



Home Office

# National ANPR Standards for Policing: Part 1 – Data Standards

Version 2.0  
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# Change History

Version No.	Date	Details of Changes included in Update	Author
1.0	May 2013	Approved Version 1	Bill Mandeville
1.1	12.12.13	Draft incorporating reference to new Part 3 NASP Database Access Standards	Bill Mandeville
1.2	07.01.14	Minor Revisions	Bill Mandeville
1.3	24.03.14	Updated Glossary added Appendix A	Bill Mandeville
1.4	26.03.14	Minor revisions	Bill Mandeville
1.5	18.07.14	Data retention provisions moved to Part 3 NASP	Bill Mandeville
1.6	24.07.14	Minor revisions	Bill Mandeville
1.7	18.09.14	Minor revisions following liaison with ICO	Bill Mandeville
2.0	15.10.14	Version 2.0 as approved by National User Group	Bill Mandeville

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# 1 Introduction

- 1.1 In order to facilitate the development and integration of Automatic Number Plate Recognition (ANPR) systems used by law enforcement agencies (LEAs), a set of standards have been developed by the National ANPR Programme Team on behalf of the Association of Chief Police Officers of England, Wales and Northern Ireland (ACPO) and the Police Service of Scotland and other LEAs who connect to or have access to the National ANPR Infrastructure (NAI). These are the National ANPR Standards for Policing (NASP). The standards are consistent with the requirements of the Surveillance camera Code of Practice issued under provisions of the Protection of Freedoms Act 2012.
- It is expected that these standards will be adopted by LEAs throughout the UK.
- 1.2 NASP is divided into three parts:
- Part 1 – Data Standards
  - Part 2 – Infrastructure Standards
  - Part 3 – Data Access and Management Standards
- Part 1 (this document) prescribes the standards with which data must comply in order for it to be accepted into the law enforcement NAI.
- Part 2 (published separately) prescribes the standards for the components of the NAI including the operability standards required of Back Office systems that are to be used by LEAs and connected to the NAI.
- Part 3 (published separately) prescribes the standards required for access to and management of ANPR data within the NAI
- 1.3 This document supersedes any previously published versions.

# 2 Applicability

- 2.1 These standards apply to any ANPR systems operated by the police service and other LEAs, throughout the UK, that connect to, or receive data from the NAI. ANPR systems include the Number Plate Reading Device (NRD), the Back Office Facility (BOF), communications links, firewalls and other related supporting components, including those components that are under the ownership or control of other organisations.
- 2.2 An ANPR system must conform to Parts 1 and 2 of NASP for it to be a candidate for supplying data to the National ANPR Data Centre (NADC).
- 2.3 An organisation may only connect to, or receive data from the NAI following approval of the Policing lead for ANPR within the national ANPR Programme. Reference to LEA within all parts of NASP is in respect of 'Approved LEA' unless indicated otherwise. LEAs are listed in Appendix A.

# 3 Data Security

- 3.1 LEAs have a duty to protect ANPR data to ensure its integrity and to maintain its judicial standing. ANPR 'read' data should be attributed a protective marking of

PROTECT – ANPR – READ DATA.<sup>1</sup> ANPR data is not assessed as personal data at the point of capture or until such data is entered into an LEA database system, e.g. BOF or NADC.

- 3.2 When loaded onto an LEA database, other material could be accessed such that personal details of persons associated with the ANPR ‘read’ data (vehicle) may be identified. Once ANPR ‘read’ data is available within an LEA database, it is then to be treated as ‘personal data’ in the context of the Data Protection Act (DPA) 1998, and all ANPR data should be managed in accordance with DPA principles and handled as RESTRICTED data in accordance with the Government Protective Marking Scheme (GPMS).
- 3.3 Whilst in the custody of, or being transmitted to or from an LEA, ANPR data should be handled in conformance with Part 2 of NASP.
- 3.4 Access to data within ANPR systems must be in conformance with Part 3 of NASP

