AUTOMATED RACISM

How police data and algorithms code discrimination into policing

AMNESTY INTERNATIONAL

Amnesty International is a movement of 10 million people which mobilises the humanity in everyone and campaigns for change so we can all enjoy our human rights.

Our vision is of a world where those in power keep their promises, respect international law and are held to account.

We are independent of any government, political ideology, economic interest or religion and are funded mainly by our membership and individual donations.

We believe that acting in solidarity and compassion with people everywhere can change our societies for the better.

Automated Racism: How police data and algorithms code discrimination into policing

AI Index Number: EUR 45/8992/2025

Published February 2025

Amnesty International UK, Human Rights Action Centre,
17-25 New Inn Yard, London EC2A 3EA

www.amnesty.org.uk
sct@amnesty.org.uk

Cover photo: Unsplash/Timon Studler

AUTOMATED RACISM

How police data and algorithms code discrimination into policing

Contents

Abbreviations

ABH	actual bodily harm
AI	artificial intelligence
ASB	anti-social behaviour
ATM	automated teller machine (a cash dispenser)
CAD	computer-aided dispatch
CESCR	Committee on Economic, Social and Cultural Rights
CRIS	Crime Recording System (used by the Metropolitan Police Service)
DARAT	Domestic Abuse Risk Assessment Tool (used by Hampshire Constabulary and Thames Valley Police)
ECHR	European Convention on Human Rights
ECtHR	European Court of Human Rights
FOI	freedom of information
GDPR	General Data Protection Regulation
GIS	geographic information system
GMP	Greater Manchester Police
GPS	global positioning system
GBH	grievous bodily harm
HART	Harm Assessment Risk Tool, an algorithmic risk assessment tool
ICCPR	International Covenant on Civil and Political Rights
ICERD	International Convention on the Elimination of All Forms of Racial Discrimination
ICO	Information Commissioner's Office
IOM	Integrated Offender Management, a profiling system
LAPD	Los Angeles Police Department
MPS	Metropolitan Police Service
NGO	non-governmental organisation
ONS	Office for National Statistics
PNC	Police National Computer
PND	Police National Database
PSED	Public Sector Equality Duty
PSNI	Police Service of Northern Ireland
RBP	risk-based policing
RTM or **RTMDx**	risk terrain modelling, an automated geographic predictive policing system
STORM	System for tasking and operational resource management (software that many UK police forces use for computer-aided dispatch)
VHA	Violence Harm Assessment, crime prediction and risk assessment tool
WMP	West Midlands Police

Glossary

ArcGIS: a proprietary geographic information mapping system

Chilling effect: when the fear of a negative response, for example from the state, leads people to change their behaviour, for example by self-censoring.

COMPAS (Correctional Offender Management Profiling for Alternative Sanctions): a predictive risk scoring system used in the US criminal legal system.

'Crime' and 'criminalised behaviour': crimes are considered to be criminal offences under the law. Criminalised behaviour refers to behaviour which is not explicitly a crime but is still treated as such by police and other authorities.

Domestic Abuse Risk Assessment Tool (DARAT): a profiling tool used by Hampshire Constabulary and Thames Valley Police.

Delphi Geo Spatial Analysis: a geographic information mapping tool used by some UK police forces for geographic crime prediction.

Formal suspicion: a person is considered to be under formal suspicion once they have been charged with a crime.

Gangs Matrix: a predictive and profiling database used by the Metropolitan Police Service.

Integrated Offender Management (IOM): a machine-learning tool used for profiling individuals.

Knife Crime and Violence Model: an automated individual risk assessment system used by Essex Police.

Operation Grip: a UK Home Office-funded crime mapping programme.

PAVED: a national gendarmerie system (France) which used data on household incomes, nationality, immigration and household composition to attempt to predict car thefts.

'Police intelligence': information reported by police and held on police databases. It can include uncorroborated information, representing the subjective views of an individual officer.

Predictive policing: Throughout this report, we use the term 'predictive policing' to refer to the data-driven, profiling, and risk prediction and assessment systems used by police forces. The term 'predictive policing' asserts that there is a predictive function being carried out, something disputed by the evidence in this report, the experts we interviewed, and published research. However, as the term is widely used as a reference for these systems in general parlance, policies and academic research, we use it in this

report for ease of reference. This does not imply we endorse its use or believe these systems to be truly predictive.

Offender Management App: A risk profiling tool used by Avon and Somerset Police.

PredPol: a commercial geographic predictive policing system.

Prevent: a UK government programme ostensibly aimed at stopping people from becoming terrorists or supporting terrorism. Prevent also supports the rehabilitation and disengagement of people already involved in terrorism. Like predictive policing, it involves collecting and processing data on a large scale, and profiling.

Qlik Sense: a data analytics platform used by police, including for systems which seek to predict, profile or assess the risk of people committing crime.

Racial profiling: suspecting, targeting or discriminating against someone based on characteristics such as their supposed race or ethnicity, rather than because of evidence about that individual.

Racialised: this report uses the term to refer to individuals and communities who are identified as a group because they are non-white. Where disaggregated data is presented, we refer to the specific community being highlighted, such as Black, Asian or mixed. When quoting from official documents or interviews, the terms Black and Minority Ethnic (BME) or Ethnic Minority may appear.

Risk (as in 'at risk of committing crime'): this report uses the term to refer to the alleged likelihood that someone will be a victim or perpetrator of a crime. For readability, we have not used quotation marks every time, but this does not imply endorsement of the term.

Risk terrain modelling (RTM): an automated geographic predictive policing system.

RTMDx: a risk terrain modelling software.

Solely automated data processing: data processing without human intervention and that may have legal or other significant effects on an individual.

Stop and search: police discretionary power to stop and detain people in order to search them.

Subject Access Request (SAR): the process by which someone can request a copy of personal information that an organisation may be holding about them.

Sus laws: laws which gave police discretionary powers to stop and arrest people they suspected of engaging, or intending to engage, in criminal activity.

Top600 and Top400: automated individual risk modelling systems used in the Netherlands to profile and rank young people according to their alleged likelihood of committing crime.

Executive summary

> 'a lot of policing claims to be predictive [...] police make a prediction about who they should stop, who they should search, who they should question based on some kind of prediction, sometimes informed by evidence, often not. What is now being called predictive policing is the automation of those forms of prediction.'
> **Dr Adam Elliot-Cooper, Queen Mary, University of London**[1]

> '[W]hat we're doing is shifting from a society or a space within which we respond to the needs of individuals, and what we do is present them this risk that needs to be managed [...] rather than responding to those needs that individuals may have, it repackages it algorithmically, you literally shift these individuals into risk to be managed.'
> **Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University**[2]

> 'the way in which these systems work is that you're guilty until you can prove yourself innocent. [...] criminalisation is a justification for their existence [...] There is the presumption that people need to be surveilled and that they need to be policed.'
> **Zara Manoehoetoe, Kids of Colour and Northern Police Monitoring Project**[3]

Almost three-quarters of UK police forces are using data-based and data-driven systems to attempt to predict, profile, and assess the risk of crime or criminalised behaviour occurring in the future. The use of such approaches is influencing decisions in policing and the criminal legal system and people's access to essential services.

The use of these so-called predictive policing tools in policing and the criminal legal system violates people's rights, including the right to a fair trial and the presumption of innocence, the right to privacy, the right to freedom of assembly and association, and the right to equality and non-discrimination. These systems are, in effect, a modern method of racial profiling, reinforcing racism and discrimination in policing. They also risk violations to people's economic, social and cultural rights, such as the right to social security.

Police forces use these systems to attempt to predict where alleged crime will occur and to predict and profile who will commit crime in the future or who is at 'risk' of committing crime or other criminalised behaviour. Police use these so-called predictions, profiles, and risk assessments to target specific areas, and people and groups in those areas, with increased policing. The aim is to target certain individuals and intervene before the predicted behaviour has occurred.

These predictions, profiles and risk assessments influence a wide range of policing, including surveillance and monitoring of areas and individuals, police patrols and other targeted operations, including stop and search and arrest. Police forces also share these predictions, profiles and risk assessments, and related data, with other criminal legal system authorities including the Crown Prosecution Service, prison and probation services; with essential public service providers such as councils and local

authorities, and the Department for Work and Pensions; and with unspecified third-party agencies and organisations.[4] Predictive policing systems are contributing to racist and discriminatory policing and criminalisation of areas, groups and individuals, perpetuating institutional racism in policing and society.

Their use is leading to the repeated targeting of more deprived areas, including areas with higher populations of Black and racialised people, and the targeting of individuals from Black and racialised and more deprived backgrounds. There are strong parallels between the racism of police profiling in the 1970s and 1980s in the UK under 'Sus laws', and the use of predictive policing systems to profile people, communities, and neighbourhoods today. These data-based systems are the modern face of racial profiling.

These systems are developed and operated using data from policing and the criminal legal system. That data reflects the structural and institutional racism and discrimination in policing and the criminal legal system, such as in police intelligence reports, suspect data, stop-and-search or arrest data. There is inherent bias in that data. For example, areas with high populations of Black and racialised people are repeatedly targeted by police and therefore crop up in those same police records. Black people and racialised people are also repeatedly targeted and therefore over-represented in police intelligence, stop-and-search or other police records. This is the data which is then used in police predictive, profiling and risk assessment systems – to develop them, train them, and operate them. These biases lead the systems using that data to predict that crime will occur in those areas, or that individuals from those backgrounds are likely to commit crime.[192] These outputs lead to further repeated targeting of those areas and individuals, creating a cycle of discrimination and criminalisation.

People in this report spoke of being repeatedly targeted and stopped by police in the areas where they live, of being targeted by police because of where they live, of being questioned, stopped and searched, and being subjected to violence by police. Others spoke about the trauma of being repeatedly targeted by police, both on an individual and a community level.

This report focuses on multiple aspects of predictive policing in the United Kingdom (UK), including the systems themselves, the policing outcomes or decisions they influence, and the impact on individuals, groups and communities in the UK.

The research for this report took place between October 2022 and November 2024. Amnesty International sent Freedom of Information requests to all UK police forces, and reviewed publicly available documentation relating to forces' use of predictive policing systems. In areas where police have used predictive policing systems Amnesty International conducted discussions with groups, as well as with individuals profiled by police, and members of community groups. Amnesty International also interviewed experts and academics with relevant knowledge, including a former police chief scientist and a member of a police data ethics committee.

The human rights impact of predictive policing

Discrimination

Use of predictive, profiling and risk assessment systems in policing is leading to racial profiling, discrimination and discriminatory treatment, in breach of the UK's national and international human rights obligations.

The use of these systems by police results, directly and indirectly, in racial profiling, and the disproportionate targeting of Black and racialised people and people from lower socio-economic backgrounds. This in turn leads to their increased criminalisation, punishment, and exposure to violent policing.

As the UN High Commissioner for Human Rights has acknowledged, 'predictive tools carry an inherent risk of perpetuating or even enhancing discrimination, reflecting embedded historic racial and ethnic bias in the data sets used, such as a disproportionate focus of policing of certain minorities.'[5]

Police and criminal legal system data reflects the structural and institutional racism and discrimination that exists in society. This data is then used in police predictive, profiling and risk assessment systems at all stages; to develop them, train them, and operate them. These systems thus lead to discriminatory outputs, exacerbating discrimination that already exists in policing and the criminal legal system. The geographic-focused crime prediction and hotspot mapping systems lead to the same areas and communities, often more deprived areas, and areas with high populations of Black and racialised people, being racially profiled and repeatedly targeted by police. This leads to people in those communities being frequently monitored and subject to stop and account, stop and search, and even use of force. It leads to a greater likelihood of engagement with police and therefore increased risk of encounters escalating into violence and sometimes serious harm at the hands of the police.

Individual-focused prediction, profiling and risk prediction systems similarly lead to people from the same backgrounds – often Black and racialised people and people from lower socio-economic backgrounds – being racially profiled and repeatedly targeted by police. This also results in those people being monitored, subject to stop and account, stop and search, use of force and an increased likelihood of engagement with the police.

These systems also influence other decisions in the criminal legal system, such as licence conditions. Profiles are shared with the Crown Prosecution Service, probation service, the Department for Work and Pensions, local authorities and unspecified third-party agencies or organisations.

The policing and criminal legal system outcomes for, and impacts on, Black and racialised people are entered into police and criminal legal system data, creating feedback loops of policing, discrimination and criminalisation.

A fair trial and the presumption of innocence

Predictive policing systems produce predictions, profiles and risk assessments. These amount to suspicion of criminality or actual labels of criminality, about a person or group in a particular area. That suspicion or label is based on data which does not amount to evidence of a criminal conviction, or amount to formal suspicion in the form of a charge, but merely reflects a profile, or opinion, of potential guilt. These predictions can lead to policing interventions and consequences for individuals and groups profiled or labelled. This risks violating the presumption of innocence and the right to a fair trial.

People in areas targeted by these systems are presumed guilty. Police are pre-disposed to seeing their behaviour as criminal or dangerous, increasing their risk of criminalisation. Police using these systems have sought to highlight how predictions have led to targeted patrols of areas, stop and account, stop and search and arrests.

Even more directly, individuals profiled by individual-focused predictive policing systems are not presumed innocent. Individuals are profiled and labelled as criminals based on intelligence reports and mere suspicion of involvement in crime, without objective evidence. An individual can be profiled without having committed a crime.

These profiles lead to monitoring and interventions by police, including stop and search and home visits, continuing the cycle of criminalisation. Profiles are shared with the Crown Prosecution Service, probation, and prison authorities, potentially influencing criminal legal system outcomes such as charging decisions, licence conditions, sentencing and prisoner categorisation. Profiles have also been shared with other agencies, including the Department for Work and local authorities, where they may affect people's ability to access essential services such as welfare and employment, and other local authority-run services.

The use of these pre-emptive systems to target people and groups before they have offended risks infringing on the presumption of innocence and the right to a fair trial. As these systems can also be used in sentencing, they risk undermining the principles of consistency of sentencing.

Privacy and data

The use of predictive policing systems leads to heightened police activity in particular locations, and a greater possibility of interference and unwarranted intrusion by the state. These systems erode people's right to privacy, targeting them in their local area and targeting them because of the area they live in.

Individuals' profiles are shared with other state agencies, including the Crown Prosecution Service and probation services, Department for Work and Pensions, local authorities and unspecified third-party agencies or organisations, increasing concerns about the proportionality of the interference with people's rights. The stigma of suspicion or guilt can follow individuals as they interact with local services, including employment, housing and education. The data sharing can also lead to negative outcomes in other areas of people's lives, such as withdrawal of welfare.

Predictive policing systems necessitate the widespread monitoring, collection, storage and analysis or other use of personal data, including sensitive personal data, without individualised reasonable suspicion of criminal wrongdoing (as distinct from data on previous offending history).

This report provides evidence that UK police use of these systems disproportionately targets Black and racialised people and people from more deprived backgrounds, at scale. This amounts to indiscriminate mass surveillance. Mass surveillance can never be proportionate interference with the rights to privacy, freedom of expression, freedom of association and of peaceful assembly. Amnesty International considers that all indiscriminate mass surveillance fails to meet the test of necessity and proportionality and therefore violates international human rights law.

The use of systems that necessitate such widespread monitoring, collection, storage and analysis or other use of such data is therefore a violation of the right to privacy.

Freedom of association and the chilling effect

The use of predictive and profiling systems to target both geographic areas and individuals and communities can have a chilling effect on people's ability and willingness

to exercise their right to freedom of association and assembly. This research evidences how people who live and reside in areas targeted by predictive policing will seek to avoid those areas as a result, leading to a chilling effect.

As noted above, predictive policing is a form of mass surveillance. Mass surveillance – and even the threat of such surveillance – can have a chilling effect on people's ability and willingness to exercise their right to freedom of association. This is especially so when the mass surveillance is discriminatory.

Lack of transparency

There is a significant lack of transparency around police use of predictive policing systems in the UK. People do not know about their use in policing and their influence on the policing of the areas where they live, or how they are affected or targeted. People do not know when they have been targeted by police as a result of a predictive, profiling or risk assessment system. And people do not know how to challenge such a prediction, profile or risk assessment. Even when people do seek information, for example about whether they have been profiled, they are met with legal refusals, rebuttals and exemptions from police.

Not provided by law

Predictive policing is premised on the concept of predicting criminal behaviour and intervening before it happens.

These systems are used to generate predictions and profiles, labels of potential crime and criminality, and suspicion of crime and criminality, against individuals, communities, and areas, resulting in policing intervention or enforcement. Police have huge discretion over what intervention or enforcement action is used. This makes it difficult, if not impossible, for people to adjust their behaviour to avoid this unwarranted and disproportionate state intervention. This raises serious concerns about how far the use of these systems complies with the principle of legality and is adequately provided by law – and hence serious doubts about whether these systems are lawful.

Disproportionate

UK police use of predictive policing systems is disproportionate: their interference with human rights, and the harms they exacerbate, outweigh any alleged effectiveness in preventing and detecting crime.

