change sponsor during the engagement?</p> <p>The following documents were published:</p>

	<ul style="list-style-type: none"> Engagement document V2.0 – this included an overview of the UK MoD’s decision to replace the E-3D AEW Mk1 Sentry with the E-7 AEW Mk1 Wedgetail, how the 21 proposed operating areas had been created taking into account the need for the E-7 to fly in long straight legs of c.100nm and consideration of their geographical location. The sponsor described how the operating areas had evolved taking into account early discussions with NATS. The proposed areas were presented on charts along with information on operating heights, co-location with extant E-3 areas where applicable, frequency of use and any conflicts with other significant airspace. The sponsor’s preferred option 2 to create dedicated E-7 areas was outlined, together with operating principles and assessment of impacts. A glossary of terms was provided. Engagement strategy V2.0 – this included a summary of engagement activity already undertaken in the CAP 1616 process, an explanation regarding how the sponsor identified their targeted stakeholder audience, and detail on their proposed engagement approach, materials and timeline. Full Options Appraisal (FOA) – in their FOA, the sponsor provided a summary of their Initial Options Appraisal (IOA) and explained how engagement with NATS had resulted in some amendments to the initial proposals to limit the effect on civilian Air Traffic Services (ATSU) and Free Route Airspace (FRA) routings in both the London and Scottish Upper Information Regions (UIR). Plans for tactical coordination with ATC to resolve impacts on the Scottish TRA (G) Areas North and South above FL240 following early discussions with the BGA were outlined. They set out the current E-3 airspace scenario and presented the “Do nothing” Option 0 and “Do minimum” Option 1 as comparisons against Option 2 “Dedicated E-7 Areas” with qualitative impact assessments that concluded Option 2 would have only a limited impact on NATS and the BGA. 	
B.3.2	Did the materials provide stakeholders with enough information to ensure that they understood the issue(s) and potential impact(s) on them?	Yes
	<p>Yes, there was a clear explanation regarding the basis for creation of the E-7 Operating Areas, detail on how the structures had evolved as a result of pre-stage 3 engagement and an outline of potential impacts. Operating heights, co-location with extant E-3 areas, where applicable, frequency of usage and any conflicts with other significant airspace were detailed. Although stage 3 engagement was targeted at technical aviation experts, the material was nonetheless written in a manner that could be understood by those without such expertise.</p>	
B.4	LENGTH	
B.4.1	Please confirm the start/end dates and the duration of the engagement below	
	<p>Start date: 3 June 2024 End date: 14 July 2024 Duration: 6 weeks On 6 June 2024, NATS requested an extension to the engagement period to allow sufficient time for a full impact assessment to be</p>	

	<p>conducted. This request was granted.</p> <p>Extension end date: 31 July 2024</p> <p>Overall duration: 8 weeks and 3 days</p>	
B.4.2	If duration was less than 12 weeks, what was the justification?	
	The sponsor set out their justification for the original 6-week duration within Engagement Strategy V2.0. As engagement with NATS had been ongoing from the time the ACP commenced, only minor amendments were expected from stage 3 engagement with NATS. The sponsor expected input from the British Gliding Authority (BGA) to focus on one of the twenty-one proposed areas, and this was indeed the case. The sponsor was prepared to extend the engagement period if required and in the event they did so at the request of NATS.	
B.4.3	Was the period of engagement proportionate?	Yes
	The extended engagement period is considered appropriate, reasonable and proportionate given the number of stakeholders engaged and the preliminary engagement conducted to narrow down the issues for consideration.	
B.5	GENERAL	
B.5.1	Was the conduct of the engagement aligned with the consultation strategy?	Yes
	Yes, conduct of the engagement was aligned with the Consultation Strategy.	
B.5.2	Has the change sponsor categorised the responses in accordance with CAP 1616?	N/A
	This is a Level 3 ACP. No categorisation is required.	
B.5.3	Has the change sponsor correctly identified all of the issues raised during engagement and accurately captured them in the engagement response document?	Yes
	Yes, the sponsor has responded to each item raised during engagement within their Annex A Engagement Summary Report. These are discussed at B.5.4 below.	
B.5.4	Does the engagement response document detail the change sponsor's response to the identified issues? Is the change sponsor's response to the issues raised appropriate/adequate?	Yes
	<p>Early engagement with NATS in 2023 resulted in revisions to the proposal to optimise the available airspace and limit the effect on civilian ATS and FRA routings. These revisions included:</p> <ul style="list-style-type: none"> reshaping the E-7 areas from rectangular boxes to racetracks to release airspace in the corners where the E-7 could never operate 	

