# DATA PRODUCT SPECIFICATION OF OBSTACLE DATA SET KARLOVY VARY AERODROME (LKKV)

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| Version: | 1.0 |
| Language | English |
| Extent of the data product | Karlovy Vary Aerodrome (LKKV) |
| Topic category | Transportation |
| Keywords | Obstacles |

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| Abstract of the data product |
| This data set is a full data set and it describes the obstacles in Area 2 and Area 3 of the aerodrome.  The descriptions and requirements of the obstacles can be found in ICAO Annex 15, 16th Edition and PANS-AIM (Doc 10066), 1st Edition as well as in EUROCONTROL TOD Manual, Edition 3.0.  The data is collected and published according to ICAO Annex 15, 16th Edition requirements. |

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| **Contact Information** | |
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| **1. About the data product specification** | |
| Title | Obstacle data set Karlovy Vary Aerodrome (LKKV) |
| Latest version | NIL |
| Published | 2025-04-03 |
| Updated | 2025-04-03 |
| Language | English |
| Contact | Address: ANS CR, Navigační 787, 252 61, Jeneč Phone: +420 220 372 841  Email: [ais@ans.cz](mailto:ais@ans.cz)  Web site: https://aim.rlp.cz/ |
| Web location | NIL |
| Format | PDF |
| Maintenance | The data product specification is updated regularly and reviewed at least once every year. |
| Handling restrictions | *Not applicable* |
| Terms and definitions | See ICAO Annex 15, 16th Edition and PANS-AIM (Doc 10066), 1st Edition |
| Abbreviations | AIXM Aeronautical Information Exchange Model TOD Terrain and Obstacle Data  For additional abbreviations, see ICAO Annex 15, 16th Edition and PANS-AIM (Doc 10066), 1st Edition |
| **2. Identification and purpose of the data product** | |
| Official title | Obstacle data set Karlovy Vary Aerodrome (LKKV) |
| Alternative title | *Not applicable* |
| ID | LKKV\_VS\_250417 |
| Abstract | Obstacle data set for Karlovy Vary Aerodrome (LKKV). The data is collected and published according to ICAO Annex 15, 16th Edition requirements. The data is collected and published according to ICAO Annex 15, 16th Edition requirements. Obstacle data is provided for Area 2 and Area 3 of the aerodrome. |
| Purpose | The purpose of the data product is to provide obstacle data for air navigation applications. ICAO PANS-AIM, Chapter 5.3.3.2 provides possible uses of the data. It is the responsibility of the users to determine if the data product meets their needs. |
| Topic category | Transportation |

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| Keywords | Obstacles |
| Spatial representation | Vector |
| Spatial resolution | *Not applicable* |
| Supplemental information | *NIL* |
| Restrictions | For aviation use only! |
| Extent | LKKV Area 2, Area 3 |
| **3. Scopes** | |
| ***General scope*** | |
| Scope id | General scope |
| Level | Series |
| Level name | General scope |
| Level description | The general scope is the root level of the scope level hierarchy. The general scope level defines the specifications which are for obstacles LKKV Area 2 and Area 3 according to the requirements of ICAO Annex 15, 16th Edition. |
| Extent | LKKV Area 2 and Area 3 |
| Coverage | *Not applicable* |
| **4. Data content and structure** | |
| ***General scope*** | |
| Narrative description | The data model for obstacle data follows the model defined in AIXM 5.1 |
| Application schema | See Annex A |
| Feature catalogue | See Annex B |
| **5. Reference system** | |
| ***General scope*** | |
| Spatial reference system | Horizontal reference system: WGS-84, EPSG:4326.  Vertical reference system: Baltic 1977 height, EPSG:5705. |
| Temporal reference system | Gregorian Calendar, UTC |