Substantial numbers of people are targeted: more than one system profiles hundreds of thousands of people in a single police force area. It cannot be proportionate to indiscriminately profile hundreds of thousands of people to assess their potential future risk of criminality.

The police create these tools using an extremely broad definition of crime or criminality or offending, using a broad swathe of data. The use of these systems cannot be considered proportionate when their use disproportionately impacts and affects Black and racialised people and people from more deprived backgrounds.

Right to effective remedy

Individuals subject to police predictive, profiling and risk prediction systems must have access to effective remedy.

But people have no way of knowing if they have been profiled, risk assessed or are the subject of a prediction because there is no meaningful transparency regime, and because of obfuscation by police forces.

The law offers little or no protection against the predictions, profiles, and risk assessments, and the action they lead to.

Key recommendations

Prohibition

Predictive policing systems used by police in the UK are leading to violations of people's rights to equality and non-discrimination, fair trial and the presumption of innocence, privacy, and freedom of assembly and association.

Amnesty International has called for a ban on the use of predictive policing, in relation to both individual-focused and geographic-focused systems.[6] In 2023 Amnesty International called for predictive policing systems to be prohibited in the European Union's Artificial Intelligence (AI) Act. Amnesty International was also a signatory to a joint statement along with 114 other human rights and civil society organisations in Europe, which said that the European Union must prohibit all forms of predictive and profiling systems in law enforcement and criminal justice, including systems which focus on individuals, groups and locations or areas.[7] The EU AI Act includes a prohibition on predictive policing systems.[8]

Amnesty International believes the use of data-based predictive, profiling and risk assessment systems by police, law enforcement and criminal justice authorities in the UK to predict, profile or assess the risk or likelihood of offending, re-offending or other criminalised behaviour, or the occurrence or re-occurrence of an actual or potential criminal offence(s), of individuals, groups or locations, should be prohibited.

Transparency

All data-based and data-driven systems used by police and in the criminal legal system must be subject to clear transparency requirements. This must be in addition to a ban on the above, most harmful, systems which attempt to predict, profile and assess the risk of future criminality. These transparency requirements are necessary to ensure that people can exercise their rights, and to ensure that the prohibition described above can be monitored and enforced.

There must be a clear legal obligation that requires police forces and other law enforcement authorities to publish full and explanatory details of the data-based and data-driven systems they develop and use.

At a minimum, there should be a statutory obligation on UK police forces and other law enforcement authorities across England and Wales, Scotland and Northern Ireland, including criminal legal system authorities (such as the Ministry of Justice and prison and probation services), to register and publish details about all the predictive, profiling and risk prediction systems they are developing or using on a publicly available and accessible register.

This publicly accessible register must include:
- **What the intended purpose of the system is;**
- **How the system is operated in practice, including a standard operating procedure;**
- **All data types that the system uses, including the sources of that data;**
- **What decisions or outcomes the system influences;**
- **Any internal reviews or evaluations.**

Accountability: Effective redress and remedy for people and communities affected

People and groups who have been subject to data-based and data-driven systems, including any predictions, profiles or risk assessments by police, law enforcement or criminal legal system authorities, should have clear and meaningful routes to challenge those decisions.

The lack of transparency, and obfuscation and opacity in police forces' use of these systems, can make it challenging to evidence and establish when automated systems have indirectly affected an individual, group or area.

In the context of law enforcement use of data and automated processing and decision-making, safeguards under data protection law are limited to the processing of personal data[9] and to solely automated processing which produces legal or significant consequences.[10]

There must be a statutory obligation on UK police forces and other law enforcement authorities across England and Wales, Scotland and Northern Ireland, including criminal legal system authorities (such as the Ministry of Justice and prison and probation services) using data-based predictive, profiling and risk assessment systems to provide accountability to people affected by those systems or by the decisions those systems influence.

People should have a right and a clear forum to challenge a decision not only when it has been solely automated and produces significant and/or legal effects or consequences, but also when a data-based predictive, profiling or risk assessment system has influenced or indirectly resulted in significant consequences or legal effects.

In particular, this mechanism must:
- **Ensure the right to an effective remedy against UK authorities and against a deployer for the infringement of rights;**
- **Ensure the right to information and explanation of predictive, profiling or risk assessment-supported decision-making for people affected, including about the use and functioning of the system;**
- **Ensure people affected have access to judicial and non-judicial pathways to remedy for violation of their rights by predictive, profiling or risk assessment systems;**
- **Ensure public interest organisations have the right to support people seeking remedy, as well as to lodge cases on their own initiative.**

Methodology and acknowledgements

This report focuses on multiple aspects of predictive policing in the UK: (i) the systems themselves, including how they have been developed, the data they use, and their outputs or decisions; (ii) how these outputs or decisions are used by police forces and the policing outcomes or decisions they influence or lead to; (iii) the impact that this policing has on people, groups and communities in the UK.

The research for this report took place between October 2022 and November 2024.

Amnesty International sent Freedom of Information (FOI) requests to all police forces in the UK asking about their use of predictive, profiling and risk assessment systems. To the forces that responded affirmatively, Amnesty International sent further requests asking for more information.

Amnesty International reviewed documents received via FOI requests from police forces. These included internal policing reviews and evaluations, Data Protection Impact Assessments, Equality Impact Assessments, Information Sharing Agreements, system user manuals, internal methodologies, spreadsheets of systems, technical specifications, academic reports and a data dictionary.

It was not easy to obtain clear information about UK police forces' use of these systems under the Freedom of Information Act. The forces' actions included: not replying to requests for information, or replying only when prompted further; refusing to provide the information requested, citing blanket exemptions; providing contradictory information on multiple occasions, such as stating that they did not use predictive systems when other official sources in the public domain stated that they did; and failing to send documents that they had agreed to disclose. Four forces did not respond to the requests for information at all,[11] and at least 19 forces said initially or in one of their responses that they held no information or did not use predictive, profiling or risk assessment systems, when information from other sources contradicted this.[12]

As part of this research, Amnesty International also reviewed publicly available information in relation to UK police forces and predictive policing systems, including public statements and releases, police internal reports and reviews, meeting minutes, police finance records, ethics committee reports, and private company documentation such as brochures, promotional material, and technical specifications.

In addition, Amnesty International interviewed experts on the use of these systems. Amnesty International also interviewed members of community groups working on police use of data-based predictive and profiling systems.[13] Requests for interviews were sent to the Metropolitan Police Service, Essex Police and West Midlands Police, as they are forces identified as using predictive policing systems. None of those forces agreed to interviews despite several further requests.[14] Amnesty International conducted three research discussions in areas where FOI requests and open source research showed that police forces had used or targeted predictive policing systems, both geographic and individual. These included a research discussion with 12 participants in Lambeth, south London in August 2024, a research discussion with 10 participants in Hackney,

east London, in September 2024 and a research discussion with 13 participants in Basildon, Essex, in September 2024.

On 28 November 2024, the Home Office Minister for Policing, Metropolitan Police, Essex Police and West Midlands Police were provided with a detailed summary of our research findings and invited to provide comment for inclusion in the report. A copy was also sent to the National Police Chiefs Council's Chief Scientific Advisor, Professor Paul Taylor. The Metropolitan Police Service responded on 5 December 2024 and its response is incorporated into the relevant section of the report. The Home Office Minister of State for Policing, Fire and Crime Prevention responded on 23 December 2024 stating that systems such as those discussed in this report can bring benefits when used responsibly, but that under the core UK policing tradition of policing by consent, any use must retain the support of the public, and must have appropriate safeguards.

Amnesty International encountered limitations when carrying out this research. During the initial round of FOI requests, the lack of transparency from police forces reflects the secrecy these systems enjoy. Representative bodies of police officers have sometimes complained that non-governmental organisations (NGOs) or communities have over-criticised police officer decision making; yet this criticism is in part a consequence of the limited publicly available information on topics such as predictive policing, and the fear many people, particularly from Black and racialised communities, have about the police and authorities holding their data. These fears are heightened for people with migrant heritage who fear their citizenship status could be challenged.

A note on language

Throughout this report, we use the term 'predictive policing' to refer to the data-driven, profiling, and risk prediction and assessment systems used by police forces.

The term 'predictive policing' is problematic, not least because it asserts that there is a predictive function being carried out, something disputed by the evidence in this report, the experts we interviewed, and published research.

As the term predictive policing is widely used as a reference for these systems in general parlance, policies and academic research, we use the term in this report for ease of reference. This does not imply we endorse its use or believe these systems to be truly predictive.

Similarly, the term 'risk' is used in places in this report in reference to 'risk scores' or who is assessed or labelled as at risk of being a victim or perpetrator of a criminal offence. For the purposes of readability, we have not put quotation marks around each use of risk in the report, but this should not be understood as an endorsement of the term within the context.

In addition, there are references in this report to behaviour or acts which are considered 'criminal', on the basis that they have been proscribed by law and are therefore policed, and these are therefore referred to as such in this report. This does not mean that Amnesty endorses the criminalisation or use of the criminal law against these acts or behaviours. There is also reference to behaviour and acts which are not a criminal offence, such as 'anti-social behaviour', but which are equally criminalised and policed.

This report uses the term racialised to refer to individuals and communities who are racialised as non-white. Where disaggregated data is presented, this report highlights the specific community being highlighted such as Black, Asian or mixed. When quoting from official documents or interviews, the terms Black and Minority Ethnic (BME) or Ethnic Minority may appear.

Acknowledgements

Amnesty International thanks everyone who shared their story and expertise and participated in interviews for this report. This includes the community organisations who facilitated the workshops in areas where predictive policing systems are in operation. It is also important to acknowledge the significant work of anti-racist organisers and community organisations who have for decades challenged the many ways racism and other forms of discrimination manifest in policing.

1. Background

Police forces across the UK are embedding data analysis, data-based systems and software into policing, seeking to predict areas where certain forms of crime are supposedly likely to occur, as well as profiling individuals or assessing their risk of committing crime in future. This practice is widely referred to as predictive policing. Amnesty International has found that at least 33 forces across the UK have used predictive, profiling or risk prediction systems. This amounts to almost three-quarters of all UK police forces. Of these forces, 32 have used geographic crime prediction, profiling, or risk prediction tools, and 11 forces have used individual prediction, profiling, or risk prediction tools.

The use of these systems is leading to the violation of fundamental rights, including the right to a fair trial, the right to privacy, and the right to freedom of association, among others. Their use is also leading to the violation of the right to non-discrimination, via the racial profiling and repeated targeting of more deprived areas and areas with higher populations of Black and racialised people, and the racial profiling and targeting of individuals from Black and racialised and more deprived backgrounds. Historic discrimination in policing and the criminal legal system is being reinforced and exacerbated through the use of these tools and systems in policing. There are strong parallels and continuity between the racist 'Sus laws' and their discriminatory application[15] and the use of predictive policing systems to profile people, communities, and neighbourhoods today.

1.1 Discrimination in policing in the UK

The use of predictive, profiling, and risk assessment systems by police in the UK should be seen in the context of institutional and systemic racism and other forms of discrimination in policing, the criminal legal system and wider society in the UK.

The National Police Chief's Council acknowledged in 2024 that Black people are twice as likely to be arrested, three times as likely to be subject to police use of force and four times as likely to be stopped and searched than white people.[16] The chair of the National Police Chiefs Council has publicly admitted that policing is 'institutionally racist'.[17] In the year ending March 2023 there were 24.5 stops and searches for every 1,000 Black people, 9.9 stops and searches for every 1,000 people with mixed ethnicity, 8.5 for every 1,000 Asian people – and 5.9 for every 1,000 white people.[18] In 2018 Black people were nine times more likely to be stopped and searched under section 1 of the Police and Criminal Evidence Act (1984) (PACE) for suspected drug possession despite using drugs at a lower rate than white people.[19] Racialised people are over-represented in stop and search compared to both their representation in the population and even their involvement in police records of crime.[20] The vast majority of stops and searches in the UK – 69 per cent – lead to no further action.[21]

Professor Lawrence Sherman, Wolfson Professor Emeritus at the Institute of Criminology, University of Cambridge and former Chief Scientific Officer of the Metropolitan Police Service, acknowledged the issues with stop and search in the force, asking:

> is it justified to do something that we know may cause psychological problems to the person who was stopped, and especially something that is seen widely in the community as being racially discriminatory in terms of where and with whom stop and searches are conducted? The evidence on that is not at all clear.[22]

In 2023 the Children's Commissioner revealed that Black children were six times more likely to be strip-searched in England and Wales than white children.[23] Between 2018 and 2022 at least 2,847 children were strip-searched pre-arrest, and 38 per cent of these were Black children. Almost half of these searches led to no further action by police.[24] In March 2023 the Casey Review found that the Metropolitan Police Service was institutionally racist, sexist and homophobic, and that 'Racism and racial bias are reinforced within Met systems'.[25] The review acknowledged '"Over-policing" and disproportionate use of powers against certain communities', stating that 'most prominently this includes stop and search, the use of force, intimate or strip searches, and the injury or deaths of Black, Asian, and racialised Londoners, including deaths in custody, in the pursuit of a subject, or during an arrest'.[26] Racialised people, and especially Black people, are arrested, remanded, charged, prosecuted, convicted, and imprisoned at higher rates that white people.[27] Police and criminal legal system data reflects the structural and institutional racism and discrimination that exists within society. This data is then used in police predictive, profiling and risk assessment systems at all stages – to develop them, train them, and operate them. These systems thus lead to discriminatory outputs and racial profiling, reinforcing and exacerbating the existing discrimination in policing and the criminal legal system.[28] For this reason, among others, Amnesty International has previously called for a prohibition on the use of predictive policing.[29]

1.2 The main types of predictive policing systems

There are two main types of predictive policing systems: (i) systems which seek to make predictions about the likelihood of crimes being committed in geographic locations in future; and (ii) systems which seek to profile or make a prediction about an individual's likelihood or risk of committing certain acts, often criminalised acts or criminal offences, in future.

1.2.1 Geographic predictive policing systems

There are a number of different terms used to describe this form of predictive policing, including geographic, location or place-based predictive policing[30], hotspot policing[31] predictive mapping.[32] These are systems which focus on places and seek to predict whether crime will occur there, profile the area as a high-risk crime area, or crime 'hotspot'.

An assessment by the London Assembly described this as follows:

> The technique uses historic crime data to predict where crimes are more likely to occur in the future. Forces can then use this information to deploy officers to these areas, and increase their chances of catching suspects.[33]

Police use these systems to decide where to send police patrols, what areas to monitor more closely for potential crime, and what areas to target for operations such as stop and search or other exercises of police powers and enforcement, which can and do lead to arrest and detention.

1.2.2 Individual predictive policing, profiling, and risk assessment systems

These are systems which focus on individuals, seeking to predict their likelihood or risk of certain behaviour, such as committing a crime or criminalised act. These systems are also sometimes referred to as individual risk assessment systems.

Police in the UK use these systems to give individuals a risk score, such as low, medium or standard, or high. A risk score can influence whether an individual is monitored more closely by police, and whether they are subject to additional policing such as questioning or stop and search. These risk predictions, scores and profiles are shared with other state authorities and service providers, including youth offending services, the Crown Prosecution Service, prison and probation services, potentially influencing decision-making in the criminal legal system. They are also shared with welfare authority the Department for Work and Pensions and with local authorities, where they can affect people's ability to access services such as welfare, employment, education and housing.

1.3 Definition of predictive policing

These systems are often known as predictive policing. However, there is no widely agreed, or formal or official definition of predictive policing in the UK.

The term asserts that there is a predictive function being carried out, something disputed by the evidence in this report.

Amnesty International has described predictive policing systems:

> Predictive policing systems are computer programs that use data and algorithmic models to assess the risk that a crime will be committed. Predictive policing systems calculate risk scores that allegedly reflect the likelihood that a person or group is or will be a victim or perpetrator (person-based predictive policing), or that a specific location will be a future crime scene (place-based predictive policing). Based on these computer-generated risk scores, the police take measures seeking to prevent or detect the predicted crime by directing policing efforts towards 'high-risk' locations, individuals, or groups.[34]

1.3.1 External definitions

The Law Society of England and Wales described predictive policing in a 2019 report as algorithms which 'use historical crime data to predict where future crimes might occur' and algorithms which 'predict people's behaviour and circumstances to determine who's likely to commit a crime or become a victim of one'.[35] Liberty similarly describes the systems, adding the impact they have where police patrol.[36]

Privacy International mentions that these systems 'work by feeding historic policing data through computer algorithms.'[37] A 2021 report on AI in policing and security by the UK Parliamentary Office of Science and Technology describes predictive policing as:

> algorithms and historic data to predict where certain types of crime (for example, burglaries and street violence) are likely to occur.[38]

1.3.2 Academics, community experts and other views on definitions

All of the experts Amnesty International interviewed agreed that there is no widely acknowledged or accepted definition of predictive policing.