- redefining anchor points and orientations of operating areas to avoid FRA trajectories to the oceanic boundary (Area I1) and prevent K1 crossing 10W into Shanwick Airspace
- combining E2 and F1 into one larger area to deconflict with traffic enroute to/from Copenhagen
- raising the base of D1, E1 and E2 from FL270 to FL290 to deconflict with Aberdeen and Scottish Terminal Control Area (TMA) Arrivals/Departures
- redefining the anchor point and size of F1 in the North Sea to assist handovers to/from Copenhagen.

Feedback obtained during the course of formal stage 3 engagement is outlined below. The sponsor held a post-engagement meeting with NATS on 20 August 2024 to discuss the feedback they submitted during the June to July 2024 engagement period. The sponsor's response to all issues raised is outlined below:

Feedback from NATS

Agreed level for operations

NATS responded that the agreed level for E-7 operations are likely to depend on multiple factors including time of day flows of civil air traffic and that this would require inclusion in a LoA and ATC procedures.

Sponsor's response: The MoD agrees and will work with NATS on a LoA. Non-segregated airspace, E-7 flexibility to change route/height and location plus tactical control by ATC will be instrumental in success.

Draft LoA between the MoD (ISTAR Force Commander) and NATS dated 28 November 2024 and titled "Interface Document No.8 Procedures for AEW Aircraft Operations within the UK FIR/UIR in Peacetime has been submitted to the CAA (Annex B).

Reduced Vertical Separation Minimum (RVSM) compliancy

NATS requested confirmation of separation required from the aircraft. They explained that their feedback was based on there being no increased separation requirements for operating E-7 aircraft and that the aircraft is RVSM compliant, i.e., their response was based on 1000 ft vertical separation.

Sponsor's response: The E-7 Wedgetail AEW Mk1 is RVSM compliant.

Requirement for international LoAs

NATs stated that the position of some areas would require international LoAs for ATC procedures to be created/updated.

Sponsor's response: The MoD formally requests that NATS commence this process. The MoD will assist as required.

No draft international LoAs have been submitted to the CAA, however the sponsor has provided confirmation from NATS that they are currently in draft and under review and will be completed prior to operational areas being used.

Impact on gliding community

NATS expressed the view that LoAs/procedures with the gliding community may need to be updated.

Sponsor's response: The MoD agreed and requested that NATS liaise with Prestwick Air Traffic Control (ATC) on how best to address deconfliction of gliding with E-7 operations in racetrack D1 to result in an updated LoA and articulation in the Civilian AIP.

Annex C Extract showing draft insertion to Letter of Agreement between NATS (En Route) PLC ("NERL") and British Gliding Association (BGA) and 78 Squadron, Swanwick (Military) and BAE Systems Warton has been submitted to the CAA.

Flight profile

NATS referred to earlier engagement indicating that the flight profile of the E-7 within an operating area may need to change within an operating area. They sought clarity on flight profiles within the orbit areas to develop procedures for agreeing the E-7 operating level, stating that some civil sectors are more sensitive to Right Hand or Left-Hand orbits or figure of 8 orbits. NATS requested further discussion to inform the development of required procedures.

Sponsor's response: The E-7 will fly racetrack patterns in long legs but will not be on the outer extremities of the proposed areas. The aircraft will fly a straight leg in the centre of the area and "tear drop" at each end. The E-7 will comply with ATC instructions where necessary to ensure deconfliction. Orbit direction and direction of turns can be tactically agreed on the day and amended as required. There is negligible impact on the E-7 radar picture with respect to direction of orbit/turns.

Surveillance and communications cover

Some areas may have constrained surveillance and communications cover which will need to be considered in operational agreements.

Sponsor's response: The MoD agrees. 78 Squadron have not identified any issues regarding communications at range. The E-7 has a comprehensive suite of radios and satellite communications that could be utilised in extremis. During the Test and Evaluation phase the sponsor will conduct communication trials at the extremities of the areas to ascertain if there are any issues that may need remedial action. The MoD propose discussing this issue at a NATS/MoD Table-top Exercise to prepare for E-7 operations.