## 4 Capture Records

### 4.1 Composition

- 4.1.1 An ANPR capture record places a vehicle bearing a particular registration mark at a particular place at a particular time.
- 4.1.2 There are three key components:
  - Core data – Vehicle Registration Mark (VRM), time, location of capture and camera identifier (all mandatory)
  - Supporting imagery – overview (optional) and plate patch (mandatory for systems under the ownership or control of an LEA)
  - Other metadata – further information (some mandatory, some optional)

### 4.2 Core Data

#### 4.2.1 Vehicle Registration Mark (Mandatory)

ANPR data must accurately represent VRMs of all vehicles with correctly represented EU and Schengen Community number plates. Systems must accurately record the VRM for vehicles passing through the field of each NRD to standards appropriate for each type of NRD as defined within Part 2 NASP.

The required format must conform to the Standard Coding Format UTF-8 character set. The VRM must contain no spaces.

#### 4.2.2 Vehicle Registration Mark – Not Read (Mandatory where functionality is in place)

Where a NRD has the capability to record images of vehicles passing within the field of view where no VRM is identified by the system, ‘QQQQQQQ’ must be recorded within the VRM field.

The required format must conform to the Standard Coding Format UTF-8 character set. The VRM must contain no spaces.

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<sup>1</sup> This will be amended when all LEAs have implemented the revised Government Security Classifications

### 4.2.3 Time (Mandatory)

System audit provisions must provide evidence of synchronisation using standard time source techniques to Greenwich Mean Time (GMT) plus 0 (+0) at least once every 10 minutes, with accuracy to stratum level 3.

The required format is 'dd/mm/yyyy hh:mm:ss', in 24 hour format.

For the purpose of management and audit it is desirable for the BOF component of the ANPR infrastructure to record the time and date a vehicle capture within the database and for that information to be easily retrievable.

### 4.2.4 Location (Mandatory)

ANPR data must place a capture in a location, accurate to within 10 metres. This location should have been ascertained through a Global Positioning System (GPS) device. In addition all fixed-site ANPR cameras must have their GPS co-ordinates accurately recorded to within 5 metres.

The required format for recording a location is latitude and longitude in decimal degrees.

When a mobile ANPR system is unable to deliver an accurate GPS coordinate for a read, the GPS field must be populated with N0000000 E00000000.

## 4.3 Supporting Imagery

In order to assist with assessment of the accuracy of individual capture records, ANPR data can include images:

- Plate patch – showing the number plate only, to allow comparison of the visual image with the textual representation interpreted (Mandatory for systems under ownership or control of an LEA)
- Overview – showing the vehicle, to allow identification of the make, model and colour of the vehicle in the context of the capture zone (Optional)
- 'Geo Tagging', if an accurate GPS Geo Location is available, then this detail may be added to images using Exif (Exchangeable image file format) (Optional)

A plate patch must be in JPEG format, 120x60 pixels and be no more than 3kB in size.

An overview image must be in JPEG format, no more than 25kB in size.

All images must be linked to the corresponding capture record.

All Plate Patch images recorded must be forwarded to the NADC. Where no image has been recorded the capture record must include a reference to identify that no image is recorded.

## 4.4 Other Metadata

Other data to be provided as part of a capture record is detailed in the table below:

Column	Format	Mandatory	Details
Feed ID	Numeric	Yes	Short integer (range 1 to 9999) Also known as 'Force ID'
Source ID	Numeric	Yes	Short integer (range 1 to 9999)
Camera ID	Numeric	Yes	Short integer (range 0 to 9999) Camera ID zero (0) must be used to denote VRMs entered manually by the operator of the ANPR system.
Username	String	Yes	Username of operator using the ANPR system. When deployed in other circumstances, use 'Unattended'.
Preset ID	Integer	No	Short integer Default value is 0 Used to indicate direction of travel on multi-use CCTV cameras

## 5 Record Retention and Deletion

- 5.1 All capture records received by LEAs must be supplied to the NADC. The plate patch image should also be supplied. LEAs must not operate multiple BOFs that contain ANPR data from different sources, managed separately for the retention of records that are not fully consistent with the requirements of NASP
- 5.2 All records must be managed and subsequently deleted in accordance with Part 3 NASP.