Professor Marion Oswald, Professor of Law and chair of the West Midlands Police and Crime Commissioner and West Midlands Police Data Ethics Committee said:

> I don't think it has a very clear definition. […] where it's used, it's often misunderstood. Because it could cover all sorts of different types of aims and applications and use of data and use of technology. So, I don't think there is a very good, real, accepted or acceptable definition yet.[39]

She defined predictive policing as 'models that have got some sort of future prediction element attached to it' and 'models that are looking to the future to try and predict whether somebody moves into a new level of harm'.[40]

Dr Daragh Murray, Senior Lecturer at Queen Mary, University of London, and a Fellow of the Institute of Humanities and Social Sciences, said that 'predictive tools for me are just something like an algorithm that tries to predict a likely outcome or gives a probability of a future outcome'.[41] Dr Murray agreed that 'the difficulty with the definition is that at the moment it doesn't mean anything', and said that 'a big part of the problem is [...] a lack of transparency around the use of tools in policing.'[42]

Dr Patrick Williams, Senior Lecturer at Manchester Metropolitan University described how the lack of definition was a problem in challenging the approach:

> It's premised on, almost a gap in public knowledge and understanding, which allows this status […]. It's in the absence of a clear definition that it gains its strength [from], the fact it can't be defined, it can't be held down, you can't understand the processes by which it works.[43]

He likened the concept and definition of predictive policing to the concept and definition of 'gang' in the context of policing and criminal justice:

> It's vague, its fluid. There's no agreed upon definition for the gang. That's its strength because then it becomes applied in different contexts, in different areas, in different places by different police forces, because there's no clear defined definition of it.[44]

Dr Murray also expressed concern over the impact of police use of so-called predictive tools, saying 'we know there are issues with them […] but at the moment it's a big experiment […] that impacts on people's lives.'[45]

Professor Lawrence Sherman said that 'predictive policing is built into almost any police activity that is described as proactive'.[46] Dr Adam Elliott-Cooper described predictive policing as merely a data-driven version of what policing has always been:

> a lot of policing claims to be predictive in as far as policing claims to be a kind of deterrence or can solve crimes before they happen. So in one way or another, a lot of policing claims to be able to do this; whether it's stop and search, which is a form of predictive policing: police make a prediction about who they should stop, who they should search, who they should question based on some kind of prediction, sometimes informed by evidence, often not. What is now being called predictive policing is the automation of those forms of prediction.[47]

1.4 Origins and history of predictive policing in the UK

The strategy and concept of predictive policing is underpinned by the idea that behaviours can be predicted and that people's risk of committing certain behaviour in future can be accurately assessed.

Predictive policing brings together practices from academic, theoretical, and practical disciplines and applications. These include data collection on crime, criminality and social and economic factors, statistical analysis of this data, mapping of crime data onto areas to understand patterns, the conception of risk and assessment of individuals' risk, and attempts to seek to identify and prevent crime before it occurs.

The modern concept of predictive policing is generally credited to William Bratton, the former Chief of the Los Angeles Police Department (LAPD), under whom the LAPD began an initiative of 'predictive analytics to anticipate gang violence and to support real-time crime monitoring'.[48] In a 2009 interview William Bratton said predictive policing was 'part of the evolution of policing'[49]:

> Predictive policing is [...] where we can gather information more quickly than ever in the past, analyse it, and from that, actually begin to predict that certain actions, based on intelligence, are going to occur and seek to prevent them.[50]

However, the collection, storage, and analysis of data about crime, criminality and alleged criminals has a long history in states' policing of their populations. Throughout the past three centuries, states and governments have created registers and systems to identify and categorise individuals, groups and populations. A study by academics at the London School of Economics notes that these registers and systems have sought to include and target 'those deemed "undesirable", "abnormal", or "dangerous" – or in modern-day terms, members of historically marginalized groups.'[51] Examples given include the French Royal Decree of 1724, which introduced a 'register of beggars', with their name, origin, age, and a physical description; and from 1907 the colonial government of South Africa's collection of information from people of Indian heritage over the age of eight to limit immigration.[52]

Technological advances, especially the rise of computer science in the 1960s, have significantly expanded the capabilities for the state, police, and private companies to collect data and undertake sophisticated data analysis.[53]

Dr Patrick Williams told Amnesty International:

> predictions have always been a feature of my understanding of criminal legal systems across England and Wales. Predictive policing, therefore, extends beyond that question of prediction in terms of, how do we respond or police those who pose a high level of risk.[54]

1.4.1 Geographic crime prediction

Attempts to map and predict crime are not a new phenomenon. The earliest known crime map was produced by André-Michel Guerry and Adriano Balbi in 1829. They published a map seeking to show the relationship between levels of education in France and personal and property crime. However, they could not show a clear statistical correlation.[55] In 1832 Guerry published a further work which contained other crime maps, seeking to show and understand the relationships between other social and economic factors, such as wealth and poverty, age, births and suicides.[56]

In 1995 a US study claimed that having uniformed police patrol areas where crime was prevalent, known as 'hot spots', would reduce crime in those areas.[57] One of the authors of that study, Lawrence W Sherman, was the Metropolitan Police Service's Chief Scientific Officer from 2022 to October 2024. Professor Lawrence Sherman told Amnesty International that in his view:

> what we want is proactive policing that is prioritised in relation to the harm that can be prevented, and the methods of preventing that harm themselves must be less harmful than the harm being prevented.[58]

In 2004 researchers at the Jill Dando Institute of Crime Science, University College London, critiqued existing methods of seeking to understand crime by looking at retrospective data, and instead proposed mapping crime hotspots prospectively.[59]

The origins of the current police methods of geographic predictive policing in the UK can be traced to Greater Manchester Police (GMP). Between 2010 and 2011 GMP Trafford Basic Command Unit conducted crime mapping for burglary.[60] The force described the project as:

> using geographical mapping of previous domestic burglary locations and creating buffers, which were date-dependent on the colour-coded areas. The areas identified were used for police and external resource deployment [...] within areas at key times.[61]

This approach spread further around the UK. In 2012 then Mayor of London, Boris Johnson said that he had 'put in crime mapping in London; we have crime mapping', and that 'predictive crime mapping is now the subject of an active study by the Metropolitan Police Service.'[62]

The following year Johnson said the Metropolitan Police Service (MPS) had 'begun work on testing the benefits of predictive crime mapping', and 'a trial of predictive mapping in order to reduce residential burglary', based on the model used by GMP.[63] He said the MPS had introduced the same concept 'in four boroughs in February 2013 (two East, one West, one South).'[64] Later that year Johnson further described the techniques being employed at the time by the MPS:

> This is a technique that is pioneered by the Los Angeles Police Department (LAPD) under Bill Bratton [Chief of Police] and the predictive analysis mapping has been made available to 14 of the boroughs so far [and] is going to be fully implemented by April next year.[65]

Kent Police were one of the early adopters of a commercial geographic predictive policing system, PredPol, using it for five years between 2013 and 2018. The force claimed to be the 'first force in England and Wales to introduce predictive policing'.[66] An internal evaluation in 2014 noted that the system cost the force £100,000 per year and claimed that 'PredPol does reduce crime and ASB when used'.[67] However, the same evaluation stated that the results 'do not show an overall drop in crime for the Force this year'. Elsewhere, it states that 'During the 12-month Force wide evaluation no overall drop in crime was observed.[68] The evaluation notes that 'there are mixed views and confusion around the effectiveness and purpose of PredPol'.[69] Kent Police stopped using PredPol in 2018 as it was 'challenging' to prove whether the system had helped police reduce crime.[70]

In February 2019 the Mayor of London Sadiq Khan said the Metropolitan Police were 'not currently using crime prediction software' but that the force was 'aware of a number of trials that have been run in other parts of the country looking at both geographic crime patterns and risks of re-offending, however, these are not currently in our plans.'[71] Later that year the Mayor acknowledged the use of predictive policing by the MPS, stating that: 'MPS predictive policing products identify areas of high recent offending and predict expectations of further offending.'[72]

A 2019 investigation by Liberty identified that at least 10 UK police forces were using geographic predictive mapping systems.[73]

1.4.2 Individual predictive policing, profiling, and risk assessment

Law enforcement authorities have used algorithms to predict individuals' risk or likelihood of offending and re-offending for decades.[74] Individual profiling, prediction and risk assessment has a longer history in the context of prison and probation services, where assessing whether an individual would re-offend informed the decision to release them or not.

Risk assessment and prediction of re-offending has been a feature of the criminal legal system in the UK in probation and prisons since the 20th century.[75] Initially it was the personal judgement of an official; the 1970s-90s saw a more data-driven approach; and after 2000 tools incorporated a wide range of data on individuals, such as 'lifestyle, employment, accommodation, attitudes, cognitive deficits, self-regulation and behaviours'.[76] Risk assessment tools are used widely by the UK Prison and Probation Service, with millions of prisoners subject to assessments of re-offending.

However, as UK police have shifted their strategies and models of policing towards prevention they have increasingly used these systems to predict, profile and assess individuals' supposed risk of offending and re-offending. In 2017 Durham Constabulary began using an algorithmic risk assessment tool called the Harm Assessment Risk Tool (HART) to assess individuals' risk of re-offending.[77] It was claimed that this was 'one of the first algorithmic models to be deployed by a UK police force in an operational capacity.'[78]

A study of HART including a Durham Constabulary officer and others involved in the systems development admitted that some of the data used in the model 'could be viewed as indirectly related to measures of community deprivation'[79], and that the system was 'deliberately overestimating the risk' of some offenders.[80] The predictive accuracy of the system was evaluated at just over 50 per cent, slightly better than a guess.[81] A 2018 investigation found that the system was using racist and discriminatory data profiles as part of its predictions.[82]

HART assessed more than 12,000 people between 2016 and 2021. It assessed 3,292 as 'high risk', who under the procedure established for the system's use would have been charged rather than given the opportunity to undertake a rehabilitative programme.[83] HART was discontinued in 2021 'due to the resources required to constantly refine and refresh the model to comply with appropriate ethical and legal oversight and governance.'[84]

In 2019 a Liberty report found that three forces were using individual risk assessment programs.[85] This included Durham Constabulary, West Midlands Police, and Avon and Somerset Police, which was using a system called Qlik Sense to assess the likelihood of individuals committing several offences as well as re-offending.

A 2021 report identified West Midlands Police as operating a Home Office-funded program called the National Data Analytics Solution, in partnership with eight other forces, including the MPS and GMP. This program developed machine-learning tools seeking to predict individuals' likelihood of committing offences, using, among other data, stop-and-search data.[86]

'Predictive' policing criticised and dropped in other jurisdictions

Geographic crime prediction systems have been subject to criticism in the US for repeatedly targeting poorer areas and areas with high concentrations of racialised people. Many forces have stopped using the technology. A landmark 2016 study in Oakland, California, on PredPol, at the time a leading geographic predictive policing software company, provided the first significant evidence: it found that the algorithm would result in the targeting of Black people for alleged drug crime at twice the rate of white people, despite data showing that people of all races used drugs at similar rates.[87]

The Stop LAPD Spying Coalition noted that the LAPD's use of a predictive policing system called Operation LASER was 'speculatively criminalising areas and sending officers on missions to "suppress crime" in these areas with vague profiles of who to look for.' This, the group said, 'ensured lethal and racialized police violence'. It identified and linked six police killings of Black and Latino people to Operation LASER-targeted zones in a six-month period in 2016.[88]

In 2016 another investigation was published into a widely used individual predictive risk scoring system, COMPAS. The study found that the system was producing heavily discriminatory results, routinely over-estimating the supposed risk of black defendants committing crime, while routinely under-estimating white defendants' risk of committing crime. These scores were used by judges in pre-trial bail, detention and sentencing decisions.[89]

Another study on PredPol in 2018, by the founder of PredPol, found that Latino people in the US city of Indianapolis, Indiana would have been subjected to '200% to 400% the amount of [police] patrol as white populations' had it been deployed there.[90] The research also found that Black people in Indianapolis would have been subjected to '150% to 250% the amount of [police] patrol compared to white populations.' The researchers said they found a way to tweak the algorithm to reduce that disproportion but that it would result in less accurate predictions.[91]

In 2021 a study analysed 7.4 million predictions from PredPol's own crime prediction data, which had been left on cloud storage accessible by an open link on an LAPD website. The study found that:

> [N]eighborhoods the software targeted for increased patrols were more likely to be home to Blacks, Latinos, and families that would qualify for the federal free and reduced lunch program.[92]

The UN Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance has criticised PredPol, stating that 'These data, gathered and categorized by police officers, are both the product and the cause of heightened surveillance in Black and Latinx communities.'[93]

In 2019 the LAPD announced it was ending its use of Operation LASER[94], and in 2020 of PredPol.[95] These moves came after an internal audit concluded there was insufficient data to show the impact of the programs on crime rates.[96]

A number of US police forces have stopped using predictive policing systems. Palo Alto Police Department suspended their PredPol contract because it 'didn't find it effective,' '[they] didn't get any value of it,' and 'it didn't help [the department] solve crime.' They were joined by police departments in Milpitas, Hagerstown, Rio Rancho and Mountain View.[97] Police forces in Santa Cruz, Oakland, New Orleans and Pittsburgh were forced to stop using them after local city councils banned the practices.[98]

In France a 2023 report by La Quadrature du Net found that predictive policing systems used in France were 'potentially discriminatory', and that their use was 'likely to lead to the targeting of the most precarious populations and those most exposed to structural racism'.[99] The report identified several predictive systems used by police. These included: Paris police using risk terrain modelling, a geographic crime prediction system also used by police in the UK and discussed below (Section 3.2); a police department in Val d'Oise using PredPol to predict car thefts, using data on unemployment rates, schooling and level of schooling, and ages; and a national gendarmerie system called PAVED, which used data on household incomes, nationality, immigration and household composition to attempt to predict car thefts and burglaries.[100] La Quadrature du Net notes that these systems raised 'a major risk of feedback loops', leading to 'a demultiplication of police domination on specific neighbourhoods (surveillance, identity checks, uses of coercive powers).'[101]

In the Netherlands two automated individual risk modelling systems called the Top600 and the Top400 were used to profile and rank young people according to their alleged likelihood of committing crime. The Top400 was found to 'normalise

and justify intrusive public scrutiny on minors and their families' and criticised for 'criminalis[ing] anti-social and teenage behaviour, instrumentalis[ing] care for crime prevention and testing new approaches on vulnerable minors and young adults'.[102] Appearing on the list was labelled as 'stigmatizing and invasive'.[103] People profiled as part of the Top600 would be subjected to higher penalties and faster prosecution, and prosecutors said they would seek the 'longest possible' pre-trial detention.[104] The Top600 was found to have an 'over-representation' of Dutch-Moroccan and Dutch-Surinamese juvenile suspects.[105]

2. The UK's human rights obligations

2.1 Non-discrimination

The right to equality and non-discrimination is a cornerstone of the international human rights system.

Discrimination on grounds of race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, or other status, which has the purpose or effect of nullifying or impairing the recognition, enjoyment or exercise, on an equal footing, of human rights and fundamental freedoms in the political, economic, social, cultural or any other field of public life, is prohibited under Articles 2(1) and 26 of the International Covenant on Civil and Political Rights (ICCPR), the International Convention on the Elimination of All Forms of Racial Discrimination (ICERD), and the European Convention on Human Rights (ECHR). The UK is party to these treaties and the ECHR is incorporated into UK domestic law through the Human Rights Act 1998.[106]

The Committee on the Elimination of Racial Discrimination has underscored that the principle of equality must be understood expansively, to include both formal equality before the law and substantive or de facto equality in the enjoyment and exercise of human rights.[107]

Discrimination is commonly seen as an affront to human dignity, a core value that is foundational to all human rights.[108] The prohibition on racial discrimination is also a peremptory norm of customary international law. This means that all states, everywhere, must protect and promote the right, even if they have not ratified the relevant human rights treaties. The prohibitions on discrimination on the grounds of sex and religion have arguably also reached this status under international law.