Cumulative effect of multiple, simultaneous activations of operating areas and other Special Use Airspace (SUA)

Consideration needs to be given to the cumulative effect of multiple, simultaneous activations of operating areas and other SUA such as Danger Areas (DAs) and Air refuelling areas. The squeezing of civil traffic and associated workload changes must be considered. There may be some areas that would benefit from more robust airspace management protocols and notification procedures. NATS gave as examples pre-tactical notification at D-1, F1 area, D3232 and D613 complexes and C1 and D712.

Sponsor's response: The E-7 will comply with ATC instructions to deconflict in a high tempo environment. The E-7 will normally be tasked to support UK/USAFE Fast Jet training in existing Danger Areas (DAs). Tactical decision based on Fast Jet weather considerations will often dictate operating location. The designated operating area will be notified to 78 Sqn by the E-7 crew on a day-by-day basis 2-hours prior to departure which will allow 78 Sqn sufficient time to coordinate with the relevant civilian air traffic agency. The MoD do not want to

revert to a D-1 solution as this reduces flexibility and hinders operational effectiveness. The areas will be tested during Test and Evaluation (T & E) to assist with the safety case. We anticipate that the E-7 will fly one sortie per day (Monday to Friday) with a flight of approximately 10 hours, of which 2 hours may be used to transit to/from the area. On the majority of occasions only one operating area will be active so impact to civil traffic across the vast majority of the UK will be unchanged. Weekend operations will be by exception. Additional flights may be required in support of major National/NATO Exercises or in support of National Security tasks.

ATC assurance work

Should the E-7 areas be approved, ATC assurance work will be required. The MoD would be notified of any hazards or issues identified so that mitigations or solutions can be put in place.

Sponsor's response: The MoD will assist as necessary.

Feedback from the British Gliding Authority

The BGA's one concern was regarding racetrack D1 due to its partial location within the Scottish Temporary Reserved Area (Gliding) (TRA (G)) complex. They referred to the sponsor's statement that tactical coordination with Air Traffic Control (ATC) would resolve these conflicts on a daily basis on the few occasions gliding occurs above FL290 (Base of D1). The BGA were concerned that such days would be the very rare day when extremely high glider flights are possible, stating that a random Air Traffic Controller might award a presumption of priority to the MoD and decline to allow gliders access to the TRA(G) above FL270 or FL280 (buffer for FL290). The BGA requested that there be a written presumption of priority for gliders, with caveats for emergencies or matters of national security within the Aeronautical Information Publication (AIP).

Sponsor's response: We agree that gliding should continue in TRA(G) Scottish North and South with priority given to gliders versus the E-7 unless emergencies or matters of national security dictate otherwise. The MoD proposes amending the extant Letter of Agreement (LoA) which covers legacy E-3D operations and ongoing E-3A operations to 2035 in AEW operating area UK-9. The smaller proposed E-7 operating area D-1 predominantly sits within UK-9 so there should be little change to the ATC management of airspace. A separate entry referencing priorities will be published in the Civilian AIP.

The sponsor has submitted Annex C, a draft insertion to the extant LoA between NATS (En Route) NERL and the BGA and 78 Squadron, Swanwick (Military) and BAE Systems Warton. When AEW Operating Area D1 is active concurrently with TRA(G) Scottish Upper Area (South), the E-7 will either operate at FL350 allowing gliders to operate up to FL330 or will relocate to another E-7 Operating Area allowing gliders unlimited vertical access. This will allow gliders priority unless the E-7 has to be in the area for priority defence tasking in which case access to gliders will be denied.

Feedback from the MoD

DAATM expressed their full support for the ACP and raised no issues.

Sponsor's response: As the operating areas are non-segregated in the London and Scottish UIRs and will be managed tactically on a daily