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| **6. Data capture and production** | |
| ***General scope*** | |
| Description | Obstacle data capture rules are based on EUROCAE ED- 98C and Eurocontrol TOD Manual. Obstacle coverage areas have been created according to ICAO Annex 15, 16th Edition and PANS-AIM, 1st Edition. |
| Guide | EUROCAE ED-98C |
| Data acquisition and processing | The data was captured and processed with photogrammetry and terrestrial survey. |
| **7. Maintenance of the data** | |
| ***General scope*** | |
| Description | The data set will be updated every AIRAC cycle.  New obstacles erected between AIRAC dates will be announced by NOTAM. |
| Frequency | Continual |
| User defined | *Not applicable* |
| **8. Portrayal rules** | |
| ***General scope*** | |
| Portrayal rules | *Not applicable* |
| **9. Data delivery** | |
| ***General scope*** | |
| Format name | AIXM |
| Format version | 5.1 |
| Format specification | AIXM 5.1 Specification (source [http://aixm.aero](http://aixm.aero/)) |
| File structure | <http://www.aixm.aero/schema/5.1/AIXM_Features.xsd> |
| Language | English - eng |
| Character set | UTF-8 |
| Units of delivery | Dataset |
| Transfer size | Various |

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| **10. Metadata** | |
| ***General scope*** | |
| Specification | Title: ISO 19115:2003, Geographic information – Metadata Date: 2003 |
| Encoding | Title: ISO 19139:2007, Geographic information – Metadata  – XML schema implementation  Date: 2007 |
| Metadata elements | The metadata is included in the data set as described in Commission implementing regulation (EU) 2020/469 AIS.TR.340.  The following metadata is provided:   * name of the organizations or entities providing the data set; * the date and time when the data set was provided; * the validity of the data set; and * any limitations on the use of the data set. |
| **11. Additional information** | |
| ***General scope*** | |
| Additional information | *Not applicable* |

#### Annex A Application schema

The application schema is according to the AIXM 5.1 model (source [http://aixm.aero](http://aixm.aero/)). The overview of vertical structure is presented below.



#### Annex B Feature catalogue

All necessary definitions are given in the AIXM 5.1 model. The full definitions as well as the mapping of all ICAO requirements to AIXM 5.1 can be found at [http://aixm.aero](http://aixm.aero/).

The table below lists the obstacle attributes (as specified in ICAO PANS-AIM Appendix 1 Table A1-

6) that are provided in the data set and their mapping to AIXM 5.1

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| Table A1-6 Obstacle data | | AIXM 5.1 |
| Property | Sub-Property | Feature |
| Obstacle identifier |  | VerticalStructurePart.designator |
| Operator / Owner |  | VerticalStrucuture.annotation.Note |
| Geometry type |  | VerticalStructurePartGeometry.surfaceExtent VerticalStructurePartGeometry.linearExtent VerticalStructurePartGeometry.location |
| Horizontal position |  | VerticalStrucurePart.location.ElevatedPoint VerticalStrucurePart.linearExtent.ElevatedCurve  VerticalStrucurePart.surfaceExtent.ElevatedSurface |
| Horizontal extent |  | VerticalStructure.radius |
| Elevation |  | VerticalStrucurePart.location.ElevatedPoint.elevation  VerticalStrucurePart.linearExtent.ElevatedCurve.elevati on  VerticalStrucurePart.surfaceExtent.ElevatedSurface.ele vation |
| Height |  | VerticalStrucurePart.verticalExtent |
| Type |  | VerticalStructure.type |
| Date and time stamp |  | VerticalStructure.featureLifetime.start |
| Operations |  | VerticalStrucurePart.mobile VerticalStrucurePart.constructionStatus |
| Effectivity |  | VerticalStructure.timeSlice.VerticalStructureTimeSlice.v alidTime  VerticalStructure.timeSlice.VerticalStructureTimeSlice.fe atureLifetime  VerticalStructurePart.timeInterval.Timesheet |
| Lighting | Type | VerticalStructure.lighted VerticalStructure.lightingICAOStandard VerticalStructure.synchronisedLighting  VerticalStructurePart.lighting.LightElement.type |
|  | Colour | VerticalStructurePart.lighting.LightElement.colour |
| Marking |  | VerticalStructure.markingICAOStandard VerticalStructurePart.markingPattern VerticalStructurePart.markingFirstColour  VerticalStructurePart.markingSecondColour |
| Material |  | VerticalStructurePart.visibleMaterial |

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