The Committee on the Elimination of All Forms of Racial Discrimination has affirmed that the prohibition of racial discrimination under ICERD applies to purposive or intentional discrimination, as well as discrimination in effect,[109] and that the prohibition on racial discrimination includes structural discrimination.[110] The Committee on Economic, Social and Cultural Rights (CESCR) described systemic discrimination:

> The Committee has regularly found that discrimination against some groups is pervasive and persistent and deeply entrenched in social behaviour and organization, often involving unchallenged or indirect discrimination. Such systemic discrimination can be understood as legal rules, policies, practices or predominant cultural attitudes in either the public or private sector which create relative disadvantages for some groups, and privileges for other groups.[111]

The United Nations High Commissioner for Human Rights has further described systemic racism in relation to people of African descent (but which can be applied to other racialised groups):

> Systemic racism against Africans and people of African descent, including as it relates to structural and institutional racism, is understood to be the operation of a complex, interrelated system of laws, policies, practices and attitudes in State institutions, the private sector and societal structures that, combined, result in direct or indirect, intentional or unintentional, de jure or de facto discrimination, distinction, exclusion, restriction or preference on the basis of race, colour, descent or national or ethnic origin. Systemic racism often manifests itself in pervasive racial stereotypes, prejudice and bias and is frequently rooted in histories and legacies of enslavement, the transatlantic trade in enslaved Africans and colonialism.[112]

Indirect discrimination is also prohibited. It is defined as 'laws, policies or practices which appear neutral at face value, but have a disproportionate impact on the exercise of Covenant rights as distinguished by prohibited grounds of discrimination'.[113] This is echoed in the UK Equality Act 2010.[114]

The UN High Commissioner for Human Rights has stated that:

> predictive tools carry an inherent risk of perpetuating or even enhancing discrimination, reflecting embedded historic racial and ethnic bias in the data sets used, such as a disproportionate focus of policing of certain minorities.[115]

Tendayi Achiume, former UN Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia, and related intolerance, has made it clear that predictive policing systems reinforce and exacerbate existing racism within institutions such as the police and law enforcement authorities, as well as wider society:

> [P]olice departments in different parts of the world use emerging digital technologies for predictive policing, in which artificial intelligence systems pull from multiple sources of data, such as criminal records, crime statistics and the demographics of neighbourhoods. Many of these data sets reflect existing racial and ethnic bias, thus operating in ways that reinforce racial discrimination despite the presumed 'objectivity' of these technologies or even their perceived potential to mitigate the bias of the human actors they supplement or replace. Furthermore, police departments tend to deploy predictive technologies disproportionately in impoverished communities of predominantly ethnic or racial minorities.[116]

The UN Special Rapporteur on racism has acknowledged that:

> Predictive policing reiterates and exacerbates the existing biases in the policing system, while providing the guise of objectivity because of the use of supposedly neutral algorithmic decision-making.[117]

The European Commission's Vice-President for Digital Policy, Margrethe Vestager, has recognised that 'Immigrants and people belonging to certain ethnic groups might be targeted by predictive policing techniques that direct all the attention of law enforcement to them' and asserted that 'This is not acceptable.'[118]

The EU AI Act also acknowledges the discrimination inherent in the policing and criminal justice data which is used in these systems, and the discriminatory impact it leads to:

> Biases can for example be inherent in underlying data sets, especially when historical data is being used, or generated when the systems are implemented in real world settings. Results provided by AI systems could be influenced by such inherent biases that are inclined to gradually increase and thereby perpetuate and amplify existing discrimination, in particular for persons belonging to certain vulnerable groups, including racial or ethnic groups.[119]

The EU Parliament Civil Liberties, Justice and Home Affairs committee report on the AI Act also states that:

> The use of AI in law enforcement entails a number of potentially high, and in some cases unacceptable, risks for the protection of fundamental rights of individuals, such as [...] different types of discrimination and errors inherent in the underlying algorithm which can be reinforced by feedback loops.[120]

In 2021 the UN High Commissioner for Human Rights recommended that states:

> Expressly ban AI applications that cannot be operated in compliance with international human rights law and impose moratoriums on the sale and use of AI systems that carry a high risk for the enjoyment of human rights, unless and until adequate safeguards to protect human rights are in place.[121] The UN Special Rapporteur on racism has said that 'outright bans' on the use of these technologies may be necessary in order to prevent discriminatory outcomes.[122]

Equality Act 2010 and the Public Sector Equality Duty

Section 149 of the UK's Equality Act sets out the Public Sector Equality Duty (PSED). This requires public bodies 'to eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act' and 'advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it'.

This means that all public bodies (including law enforcement agencies) in the UK must eliminate unlawful discrimination against those with protected characteristics, such as age, race, or sex.

It applies to the use of technology, including predictive and profiling systems, by public bodies. And it requires those bodies to carry out Equality Impact Assessments and take steps to prevent and mitigate unlawful discrimination.

2.2 A fair trial and the presumption of innocence

The right to a fair trial is a basic human right. It is one of the universally applicable principles recognised in the Universal Declaration of Human Rights adopted by the world's governments in 1948 and is a fundamental element of the international human rights system.

This provides every person charged with a criminal offence the right to be presumed innocent until and unless proven guilty according to law after a fair trial.

The right to fair trial has been reaffirmed and elaborated since 1948 in the International Covenant on Civil and Political Rights,[123] and in numerous other international

and regional treaties and non-treaty standards adopted by the UN and by regional intergovernmental bodies, such as the European Convention on Human Rights.[124] The UK is party to these treaties and the ECHR is incorporated into UK domestic law through the Human Rights Act 1998. The risk of human rights abuse starts at the first moment that official suspicion, in the form of a charge or designation of an official suspect, is raised against a person. The risk continues through the arrest, pre-trial detention, during the trial, during all appeals, to the imposition of any punishment.[125]

The European Court of Human Rights (ECtHR) has held that 'the presumption of innocence may be infringed not only by a judge or court but also by other public authorities', specifically statements by police.[126] The ECtHR has acknowledged the risk that stigmatisation poses to the presumption of innocence in relation to people's details and personal data being held on police databases.[127] The Court has found an infringement where an individual is subject to preventative measures by law enforcement without a public hearing,[128] and where a judicial opinion suggested guilt, without a formal finding.[129] It can be inferred that predictive policing systems, which produce suspicions about an individual, in the form of a prediction, profile or risk assessment, based on criminal records or data which does not amount to evidence of guilt or a criminal conviction, and leading to preventative measures without a public hearing, may violate the presumption of innocence.[130]

Police and other law enforcement authorities use data-based models and systems to predict where crime may occur, and profile individuals and predict their likelihood of alleged future criminality. These predictions and profile lead to policing intervention or enforcement against individuals before those actions or offences have occurred. These predictions, profiles and assessments lead to individuals, communities and areas being labelled as 'criminal' or likely future criminals, and subject to increased intervention and enforcement activity – before the action which the intervention and enforcement seek to prevent occurs. Data used to make these predictions and assessments often includes information which would not amount to evidence of guilt nor a conviction following a fair and open trial. This data includes crime reports, police 'intelligence' information and stop-and-search data, as well as socio-economic and population data. The interventions and enforcement that follow from these predictions, profiles and risk assessments can include police monitoring and surveillance, questioning, further stops and searches, and other targeted police operations in an area or against an individual or group. All of these increase the likelihood of arrest or other criminal sanction. Moreover, these profiles and predictions can be shared with other criminal legal system authorities, such as prosecutorial authorities.

Other punishment can occur in the form of non-criminal justice sanctions, such as the removal of access to essential public services, exclusion from education, eviction from public housing, and loss of employment.[131]

All of these consequences occur without a formal charge or evidence – let alone proof – of guilt according to law. This must be considered a violation of international fair trial standards, in particular the presumption of innocence.[132] A coalition of more than 50 human rights and civil society organisations in Europe has described predictive policing systems as 'shifting criminal justice attention away from criminal behaviour towards vague and discriminatory notions of risk and suspicion.'[133]

EU Vice-President Margarethe Vestager has warned of the potential for predictive systems to profile people and target them before they have carried out the predicted action:

> We face the advent of AI-powered predictive policing. Humans targeted not for what they have done, but for what an algorithm considers they are likely to do.[134]

The co-rapporteur of the EU AI Act, Dragos Tudorache MEP, publicly affirmed that 'Predictive policing goes against the presumption of innocence and therefore against European values. We do not want it in Europe.'[135]

The EU AI Act notes the risks that predictive and profiling systems pose to the presumption of innocence:

> In line with the presumption of innocence, natural persons in the Union should always be judged on their actual behaviour. Natural persons should never be judged on AI-predicted behaviour based solely on their profiling, personality traits or characteristics, such as nationality, place of birth, place of residence, number of children, level of debt or type of car, without a reasonable suspicion of that person being involved in a criminal activity based on objective verifiable facts and without human assessment thereof.[136]

The AI Act even considers the potential for harm and infringement to the presumption of innocence to be so great that they are prohibited:

> Therefore, risk assessments carried out with regard to natural persons in order to assess the likelihood of their offending or to predict the occurrence of an actual or potential criminal offence based solely on profiling them or on assessing their personality traits and characteristics should be prohibited.[137]

The Act also notes the potential for the right to a fair trial to be hampered by the use of AI systems in law enforcement which are not sufficiently transparent or explainable:

> the exercise of important procedural fundamental rights, such as the right to an effective remedy and to a fair trial as well as the right of defence and the presumption of innocence, could be hampered, in particular, where such AI systems are not sufficiently transparent, explainable and documented.[138]

2.3 Privacy and family life

Article 17 of the ICCPR provides that 'no one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence'. The right to privacy is also guaranteed by Article 8 of the ECHR and the Human Rights Act 1998.

The right to privacy is critical to exercising the rights to freedom of expression and peaceful assembly. The UN Special Rapporteur on privacy has stated that this right is essential 'to dignity and the free and unhindered development of one's personality'.[139]

Privacy allows people space to form their identity without judgement, to explore their opinions and beliefs and choose how to express themselves. If data about an individual – including their background, race, ethnicity, health or biometric data – is monitored, held, and shared by the police and other public agencies, strong safeguards must protect the individual's right to privacy. Individuals must be made aware of how their lives are being scrutinised and interfered with, how information about them is captured and retained, and how any inferences made can harm them in unexpected ways. Police use of predictive, profiling and risk assessment systems infringes this right

in several ways. These systems use data, often substantial amounts of it, including criminal records, crime data and information on people's ethnicity and backgrounds.

Data concerning race, ethnicity, health, biometric data, political opinions, and beliefs is particularly sensitive.[140] The ECtHR has recognised that certain categories of sensitive data automatically fall within the scope of the right to privacy, including data relating to criminal offences, ethnic origin, and health.[141]

Exercising one's right to privacy and family life may be subject to certain restrictions, but only if they meet a stringent three-part test. The restrictions must be:

- provided by law (which must be formulated with enough precision to enable an individual to regulate their conduct accordingly);
- demonstrably necessary and proportionate (using the least restrictive measure to achieve the specified purpose);
- for the purpose of protecting specified public interests (such as national security) or the rights or reputations of others.

However, police use of predictive, profiling and risk assessment systems necessitates widespread monitoring, collection, storage, and analysis – or other use – of personal data, including sensitive personal data. And it does so without individualised reasonable suspicion of criminal wrongdoing (as distinct from data on previous offending history). As discussed later in this report (Section 5.1), Amnesty International believes there is evidence that predictive policing systems in the UK disproportionately target Black and racialised people and people from more deprived backgrounds, at scale. This amounts to indiscriminate mass surveillance.

Mass surveillance can never be proportionate interference with the rights to privacy, freedom of expression, freedom of association and of peaceful assembly. Amnesty International considers that all indiscriminate mass surveillance fails to meet the test of necessity and proportionality and therefore violates international human rights law.[142]

The UN High Commissioner for Human Rights has said, in relation to police use of predictive, profiling and risk assessment systems, that:

> The privacy and broader human rights implications of these activities are vast. First, the data sets used include information about large numbers of individuals, thus implicating their right to privacy. Second, they can trigger interventions by the State, such as searches, questioning, arrest, and prosecution, even though AI assessments by themselves should not be seen as a basis for reasonable suspicion due to the probabilistic nature of the predictions.[143]

Amnesty International has published evidence of discrimination and infringement of the human rights to privacy, and to freedom of expression and association in connection with the Gangs Matrix – a predictive and profiling database used by police in the UK.[144] The UN Special Rapporteur on privacy has criticised the Gangs Matrix, saying:

> Police officers reportedly make assumptions about individuals based on their race, gender, age, and socioeconomic status [...] Those whose names are on the Matrix experience 'multiple stop and search encounters which seemingly lack any legal basis.' Some report that police have stopped and searched them 200 times, others report up to as many as 1,000 times, with some reporting multiple stops every day. This has an impact on individuals' rights to freedom from interference with their privacy and their freedom from arbitrary arrest on an ethnically discriminatory basis.[145]

Data protection

The collection, storage and processing of data by police and other authorities as part of predictive policing systems raises the possibility of data protection breaches. As does the sharing of data used in the systems and sharing of the outputs such as predictions, profiles and risk assessments.

All processing of personal data by the police and criminal legal system authorities for any of the 'law enforcement purposes'[146] must meet certain 'law enforcement data protection principles'.[147]

Any processing of sensitive data must either be based on consent or be 'strictly necessary for the law enforcement purpose'.[148] Authorities processing this data must have an 'appropriate policy document' in place.[149]

Sensitive data includes:

(a) the processing of personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs or trade union membership;
(b) the processing of genetic data, or of biometric data, for the purpose of uniquely identifying an individual;
(c) the processing of data concerning health;
(d) the processing of data concerning an individual's sex life or sexual orientation.[150]

The Information Commissioner's Office has said that this 'strictly necessary' requirement means that police and criminal legal system authorities must:

- ensure that the processing of sensitive information is specific in nature and dependent on the specified law enforcement purpose;
- clearly demonstrate why there are reasonably no less intrusive means of achieving the same purpose; and
- clearly demonstrate how such processing will be effective in meeting the specified law enforcement purposes.[151]

As well as the above conditions, any use of data by police or criminal legal system authorities as part of predictive policing systems must be lawful and fair; the purpose of the processing must be specified, explicit and legitimate; the data used must be adequate, relevant and not excessive, which means that it must be limited to what is necessary for the purpose(s) for which the authority is processing it; the data must be accurate; it must be possible to distinguish between personal data based on fact and that which is based on opinion or assessment; and it must be clear whether it relates to different categories of individuals, such as suspects, individuals who have been convicted, and victims and witnesses.[152]

Amnesty International found in 2018 that the Metropolitan Police Service Gangs Matrix database and the process for adding individuals to it, assigning risk scores and sharing data with partner agencies had 'few, if any, safeguards and little oversight'. It raised concerns that information from the database was being shared with many partner agencies and that the police could not distinguish opinion from fact. Amnesty International found that the data collection amounted to an interference with young people's rights'.[153]

2. 4 Freedom of peaceful assembly

The right to freedom of peaceful assembly is guaranteed in Article 21 of the ICCPR, Article 11 of the ECHR, and the Human Rights Act 1998. It is fundamental to realising a wide range of other rights, and particularly important for amplifying the concerns of marginalised individuals and groups.[154]

No one should be harassed or face other reprisals as a result of their presence at, or affiliation to, a peaceful assembly. The right to freedom of peaceful assembly may be restricted if the three-part test outlined above (see page 32) is met.

The right to freedom of peaceful assembly may be violated where fear of negative state action for exercising this right leads to self-censorship – in other words, where there is a chilling effect on freedom of assembly.[155] The ECtHR has also recognised a chilling effect in relation to the rights to freedom of expression and peaceful assembly.[156]

Amnesty International has previously found the UK Prevent programme – which like predictive policing involves large scale data-collection and retention, profiling, stigmatisation and suspicion without objective evidence – led to self-censorship and had a chilling effect.[157] Amnesty International has also found that mass surveillance, especially discriminatory mass surveillance and even the threat of such surveillance, can have a chilling effect on people's ability and willingness to exercise their right to freedom of expression and association.[158] Liberty has noted the chilling effect caused by predictive policing in the UK:

> As we normalise predictive policing, we may begin to self-police to avoid unwarranted suspicion. We may become afraid of the level of data being gathered about us, what it is used for, how it is shared and what predictions might be made about us as a result – and this may have a chilling effect on what we choose to say, where we choose to go and who we choose to associate with.[159]

Similarly, the UN Special Rapporteur on the rights to freedom of peaceful assembly and of association, Clément Nyaletsossi Voule, has said that:

> The unchecked expansion of surveillance technology in public spaces […] is becoming a serious threat to the enjoyment of civic freedoms. With artificial intelligence or machine learning techniques authorities can now analyse the huge quantities of data produced by these surveillance tools, offering new pretexts for rights interferences, such as predicting future behaviour or flagging suspicious activity. Moreover, the intrusion by pervasive surveillance on individuals' privacy poses a vast chilling effect and threatens the participation and freedom to organise and participate in assemblies.[160]

2.5 Freedom of expression

Under Article 19 of the ICCPR and Article 10 of the ECHR everyone has the right to freedom of opinion and expression. The right to freedom of expression includes the right to seek, receive and impart information and ideas of all kinds by any means (for example, forms of behaviour and dress, music, speech, online).[161]

It includes ideas that may be deeply offensive and is key to enabling individuals to exercise their other human rights.[162]

The right to freedom of expression may be violated where fear of negative state action for exercising this right leads to self-censorship – in other words, where there is a chilling effect on freedom of expression. The right to freedom of expression may be restricted if the three-part test outlined above (see page 32) is met.