## 6 Performance Evaluation

- 6.1 An annual performance evaluation of all components within ANPR systems must be conducted to assure conformance with the data standards defined in part 2 of NASP. Timescales for all performance evaluations must be defined in local policy and standard operating procedures. In addition systems should be monitored to enable early identification of any reduced levels of performance. Where performance falls below standards then this must be corrected and reassessed to confirm that performance conforms to data standards, within 30 days of that being identified. If not resolved within 30 days of identification, then the feed of data from those components must cease until corrected.
- 6.2 In addition to the above, the performance standards for all NRD that do not have the capability to provide supporting imagery must be evaluated at not less than 6 monthly intervals for at least 50 vehicles passing consecutively within the field of view.

- 6.3 A log for all performance evaluation activities must be retained in a form to enable the record of reviews for each component within ANPR systems to be identified and retrieved when required.

## **7 Further Details**

Any enquires in relation to NASP should be addressed in the first instance to the National ANPR Programme Team at [anpr@homeoffice.gsi.gov.uk](mailto:anpr@homeoffice.gsi.gov.uk).

## Glossary of Terms, Abbreviations and Definitions

ACPO	Association of Chief Police Officers of England, Wales and Northern Ireland
ANPR	Automatic Number Plate Recognition
ANPR system	A collection of cameras, readers and Back Office Facility
BOF	Back Office Facility
Capture	The process by which a VRM is read
CCTV	Closed Circuit Television
CPIA	Criminal Procedure and Investigations Act 1996
DPA	Data Protection Act 1998
Exif	Exchangeable image file format
GSCP	Government Security Classification Policy – (replaces the Government Protective Marking Scheme)
GMT	Greenwich Mean Time
GPS	Global Positioning System
GPMS	Government Protective Marking Scheme
JPEG	Joint Photographic Expert Group image format
LEA	Law Enforcement Agency – Includes police forces and other agencies undertaking law enforcement activities
NASP	National ANPR Standards for Policing
NADC	National ANPR Data Centre
NAI	National ANPR Infrastructure
NRD	Number Plate Reading Device
Schengen	The Schengen Information System will enable the authorities of signatory countries to have access to reports on persons and objects for the purpose of border checks and controls and other police and customs checks
UTF - 8	Unicode Character Set – Provides a standard coding format used in software applications and operating systems
VRM	Vehicle Registration Mark

## APPENDIX A

### Approved LEA

ACPO Vehicle Crime Intelligence Service (AVCIS)  
Avon and Somerset Constabulary  
Bedfordshire Police  
British Transport Police  
Cambridgeshire Constabulary  
Cheshire Constabulary  
City of London Police  
Civil Nuclear Constabulary  
Cleveland Police  
Cumbria Constabulary  
Derbyshire Constabulary  
Devon and Cornwall Constabulary  
Dorset Police  
Driver and Vehicle Standards Agency (DVSA)  
Durham Constabulary  
Dyfed-Powys Police  
Essex Police  
Gloucestershire Constabulary  
Greater Manchester Police  
Gwent Police  
Hampshire Constabulary  
Hertfordshire Constabulary  
H M Revenue & Customs (HMRC)  
Humberside Police  
Kent Police  
Lancashire Constabulary  
Leicestershire Constabulary  
Lincolnshire Police  
Merseyside Police  
Metropolitan Police Service  
Ministry of Defence Police  
National Crime Agency (NCA)  
Norfolk Constabulary  
North Wales Police  
North Yorkshire Police  
Northamptonshire Police  
Northumbria Police  
Nottinghamshire Police  
Police Scotland  
Police Service of Northern Ireland (PSNI)  
South Wales Police  
South Yorkshire Police  
Staffordshire Police  
Suffolk Constabulary  
Surrey Police  
Sussex Police  
Thames Valley Police  
Warwickshire Police  
West Mercia Constabulary  
West Midlands Police  
West Yorkshire Police