	<p>basis, other MoD and USAFE operators will coordinate their movements to deconflict as required.</p> <p>Letters of Agreement</p> <p>The sponsor has submitted:</p> <ul style="list-style-type: none"> Annex B Draft LoA between MoD and NATS (Interface Document (ID) 8) – Procedures for AEW Aircraft Operations within the UK FIR/UIR in peacetime (dated 28 November 2024). Annex C Extract showing draft insertion to Letter of Agreement between NATS (En Route) PLC (“NERL”) and British Gliding Association (BGA) and 78 Squadron, Swanwick (Military) and BAE Systems Warton regarding operations in operating area D1. <p>The sponsor has provided an update by email that Annex B ID 8 is under review but will be completed and signed prior to operational areas being used.</p> <p>No international LoAs have been submitted to the CAA, however the sponsor updated by email that the international LoAs are currently in draft and under review but will be completed and signed prior to operational areas being used.</p>	
B.5.5	Is the formal airspace change proposal aligned with the conclusions of the engagement response document?	Yes
	Yes, it is aligned.	
B.5.6	Was a Public Evidence Session required for this proposal? If yes, was any new evidence presented which could alter the conclusions of the engagement response document and/or formal airspace change proposal submission?	N/A
	This is a level 3 airspace change and so there is no requirement for the CAA to consider holding a Public Evidence Session.	
B.6	RECOMMENDATIONS/CONDITIONS/PIR DATA REQUIREMENTS	
B.6.1	Are there any Recommendations which the change sponsor should try to address either before or after implementation (if approved)? If yes, please list them below.	None
B.6.2	Are there any Condition(s) which the change sponsor must fulfil either before or after implementation (if approved)? If yes, please list them below.	Yes

	<p><i>Before implementation:</i></p> <p>Proposed condition no.1: All LoAs to be finalised, agreed and signed by relevant parties and submitted to the CAA prior to implementation.</p>	
B.6.3	Are there any specific requirements in terms of the data to be collected by the change sponsor for the Post Implementation Review (if approved)? If yes, please list them below.	Yes
	<p><i>GUIDANCE NOTE:</i> <i>PIR data requirements concerns any specific data which the change sponsor should be instructed to collate post-implementation, if indeed the airspace change proposal is approved. Please use this section to list any such requirements so that they can be captured in the regulatory decision accordingly.</i></p>	
	<p><u>STAKEHOLDER OBSERVATIONS</u></p> <p>The change sponsor is required to collate related stakeholder observations (enquiry/complaint data) and present it to the CAA. Any location/area from where more than 10 individuals have made enquiries/complaints must be plotted on separate maps displaying a representative sample of:</p> <ul style="list-style-type: none"> • aircraft track data plots; and • traffic density plots <p>The plots should include a typical days-worth of movements from the last month of each standard calendar quarter (March, June, September, December) from each of the years directly preceding and following implementation of the airspace change proposal.</p>	

PART C – Consultation Assessment Conclusion(s)		
C.1	Does the consultation meet the CAA’s regulatory requirements, the Government’s guidance principles for consultation and the Secretary of State’s Air Navigation Guidance?	Yes
	<p>The fundamental principles of effective engagement are targeting the right audience, communicating in a way that suits them, and giving them the tools to make informative, valuable contributions to the proposal’s development. I am satisfied that these principles have been applied by the change sponsor before, during and after engagement. I am satisfied that the change sponsor has conducted this engagement in accordance with the requirements of CAP 1616, and that the engagement has:</p>	

	<ul style="list-style-type: none"> • Taken place when the proposal was at a formative stage – evidenced by the sponsor’s invitation to stakeholders to comment on the proposed design with a commitment that all feedback would help to shape the final proposal. The sponsor requested that stakeholders specifically consider the perceived effect, positive or negative, of the proposal, key concerns and any mitigating factors that could be employed to minimize impact. • Presented sufficient reasons for the proposal to permit intelligent consideration – evidenced by clear explanation provided regarding the basis for creation of the E-7 Operating Areas, detail on how the structures had evolved because of pre-stage 3 engagement, presentation of the 21 operating areas and an outline of potential impacts. • Provided a sufficient timeframe to allow considered responses – evidenced by a stage 3 engagement duration of 8-weeks and 3 days which was extended at the request of NATS. The sponsor had conducted preliminary engagement with their stakeholders to narrow down the issues and continued to engage after the formal engagement period had closed. • Taken into account the product of the consultation. Although the sponsor did not make any revisions to the E-7 operating areas on account of feedback, they had previously refined the areas on account of pre-stage 3 feedback from NATS. They have created and updated Letters of Agreement and committed to working further with stakeholders, for e.g., by assisting with ATC assurance work and conducting a MoD/NATS tabletop exercise.
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Level 3 ACP

PART D – Engagement Assessment sign-off			
	Name	Signature	Date
Engagement assessment completed by Airspace Regulator (Engagement and Consultation)	██████████	████████████████████	03.03.25
Engagement assessment conclusions approved by Principal Airspace Regulator	██████	██████████	05.03.25