The UN Special Rapporteur on the rights to freedom of peaceful assembly and of association has stated that:

> The increased use by States of digital surveillance, such as [...] digital profiling tools contributes to the shrinking of civic space and limitations on freedom of expression in many countries.[163]

The EU Parliament Civil Liberties, Justice and Home Affairs committee has acknowledged these risks, saying that:

> The use of AI in law enforcement entails a number of potentially high, and in some cases unacceptable, risks ... to the protection of privacy and personal data, the protection of freedom of expression.[164]

2.6 Liberty: Freedom from arbitrary arrest

Everyone has the right to personal liberty and security of the person and therefore to freedom from arbitrary arrest and detention.[165] No one shall be deprived of their liberty except on such grounds and in accordance with such procedure as are established by international and domestic law.[166] Arrests and detentions must also not be based on discriminatory grounds.[167]

Reasonable suspicion is one of the stated exhaustive grounds for arrest and deprivation of liberty, but the European Court of Human Rights has interpreted reasonable suspicion as requiring:

> The existence of facts or information which would satisfy an objective observer that the person concerned may have committed an offence. [...] The question then is whether the arrest and detention were based on sufficient objective elements to justify a 'reasonable suspicion' that the facts at issue had actually occurred.[168]

Further, where an individual is detained under a law permitting preventive detention, allegedly to prevent them from committing a crime, but no investigation is conducted and they are not charged, this will amount to a violation of the right to liberty.[169]

Authorities' use of predictive and profiling systems to generate suspicion or even justify police action, if it results in monitoring, surveillance, stop and search, arrest, detention

and other forms of police intervention or enforcement, engages the right to liberty and may infringe this right.[170]

2.7 Principle of legality

The principle of legality requires all restrictions on human rights to be provided by law.

Article 15 of the ICCPR requires criminal laws to state precisely what constitutes a criminal offence and what the consequences of committing it would be.

Police and criminal legal system authorities are using predictive and profiling systems to generate vague and general suspicion against individuals, communities and areas in relation to alleged criminal activity, without clear criteria and using vague concepts of criminality. The suspicion results in policing intervention or enforcement. All this happens with little to no transparency around these systems and the way they are used and implemented, and it violates the principle of legal certainty.

Without legal certainty it is difficult for people to adjust their behaviour to avoid state intervention. Ill-defined and excessively broad laws and policies are also more likely to be arbitrarily applied and abused. If authorities use these systems in this way, alongside these vague and ill-defined concepts then they will be violating the principle of legal certainty.

3. Geographic or area-focused crime prediction tools

> 'It targets and profiles entire areas. It targets you based on the community you live in. It's a clear example of how racism structures policing.'[171]
>
> 'It is bullshit. Any place that is overpoliced will report more crime. Mapping of crime areas is already rooted in racism.'[172]
>
> 'I think it just traumatises these communities.'[173]
> **Views from areas affected by predictive policing**

Amnesty International has found that at least 32 police forces across the UK have used geographic crime prediction and hotspot mapping tools.[174]

These data-based and data-driven systems focus on areas or places and attempt to predict whether crime will occur there, profiling the area as a crime hotspot or high-risk crime area.

Police use these systems to decide where to send police patrols, what areas to monitor more closely for potential crime, and what areas to target for specific operations such as stop and search or other exercises of police powers and forms of enforcement, which can and do lead to arrest and detention.

3.1 Grip hotspot mapping: 20 UK police forces

In 2021, 20 police forces across the UK received significant funding from the Home Office for hotspot policing under a programme called Grip or Operation Grip.[175]

Grip was described in the government's Beating Crime plan as:

> Highly-targeted, analytically driven policing operations in the highest crime hotspots in those forces, with visible patrols to suppress criminal behaviour. And a sophisticated, data-driven approach will allow forces to micro-target places where serious violence is most likely to occur.[176]

The hotspot policing under Grip was described as 'a place-based policing intervention that focuses police resources and activities on those places where crime is most concentrated.'[177] The Home Office gave almost £5 million to 20 police forces[178] across England and Wales in April 2021 as part of Grip, 'to increase Hotspot Policing in towns and cities blighted by violent crime.'[179] These forces were chosen on the basis that they were the areas 'most affected by serious violence', based on hospital admissions data.[180]

The Home Office has said that 'At least 120,000 patrols were carried out by Grip forces and forces receiving bespoke hot spot policing funding in the year ending March 2022'. In an evaluation of Grip published in February 2024, the Home Office said that 'Though the intervention was cost effective, results were not as impressive as suggested by the literature on hot spot policing', and 'few forces demonstrated a statistically

significant reduction in crime.'[181] Despite this, the Home Office provided funding for the same 20 'to deliver the hot spot policing programme' until March 2024.[182]

3.1.1 Essex Police and Grip hotspot mapping

The Home Office has stated that the Grip version of hotspot policing was developed by Essex Police in 2020.[183] The Essex Police model was then used as the model for the other forces implementing the Grip hotspot policing programme.

According to the Home Office, this hotspot policing tactic involves:

> Operating regular, intensive, high visibility police foot patrols for short periods of time within specific areas where there is a risk of serious violence. Police data analysis will inform which areas are most at risk of violent crime and where the patrols should be targeted.[184]

Essex Police piloted this approach in Southend-on-Sea in 2020, with a study on the method carried out by an Essex Police Detective Chief Inspector and academics from the University of Cambridge, among others.[185] The study describes the method as follows:

> We identified 20 hot spots of 150m^2 each on the basis of community violence defined as serious assaults, robbery, and drug dealing in the Southend-on-Sea area of Essex Police, with boundaries geo-fenced to collect GPS measures of foot patrol presence generated by hand-held electronic trackers issued to officers directed to perform patrols.[186]

The areas identified in this way were then allocated extra police patrols.[187] This study provided the evidence basis for the Grip model of geographic predictive policing in the UK. It attempted to answer the question:

> Does one foot patrol per day (15–20 min) conducted in serious violence harm spots reduce street-visible crime harm and frequency relative to no foot patrol in the same hot spots, and if so by how much?[188]

There is no conclusive evidence from the Essex Police pilot or subsequent studies of the implementation that the use of so-called hotspot mapping had any impact on crime. There is, however, evidence that the use of the system reinforced and contributed to racial profiling and racist policing.

To select the 'areas of concentration', the Essex Police initiative looked at 'injury, robbery, and drug trafficking' – offences it regarded as 'serious violence' and which were also described as 'community violence'.[189] The hotspots were identified via a 'kernel density estimation', identifying 'clusters of crime within a 150-m area, weighted by the crime harm index to create harm spots.'[190] The crime harm index referred to is the Cambridge Crime Harm Index, a metric which ranks crimes based on sentencing guidelines and the starting point of the total days in prison a first-time offender convicted of that offence would receive.[191]

The authors refer to the map in Figure 1 and state that 'Within these grids, 20% of all violence and 41% of all harm were occurring in 2.6% of the geographic area for a total of 277 offences.'[192] These predicted 'harm spots' were then used to allocate police patrols at a rate of eight areas per day, with patrols allocated randomly over the 90-

day period of the study.[193] The cost of this pilot was '£22,750 of Home Office Surge funding from an allocation of £1,160,000 to Essex Police in the year 2020/21.'[194]

The authors concluded that there was a 31 per cent reduction in 'street visible crimes', and that '35.6% lower harm was reported on patrol days', based on the crime harm index.[195]

Figure 1: 'The harm spots in Southend-on-Sea', according to Essex Police.[196]

DEMOGRAPHIC ANALYSIS

Amnesty International has conducted a demographic analysis of the areas profiled and targeted by Essex Police's geographic crime prediction tool, and created maps of the same areas in order to show the demographics of the people who live in the predicted 'harm' areas targeted by police.

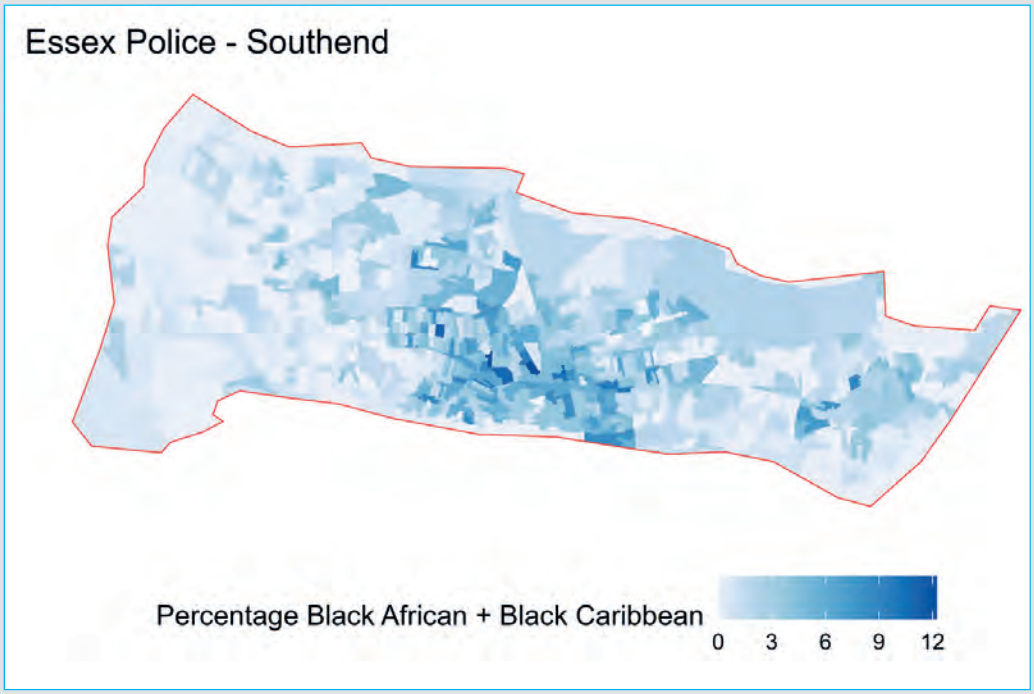

Figure 2: Distribution of Black African and Black Caribbean residents in Southend-on-Sea.
Source: Map by AIUK

DEMOGRAPHIC ANALYSIS continued

Figure 2 shows the population of Black African and Black Caribbean residents who live in the targeted area in Southend. The predicted 'harm spots' in the Essex Police map correspond significantly to areas where there is a higher population of Black African and Black Caribbean residents.

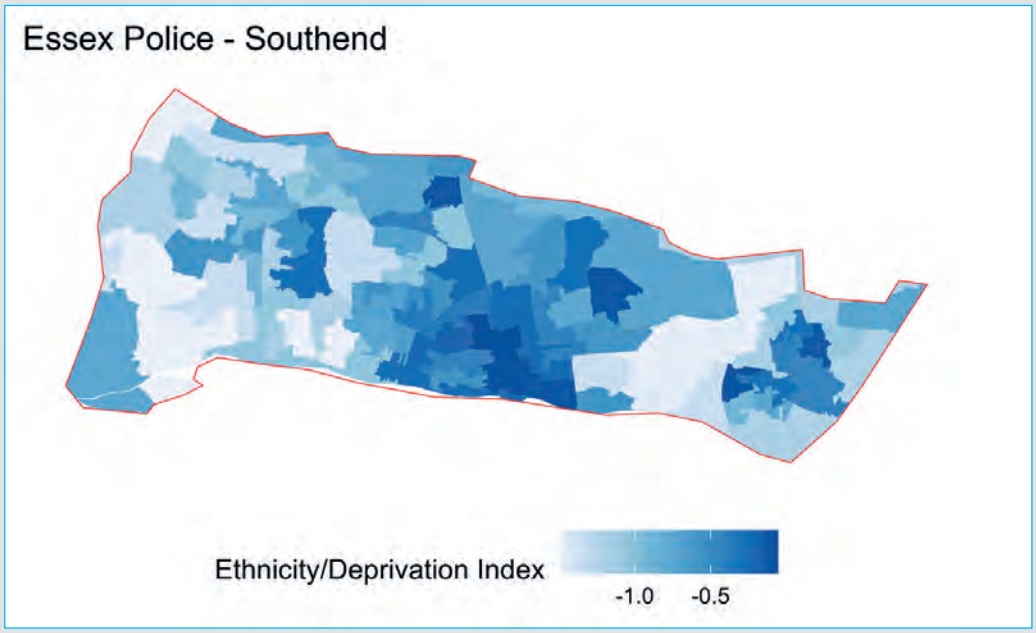

Figure 3: Ethnicity and deprivation in Southend-on-Sea. ***Source:*** Map by AIUK

Figure 3 shows a combination of the levels of deprivation and the population level of Black African residents, Black Caribbean residents, Asian Bangladeshi residents and Asian Pakistani residents in Southend.[197] Again, the predicted 'high harm' spots in the Essex Police map correspond significantly to areas with a higher population of more deprived Black African, Black Caribbean, Asian Bangladeshi and Asian Pakistani residents.

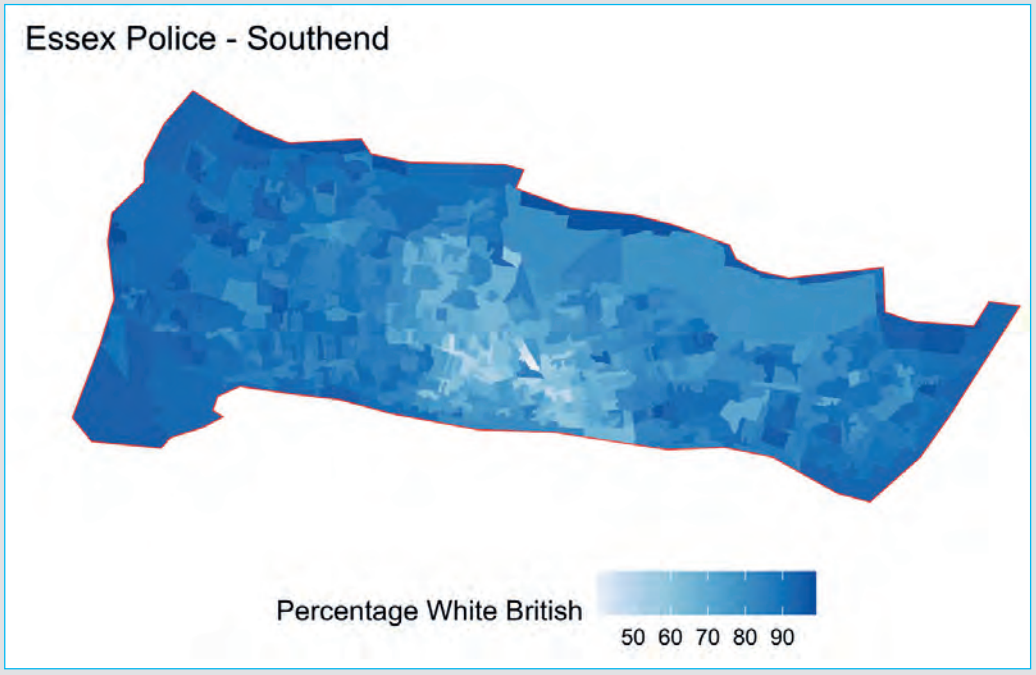

Figure 4: Distribution of white British residents in Southend-on-Sea. ***Source:*** Map by AIUK

DEMOGRAPHIC ANALYSIS continued

Figure 4 shows the population of white British residents in the targeted area in Southend. While there is a high population of white British people throughout the area, the areas which have been predicted to be high harm are predominantly areas with very low concentrations of white British people.

These maps show that the use of Grip hotspot mapping by Essex Police results in the racial profiling and targeting of Black and racialised communities, particularly deprived Black and racialised communities.

In September 2024 Amnesty International conducted a community discussion group with 12 young people between the ages of 13 and 19 in Essex. The participants discussed the use of predictive policing by Essex Police and in their local areas, including Southend.

Participants in the group were shown a map of Southend and Essex Police's 'harm spots in Southend-on-Sea' in Figure 1 above and asked to describe their experiences and knowledge of policing in the area. They described west Southend and Leigh-on-Sea as an 'expensive area' and 'really nice' where there were 'few police'.[198]

Participants noted that the police so-called hotspots in the centre of Southend correlated to where 'lots of youth/schoolchildren' are. They described the east of Southend, Thorpe Bay, where there were no hotspots, as inhabited by 'rich older people'.[199] They described the area north of Southchurch, corresponding to two hotspots, as estates where there was 'more policing, more searches'.[200] East of Southend town centre and in Chalkwell, corresponding to several alleged hotspots, participants said, 'there's loads of estates' and 'colleges,' where 'young people' and 'youth' were subject to stop and search.[201]

A review conducted by Essex Police on Operation Grip in April 2022 found this implementation of Grip geographic predictive policing between 2021 and 2022 'coincided with us seeing no significant reduction in community violence across Essex'.[202] In three patrolled areas (Southend, Chelmsford, and Colchester) there was even 'an increase in community violence compared to non-treatment areas'.[203]

Despite this, Essex Police continued Grip hotspot mapping in 2022-23. During this time, Essex Police said that its focus was on 'non-domestic public space violent crime,' specifically:

> Assault ABH [actual bodily harm], Common Assault or GBH [grievous bodily harm], Fight, Robbery, Stabbing, Armed Robbery, Acid Attack, Firearm, disposed as Crime/Crime Related/ASB [anti-social behaviour]; excludes domestic.[204]

The data used to identify relevant hotspots were 'STORM calls'.[205] STORM is the software that many UK police forces use for computer-aided dispatch (CAD), to record and prioritise 999 calls to the police, and dispatch police to the location of the incident.[206] In the year ending March 2022, Essex Police conducted an additional 15,536 patrols through the Home Office-funded Grip programme.[207]

The force created a map of Essex (Figure 5) showing 'treatment' areas (red dots) where alleged crime hotspots were identified and where police were tasked to patrol and conduct 'interventions'. Other alleged crime hotspots were not patrolled. These 'pure control' areas (blue dots) enabled a comparison that might show whether the patrols had any effect on crime.[208]

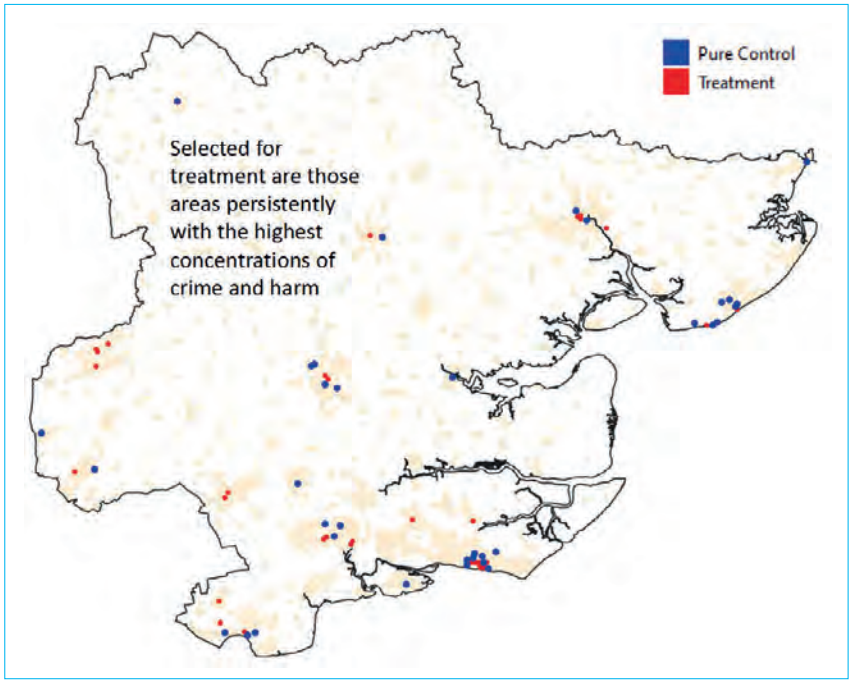

Figure 5: Map of Essex showing hotspots identified as 'treatment' and 'control' areas.[209] ***Source:*** © Essex Police

A further analysis of Grip hotspot policing by Essex Police in 2023 also concluded that there were no statistically significant changes in crime in the targeted areas, and that 'the volume of Op [Operation] Grip offences remained relatively stable'.[210]

Despite this, Essex Police were given 'up to £1,637,769' by the Home Office to conduct predictive hotspot policing on 'serious violence and anti-social behaviour in 2024/25'.[211] The Essex Police, Crime and Fire Commissioner said that the force's operation of hotspot policing under Grip until 2025 would be evaluated via a 'comparison of crime and anti-social behaviour figures in hotspot areas with wider force trends, and through the findings of public confidence surveys commissioned by the Home Office.'[212] The evaluated impact will include 'community perceptions in the hotspots […] and levels of trust and confidence in the police.'[213] A Home Office study acknowledged that Grip hotspot policing does not engage at all with the 'community impact' of this form of policing.[214] Like other assessments of Grip (see Section 3.1) this Home Office study found that few forces demonstrated a statistically significant reduction in crime.

Feedback loops

Feedback loops in this context occur where police use data which reflects the structural and institutional discrimination in policing and the criminal legal system to make predictions or create profiles. Such data includes police intelligence, stop-and-search or arrest data. It includes areas with high populations of Black and racialised people repeatedly targeted by police and therefore occurring in those same police records, or Black people and racialised people repeatedly targeted by police who are therefore over-represented in the statistics. The bias in that data leads to predictions that crime will occur in those areas, or that individuals from those backgrounds are likely to commit crime.[215] This in turn leads to further targeting of those areas and individuals,

creating yet more data that is used to make further predictions. It is a repeating cycle. Dr Patrick Williams said this form of geographic predictive policing is:

> Simply just a regurgitation or a re-representation […] of police ideas of the usual suspects. So, the data […] used to train and inform predictive policing systems, is simply a re-representation of what policing does and has always done. And I think that's where we're at now.[216]

He went on to say that 'rather than predictive policing we should be speaking about 'predictable policing':

> Because […] as a society […] we go on to police the same communities, who we've always deemed as risky, as problematic, as most likely to be involved in crime, so unsurprisingly we're talking about black folks, or racially minoritised communities, we're talking about white working class communities, we're talking about people on the move [… They] will be […] seen as predictable subjects or predictable objects to be policed. So rather than 'predictive' policing, it's simply, 'predictable' policing. [It] will always drive against those who are already marginalised.[217]

Essex Police have published details of outcomes in 2024 which show that the force's use of geographic hotspot mapping amounts to racial profiling and discriminates against Black and racialised people.[218]

In the Essex Police force area in 2024 Black people were on average almost three times more likely to be stopped than white people, and in some areas of Essex as much as six and seven times more likely.[219] Other 'Minority' (as defined by Essex Police) individuals were 1.8 times more likely to be stopped than white individuals.[220] Almost three-quarters of stops and searches during that period resulted in no further action.[221] Essex Police has admitted that the racist disproportionality in its use of stop and search is getting worse, stating that there is 'a gentle upward trend since July 2022.'[222] Of all police forces in the country in 2023-24, Essex Police was third in stopping the most Ethnic Minority people compared to white people (behind Avon and Somerset Police and Sussex Police), and sixth in stopping the most Black or Black British people compared to white people.[223] Essex Police's use of force increased 6.5 per cent in 2024 from 2023, and Black people were subjected to police use of force three times more than white people.[224] Essex Police also used force against Ethnic Minority individuals 1.7 times more than white people.[225] Police use of force includes the use of handcuffs (on people whether compliant or non-compliant), ground restraint, unarmed combat skills, body restraint, dogs, tasers, PAVA spray (a chemical irritant that temporarily incapacitates people, similar to pepper spray), firearms and other physical force.

These figures evidence that Essex Police's use of geographic predictive policing is reinforcing and contributing to existing police discrimination and violence against Black and racialised people.

One participant in the community workshop run by Amnesty International said of Essex Police's geographic predictive policing approach that 'on paper it sounds good, but I can see where it can become toxic for society.'[226] Another noted the potential for discrimination:

> I can imagine that this leads to a lot of like discrimination, because if you're choosing places, based on people, based on income and stuff, it is just a fact that working class boys or like black boys, they get stop and searched more.[227]

3.1.2 West Midlands Police: Knife crime and serious violence prediction tools

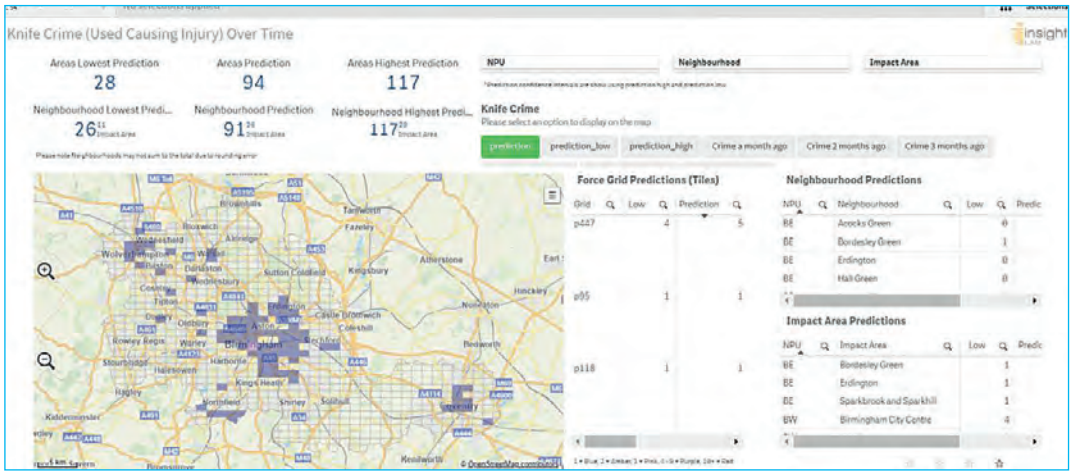

Figure 6: West Midlands Police's 'Knife crime (used causing injury) over time' predictive map showing Birmingham, Coventry and Wolverhampton and surrounding areas.[228] ***Source:*** West Midlands Police, Business Insights dashboard

West Midlands Police has deployed predictive crime mapping tools to predict knife crime and serious violence since 2021 and 2022, respectively.[229] These tools have been funded by the Home Office Grip 'hotspot' policing programme, and are part of West Midlands Police's 'Project Guardian' team, which focuses on youth violence and knife crime.[230]

According to West Midlands Police, beta testing for the 'knife crime' tool started in November 2021, and beta testing for the 'serious violence' tool started in May 2022.[231] Both tools were developed by West Midlands Police, and their development and use were reviewed by West Midlands Police's 'independent Data Ethics Committee',[232] a joint initiative of West Midlands Police and the West Midlands Police and Crime Commissioner.[233] The ethics committee 'Advised that they [the tools] can proceed.'[234] West Midlands Police has said that the 'serious violence' tool is no longer in regular use, with the force focusing instead on knife related serious youth violence.[235]

West Midlands Police knife crime prediction tool

The prediction tool developed by West Midlands Police has been used operationally since March 2023. The force states that the system seeks 'to predict […] the likely volume and locations of Knife Crime (where the knife was used, causing injury)'.[236]

West Midlands Police has referred to its use of this predictive tool as a 'trial'.[237] However, predictions from these tools have been used in operational policing, leading to patrols, stops and searches, arrests, and other interventions.

The predictive system 'divides the force area into 1 km^2 grids […] and provides a prediction for each grid square for the next four-week period'.[238] The system uses two years of data, 'as well as considering the trend for the last 20 years',[239] using 'recorded crimes' data from West Midlands Police's CONNECT system.[240]

The force has said that it uses stop-and-search records and police intelligence reports to make these predictions.[241] According to the force, its 'analysts also review offending levels from the same time last year and in the recent past to provide some context'.[242] The prediction]s are 'automatically updated' on a weekly basis.[243] The predictive outputs of the system are shown in Figure 6, Figure 7 and Figure 8. The force has stated that Birmingham West, an area which encapsulates the Soho Road and Lozells areas, 'is consistently predicted as likely to have a higher volume of knife offences'.[244]

West Midlands Police's Data Analytics Lab and Geo-Spatial Team then use these predictions to identify areas for patrols.[245] The force said that 'these areas will be smaller than ward area, likely to be concentrated at street or a few streets level.'[246]

West Midlands Police has said that the systems predictions are used to deploy targeted resources, including where the force's Project Guardian Taskforce should be deployed for the next four weeks.[247] This taskforce is then deployed to tightly defined geographical areas where it is assessed that serious youth violence involving the use of knives is more likely to occur in the next four weeks.[248]

Policing impact and outcomes related to West Midlands Police knife crime prediction tool

The predictive system informs police 'tasking processes',[249] referring to the decisions to deploy police for specific operations in those areas. West Midlands Police targets the predicted areas with many different forms of policing and enforcement action. This has included police patrols, including high-visibility patrols and plain-clothes patrols, stop and search, knife arches, weapons sweeps, joint operations with other police teams.[250]

West Midlands Police has said that between November and December 2022 police carried out enforcement action in the Soho Road and Lozells areas of Birmingham, following predictions from this system.[251] Soho and Lozells are two areas in Birmingham with higher Black and Minority Ethnic (BAME) populations than the rest of Birmingham. Lozells is ranked as one of the most deprived wards in the city, with low levels of employment.[252]

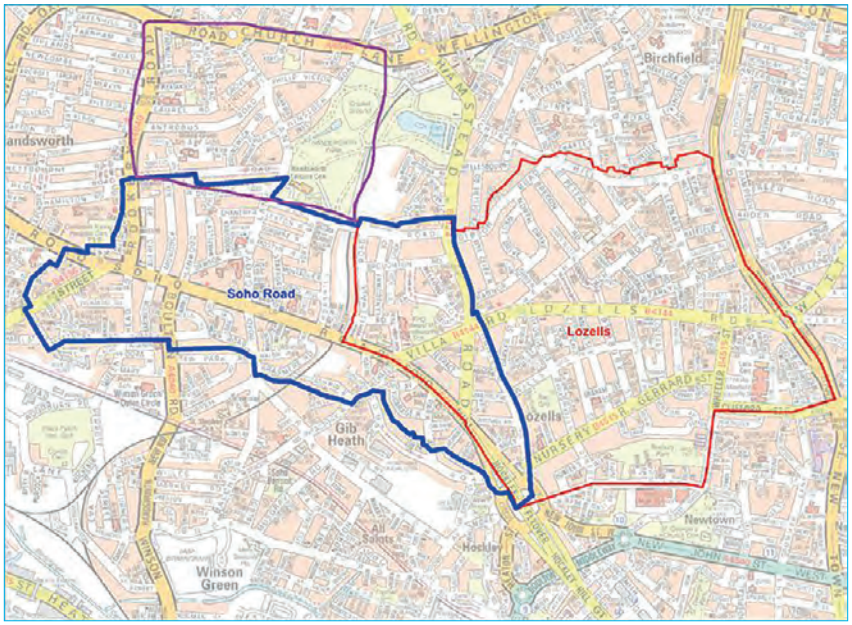

Figure 7: Map showing the areas targeted for deployment by West Midlands Police's 'Project Guardian' Taskforce, including Soho Road and Lozells areas, following predictions from the knife crime prediction tool.[253] ***Source:*** West Midlands Police

The force said this targeting of these areas led to 72 stops and searches and 34 intelligence reports, although it gave no detail on what this intelligence was.[254] According to the force, 27 arrests were made and 15 weapons were recovered, although it did not say if these were connected to the stops and searches or intelligence reports.[255] The force said that in a further deployment to Walsall in December 2022 'weapons were recovered, arrests were made' but it did not specify figures. It also said that '30 stops and searches were conducted' but did not provide details on whether these led to further action.[256] The force did not publish information on whether any charges or convictions resulted from these arrests.

West Midlands Police has acknowledged that the system has only correctly predicted knife crime incidents 17 per cent of the time; this means that it has incorrectly predicted knife crime incidents 83 per cent of the time.[257]

How West Midlands Police's knife crime prediction tool is discriminatory

The knife crime prediction tool is likely to lead to discrimination partly because of the data it uses. West Midlands Police uses stop and search and police 'intelligence' data, among other data, to influence and make these so-called predictions of knife crime in certain areas.

Stop and search is a policing tactic that is known and accepted, even by the police, to be discriminatory.[258] In the West Midlands Police area Black people were 3.9 times more likely than white people to be stopped and searched by West Midlands Police, and Asian people were 2.5 times more likely to be stopped and searched than white people in 2020.[259] A significant majority of these searches (73 per cent) resulted in no further action against the individuals stopped and searched.[260] When section 60 powers are in place, giving police the power to stop and search people without suspicion, Black people were 6.9 times more likely to be stopped and searched than white people by West Midlands Police, and Asian people were 3.2 times more likely.[261] More than 88 per cent of these stops and searches resulted in no further action against the individuals stopped.[262] West Midlands Police used force disproportionately against Black people during this period, acknowledging that 'The force cannot satisfactorily account for this and this warrants further assessment.'[263]

The use of stop-and-search data, which over-represents Black and racialised people, in a geographic crime prediction tool will result in discriminatory predictions. As areas with significant numbers of Black and racialised people have historically been over-policed, they are over-represented in police data and, as a result, systems using that data will predict increased crime in those areas. These so-called predictions will lead to further discriminatory policing, reinforcing and exacerbating the pre-existing discrimination, creating a negative feedback loop (see page 42).

A participant in one of Amnesty International's research discussions set out their experience of these feedback loops:

> On criminal databases there are lists of area codes that have the amounts of criminal activity, arrests, police sent to places leading to arrests, which creates never-ending cycle of more and more police sent to the same areas, creating over-policing and negative relationship between communities and authority, due to increased stop and search and heightened operations.[264]

Dr Daragh Murray called this the 'reinforcement loop issue', where data-driven systems:

> can be informed by a history of over policing or potentially discriminatory policing. And so they get certain outcomes and then police resources are directed to that area. And then inevitably crime was found in those areas and not in the other areas. And so you get the reinforcement loop [...] it's an automated system that almost produces its own results, or its own reality.'[265]

In addition, the system uses what is referred to as 'police intelligence'. Problems with police intelligence have been widely documented, including by Amnesty International. Police intelligence can be uncorroborated information, representing the subjective view and biases of an individual officer, with no evidential basis. A London borough gang unit official explained how police intelligence often works in the context of gang profiling:

> a police crime report might casually name 'so-and-so from X gang' without providing any further information to substantiate the claim. 'Another police officer will look at that crime report later. Because one police officer put it on there, it will be taken as fact'.[266]

The use of potentially uncorroborated, unevidenced material in this predictive system is highly likely to contribute to biased and discriminatory outputs, targeting communities and areas which are over-represented in intelligence reports.

Given that stop-and-search and intelligence data will contain bias against these communities and areas, it is highly likely that the predicted output will represent and repeat that same discrimination. Predicted outputs lead to further stop-and-search and criminal consequences, which will contribute to future predictions. This is the feedback loop of discrimination.

Influenced by the knife crime and prediction tool, West Midlands Police continues to conduct racial profiling and discriminatory policing. In the force area in 2024 white people were stopped and searched 2.3 times out of every 1,000, while Black or Black British people were stopped and searched 10.3 times out of every 1,000, almost five times as much. People of Mixed ethnicity were stopped and searched 9.1 times out of every 1,000, more than four times as much. Asian or Asian British people were stopped and searched 4.7 times out of every 1,000, more than twice as much.[267] More than two-thirds of these stops and searches (66.7 per cent) resulted in no further action against the individuals stopped.[268] West Midlands Police continue to use force against Black people more than white people, 2.3 times more in 2023.[269]

DEMOGRAPHIC ANALYSIS

Amnesty International has conducted a demographic analysis of the areas profiled and targeted by the West Midlands Police knife crime prediction tool.

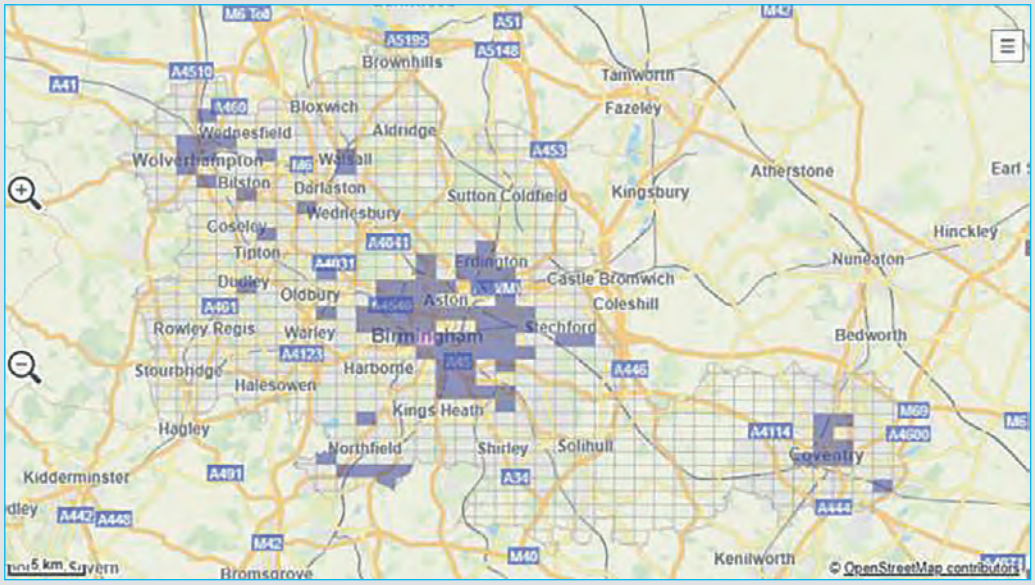

Figure 8: West Midlands Police's 'Knife crime (used causing injury) over time' predictive map showing Birmingham, Coventry and Wolverhampton and surrounding areas.[270] ***Source:*** West Midlands Police © Open Street Map contributors

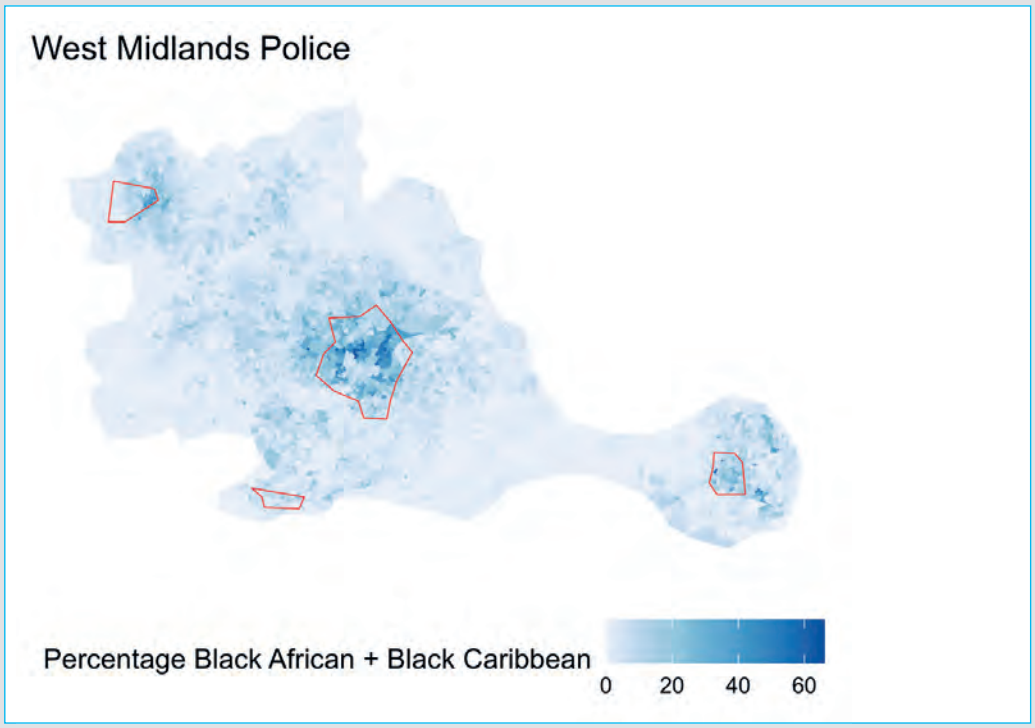

Figure 9: Distribution of Black African and Black Caribbean residents in the West Midlands. ***Source:*** Map by AIUK

Figure 9 shows the population of Black African and Black Caribbean residents who live in the targeted area in the West Midlands Police force area. The areas predicted to have knife crime correspond significantly to areas where there is a higher population of Black African and Black Caribbean residents.

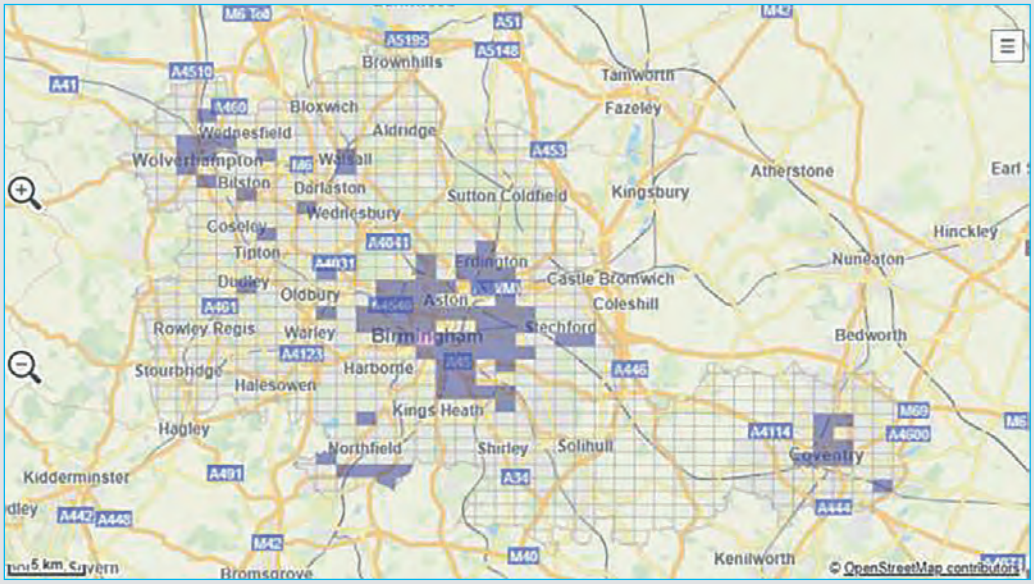

Figure 8a ***Source:*** West Midlands Police © Open Street Map contributors

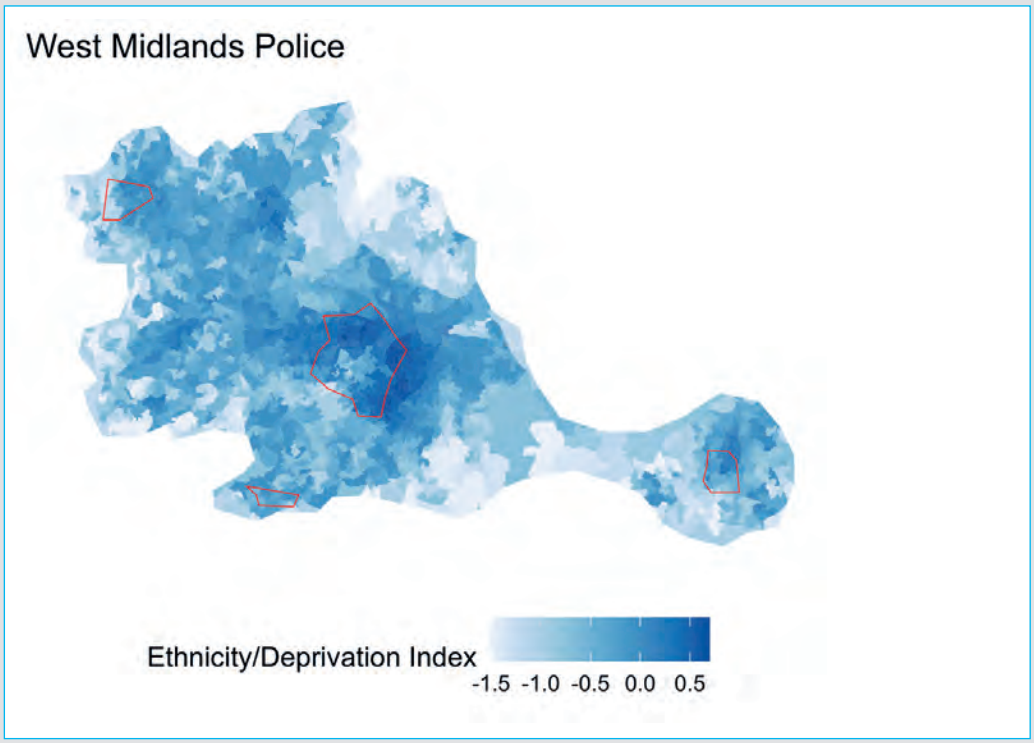

Figure 10: Ethnicity and deprivation in the West Midlands. ***Source:*** Map by AIUK

Figure 10 shows a combination of the levels of deprivation and the population level of Black African residents, Black Caribbean residents, Asian Bangladeshi residents and Asian Pakistani residents in the West Midlands Police force area.[271] Here again, the areas predicted to have knife crime include a significant proportion of the population of deprived Black African, Black Caribbean, Asian Bangladeshi and Asian Pakistani residents.

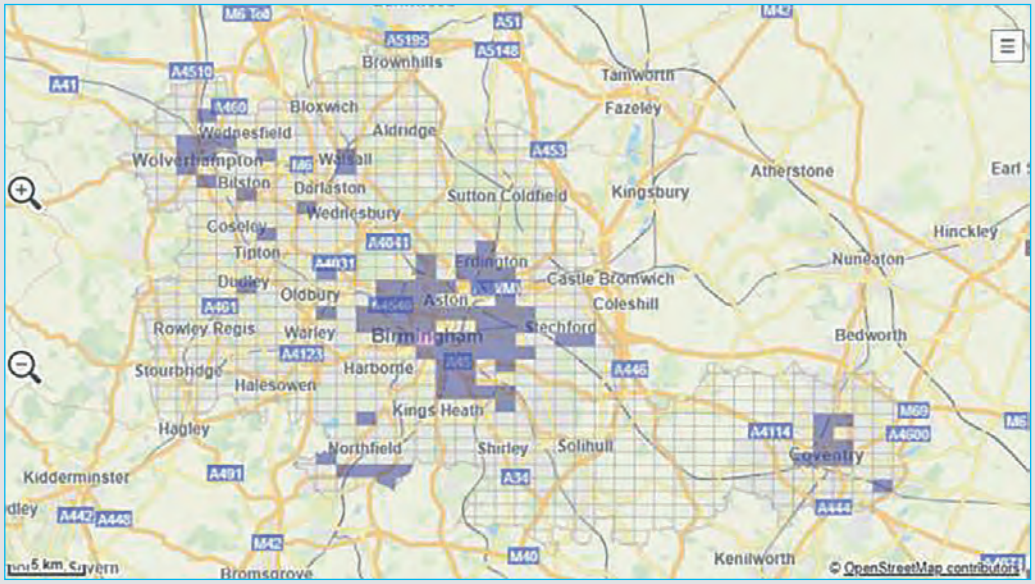

Figure 8b ***Source:*** West Midlands Police © Open Street Map contributors

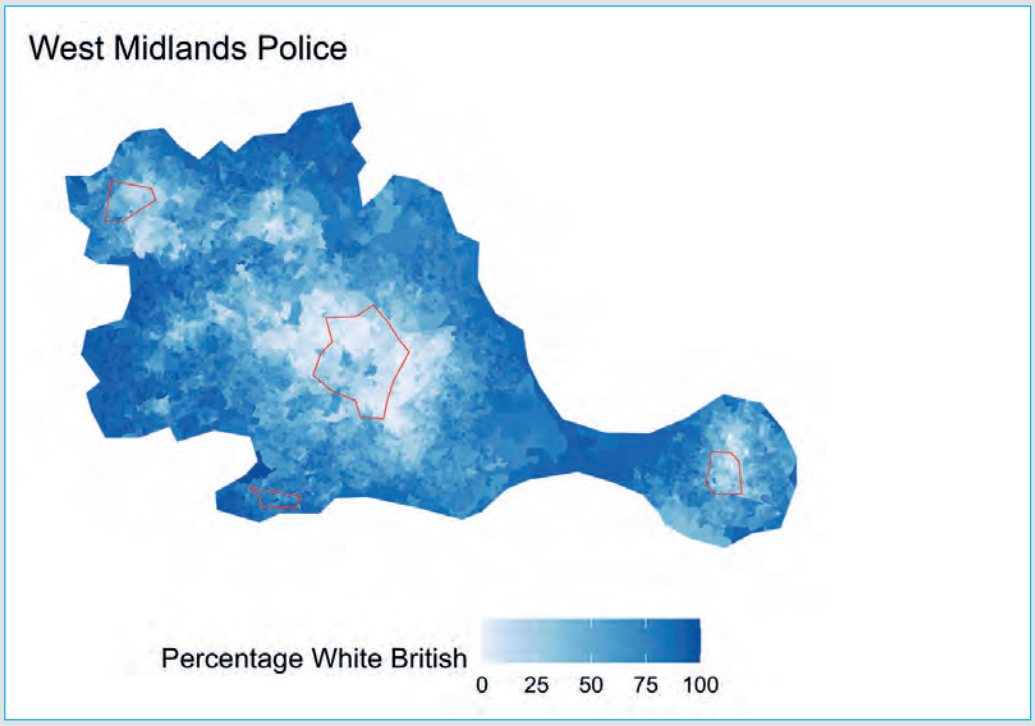

Figure 11: Distribution of White British residents in the West Midlands. ***Source:*** Map by AIUK

Figure 11 shows the population of white British residents in the targeted areas in the West Midlands Police force area. The areas where knife crime has been predicted are predominantly areas with very low populations of white British people.

These maps show that using the knife crime prediction tool by West Midlands Police results in the racial profiling and targeting of Black and racialised communities, particularly deprived Black and racialised communities.

3.2 Risk terrain modelling

Risk terrain modelling (RTM), also known by its software name, RTMDx, is an automated geographic predictive policing and crime prediction system.

Amnesty International's investigation has found that since 2020 several UK police forces have been using risk terrain modelling to attempt to predict hotspots or predictive maps of where crime is likely to occur, with other forces considering its use. The forces which have actively used risk terrain modelling include Essex Police, Metropolitan Police Service and Merseyside Police.[272]

These predictions are used to focus and increase police patrols and specific interventions in these areas, such as stop and search and other forms of enforcement, as well as targeted police operations.

Risk terrain modelling was developed by a US academic institute, the Rutgers Center on Public Security. It says the system:

> analyses the spatial patterns of crime incidents to determine how the built environment influences criminal behaviours that lead to crime outcomes at the same places over-and-over again. This adds meaningful context to raw crime data. And, diagnosing crime hot spots with RTM gives you accurate forecasts of where and why problems will persist or emerge.[273]

Risk terrain modelling is conducted using a software system called RTMDx. This software is licensed by a company called Simsi, Inc, a startup founded in Rutgers University, where RTM was created.[274] The Rutgers Centre on Public Security promotes risk terrain modelling publicly, openly seeking to 'justify the adoption of Risk Terrain Modelling into police agencies'.[275]

The centre claims there are many benefits of this approach, including 'Evidence-based support for decisions; justify need for financial or personnel resources to manage risk; Deem success and credit for controlling crime' and 'justify departmental need for resources to continue managing risk' for police 'command staff'. It states that the approach will lead to a 'More effective, responsive and transparent police department' for what it describes as 'Community Members'. It also claims that for 'Elected Officials,' this approach will 'Strengthen police-community relations'.[276]

The centre claims that police can use risk terrain modelling to decide 'where to go to address problems, what to do when you get there, and why to do it' and that its use will 'Reduce, control and forecast crime'.[277]

The centre produces a user manual for risk terrain modelling, which says that the system 'assumes that all places are risky to some extent', and that the predictive method is about:

> the distribution of those features throughout the landscape, your proximity to them, and the spatial influences they have on the attraction of potential offenders, suitable victims, and crime.[278]

It claims that 'Risk terrain modeling produces maps that visually articulate these environmental and situational contexts.'[279]

The system uses an algorithm which 'empirically tests a variety of spatial influences and analysis increments for every risk factor input to identify the most empirically – and theoretically – grounded spatial associations with known crime incident locations.' It uses this to create a 'Risk Terrain Model'.[280]

The Rutgers Center on Public Security outlines the steps to create a Risk Terrain Model:

> 1. Select an outcome event 2. Choose a study area 3. Choose a time period 4. Obtain base maps 5. Identify all possible risk factors 6. Select model factors 7. Map spatial influence 8. Weight risk map layers 9. Combine risk map layers 10. Finalize maps to communicate information.[281]

Users can apply up to 30 'risk factors' to an area and the Rutgers Center on Public Security suggests using 'literature reviews via library databases and/or Google Scholar; reports from reputable research centres' as well as 'professional experience; and practitioner knowledge'.[282] As this allows police to choose their own risk factors, it allows for possible police bias to influence these maps. This risks violating the right to non-discrimination.

The risk terrain modelling system uses two parameters for assessing the supposed influence of various physical and environmental factors (eg buildings) on the likelihood of criminality in an area: the proximity of these factors and their density. This is described by the developer:

> 'Proximity' assumes that being within a certain distance from a risky feature increases the likelihood of illegal behaviour and, ultimately, crime event locations. 'Density' assumes that the high concentration area of risky features creates a unique context for illegal behaviour and, ultimately, increases the likelihood of crime events at high-density places.[283]

The developer describes the risk terrain modelling program output as a 'Prediction', stating that '"Prediction" values represent the expected count of outcome events'.[284]

Dr Patrick Williams has criticised the system's theoretical basis, stating that 'it simplistically seeks to build a model around old issues, old theoretical positions.'[285] He said that the system allows its user 'to say, that's where the risky area is, we therefore need to concentrate our resource within that area, and we will police these individuals on that basis'.[286] Dr Williams said that this predictive system will ignore the reality that 'crime doesn't discriminate, irrespective of geography, it doesn't discriminate by race, sexuality, class, violence incurs and impacts all strata of society', and that it will only police 'particular communities' and 'behaviours' that are 'within particular spaces'. In doing so, he suggests, it 'also diverts our attention away from the harms that are taking place elsewhere'.[287] Dr Williams further described how this kind of predictive system ignores people's needs, and instead presents them as a risk:

> [W]hat we're doing is shifting from a society or a space within which we respond to the needs of individuals, and what we do is present them this risk that needs to be managed [...] rather than responding to those needs that individuals may have, it repackages it algorithmically, you literally shift these individuals into risk to be managed.[288]

The developer claims that the use of risk terrain modelling 'is adaptable to differences in political, economic, and policing structures in multiple countries and jurisdictions'.[289]

Data and discrimination

Police in Paris have used risk terrain modelling to target intervention zones based on environmental data, including the presence of schools, shops, and metro stations.[290] A study on the use of risk terrain modelling in Belfast stated that relevant factors used in 'successful' risk terrain modelling data analysis and crime predictions included data on 'drug and prostitution arrests, public housing, post offices, drug incidents, fast food establishments, percentage of black residents and percentage of male residents.'[291]

A study of risk terrain modelling used to predict shootings in the US city of Little Rock, Arkansas, included the following information in these predictions:

> median income (inverse), percent unemployed, percent of households in poverty, percent of households receiving public assistance (food stamps/ SNAP), percent of residents that are African American, and percent of households headed by a single female with children.[292]

The use of race and ethnicity in these so-called predictions is discriminatory, as is the use of socio-economic data and data on people's family makeup. If a predictive policing system is being given data on the ethnicity of the population in an area, its socio-economic status, or it's family makeup, as information that is intended to assist a so-called prediction as to the potential future criminality that may occur in that area, that is akin to labelling people who are members of those groups or backgrounds as criminal, and is therefore discriminatory. The use of ethnicity data to predict crime is inherently discriminatory. The use of the above data points has the potential to criminalise people based on their race or ethnicity, socio-economic status, social origin, and family makeup. Dr Williams told Amnesty International that these data-driven solutions created by developers are the 'seduction of technology, as a way to respond to crime,' and spoke of how 'politically it becomes so simple to just offer a tech solution and everyone will accept it and absorb it' as the reason behind the drive towards predictive policing:

> This seduction of technology literally convinces members of the public that if we allow technological solutions, technical solutionism into the room, then we can have an appreciable effect on crime rates across England and Wales. Your tech vendors and companies therefore step in with the promise of tech, they begin to produce and come up with these ingenious ideas, to seduce police officers, police funders, politicians, governments, into this mirage, that somehow we can respond to the problem with crime. […] I would argue it's a principle tension for me. Because it's a myth. It's a mirage. It's not possible, and they can't do it.[293]

3.2.1 Essex Police: Risk terrain modelling

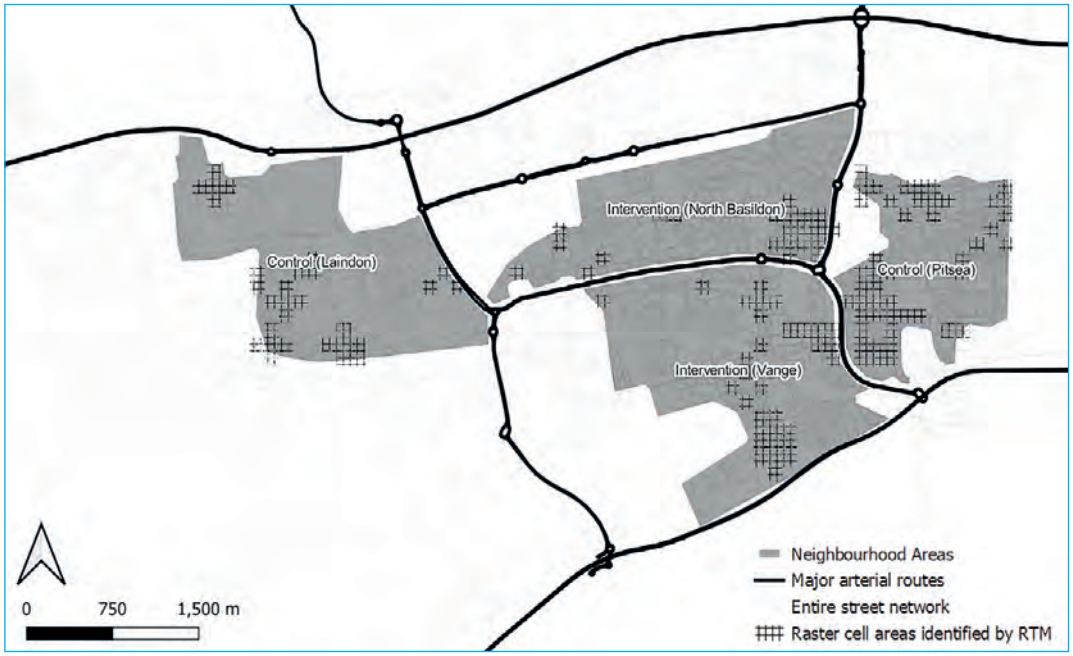

Figure 12: Neighbourhood policing team zones in Southend: alleged crime hotspots for 'intervention' and 'control' are shown as black grids on the map.[294] © OpenStreetMap contributors. Feature layers contain Ordnance Survey data © Crown copyright and database right 2020.

Essex Police has been using a system called risk terrain modelling for geographic crime prediction since 2020.[295] Essex Police has described the system as 'a technique used to enable both evidence-based policing (EBT) and problem-oriented policing (POP) responses'.[296]

Essex Police operates risk terrain modelling using RTMDx software provided by Simsi, Inc.[297] Essex Police has not publicly stated the full cost of risk terrain modelling. However, it paid Simsi, Inc £17,683.47 in August 2021 for 'Telecommunications expenditure'[298] and £20,275.51 in August 2022 for 'IT incl hardware & software licences'.[299]

When asked about risk terrain modelling, Essex Police described the system by referring to the Simsi, Inc User Manual:

> RTMDx is a software application for Risk Terrain Modelling (RTM). RTMDx diagnoses and communicates environmental attractors of crime incidents. Information products can be used to anticipate places that will be most suitable for illegal behaviour, identify where new crime incidents will emerge and/or cluster, develop place-based interventions, strategically and tactically allocate resources, and prioritize efforts to mitigate crime risks. Crime hot spots are symptoms of risky places.[300]

According to the developing company, the program 'results in an easy to understand model that selects not only the significant risk factors but also their optimal spatial influences' which is then used for 'Generating a map of crime risk'.[301]

Essex Police feed a number of data types into the risk terrain modelling system including incident date, location, data and references, crime data, offence data, and addresses and postcodes.[302]

Essex Police said this use of a predictive mapping system to prioritise 'visible police presence and positive community engagements' is 'a deliberate shift away from traditional law enforcement actions'.[303]

A study by Essex Police officers gave the following justification for the force's use of predictive hotspot policing, saying that it was being used 'amidst a climate of significant budget and personnel cuts', as 'More than 20,000 police officers and 23,500 police staff positions were lost nationwide between 2010 and 2018'. It said that Essex Police 'lost 787 officers between 2010 and 2018', but added that the force 'is set to return to 2010 resource levels by the end 2022.'[304]

Dr Adam Elliott-Cooper, Senior Lecturer in Public and Social Policy, Queen Mary, University of London, criticised this – often repeated – cost justification:

> if the government are really interested in cutting costs, then they will invest in the forms of community led infrastructure which can genuinely improve public safety and are considerably cheaper than policing and the various forms of surveillance and the technologies that are being proposed.[305]

He argued that:

> They [the police] want to save costs […] but without cutting policing […]. And I think expanding policing and cutting costs is not going to bring about the kinds of improvements that communities need.[306]

The Essex Police study said that a theory known as 'risk-based policing' underpins the force's use of risk terrain modelling. It described this theory as:

> providing officers with actionable information about physical features of the landscapes they patrol. This shifts their focus away from reacting only to calls-for-service or fixating on people present within crime hot spots. The goal is to disrupt the situational contexts, or 'risk narratives,' or 'crime scripts' as may be said in the UK, and related opportunities for crime that exist at risky places.[307]

The Essex Police study includes risk terrain modelling as part of risk-based policing as it 'informs crime risk narratives and adds an evidence-based analytical method to RBP' and 'diagnoses environmental features that connect with crime patterns and articulates how their interactions in space and time create risky places for crime.'[308] Essex Police has also referenced the 'Theory of Risky Places' in relation to its use of RTM. This theory considers that 'the spatial influence of particular attractors or generators of the landscape make some places risky, or vulnerable to crime,' and that 'Vulnerable places that also have recent exposures to crime are at an even greater risk of persistent problems.'[309]

Essex Police's initial implementation of risk terrain modelling replicated a previous implementation of the system in Kansas City, USA, adapting it for Basildon in Essex.[310] This roll-out of risk terrain modelling was 'spearheaded solely by a police agency (that is, without academic researcher involvement in the design or implementation).'[311]

Essex Police initial implementation and operational use of risk terrain modelling

Essex Police first used risk terrain modelling between September 2020 and March 2021, focusing on the community of Basildon, Southend.[312] Basildon was allegedly chosen as it was experiencing a spike in violent crime[313] and because:

> Basildon residents experience disproportionately high rates of violence requiring hospitalization compared to urban areas which are similar in geographical design and layout.[314]

The initiative focused on 'community violence'. This is described as 'incidents of street robbery or physical violence occurring predominantly in public spaces, involving persons who are not related or intimately known to one another.[315] The initiative's aim was 'policing to intervene' to prevent these incidents occurring.[316]

The approach was based on analysis by Essex Police that allegedly showed that 'non-domestic public-space violence, or community violence' repeatedly occurred:

> in the same geographical locations over long-periods of time despite the frequent turnover of victims and offenders in these areas, and the regular traditional law enforcement activities performed by the EP [Essex Police] over these periods.[317]

Essex Police collected geospatial data 'about landscape features that could potentially connect with the spatial patterns of crime under study'[318] using an open source geographic information system and a crime analysis plug-in.[319] It identified 20 'landscape features, or potential risk factors', including:

> ATMs; bars or pubs; cheque cashing and pawn brokers; convenience stores; entertainment venues; gambling venues; high rise residential units; hotels; large supermarkets or superstores; leisure clubs; nightclubs; off-licence or alcohol stores; parks and open spaces; petrol stations; restaurants; schools and educational establishments; social clubs; smaller supermarkets; takeaway premises and fast food; external demand calls to police regarding drug dealing and misuse.[320]

Table 1. The risk terrain modelling analysis conducted by Essex Police for neighbourhoods in Basildon and surrounding areas

Measures	Laindon	North Basildon	Pitsea	Vange
Total population	20,706	14,994	14,193	20,150
Square miles	1.25	0.91	0.80	1.21
Raster cells sq miles	0.24	0.21	0.34	0.32
Population density sq miles	16,565	16,540	17,771	16,718
% aged 15-24	12.2	11.9	11.8	12.2
% manual/routine occupation	86.4	97.7	91.3	93.2
% in most 30% deprived risk settings per sq miles	71.0	67.0	100.0	97.0
Convenience stores	4.0	8.8	2.5	5.8
Off licence/liquor store	1.6	2.2	1.3	1.7
Fast-food/takeaway	7.2	6.6	7.5	8.3
Drug dealing calls	3.1	3.2	4.7	7.6
Community violence last year	409	321	439	488
Rate per 1,000 residents	19.8	21.4	30.9	24.2

Source: Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', 2023, *Justice Quarterly, Table 3.* 'Descriptive stations for neighbourhoods within the study'

Risk terrain modelling software was then used to 'test the spatial influences of these risk factors', producing a 'Risk Terrain Model' of 'significant place-based risk factors for 'Community Violence' in Basildon.[321] These included the proximity of the following buildings or businesses, in descending order of significance:[322] 'Bars, Nightclub, Restaurant, Large Supermarket, Takeaway and fast-food venues, Secondary schools'. The 'density' of the following buildings was also considered:[323] 'High rise or blocks of residential units' and 'Supermarket (Small)'.

Table 2. The alleged risk factors identified by Essex Police risk terrain modelling in Basildon, Essex

Risk factors	Relative Risk Value (RRV)	Operationalisation	Spatial influence up to
Drug calls for service	4.519	Proximity	300m
Bars	3.640	Proximity	150m
Nightclub	3.635	Proximity	150m
Restaurant	3.106	Proximity	150m
Large supermarket	2.617	Proximity	150m
Takeaway	2.385	Proximity	600m
High rise residences	1.780	Density	600m
Small supermarkets	1.696	Density	600m
Hotel	1.641	Proximity	600m
Secondary schools	1.565	Proximity	600m
Convenience stores	1.476	Proximity	300m

Source: Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', 2023, Justice Quarterly, *Table 2, 'Significant environmental features in the risk terrain model'*.

Relative Risk Value (RRV) shown in Table 2 signifies 'the likelihood that violence is to occur when compared to other places in Basildon where the influence of the feature is not present.'[324] According to Essex Police's risk terrain modelling analysis:

> the highest frequency of community violence occurred in behaviour settings influenced by the combined nearby presence of convenience stores, drug calls, high rise or blocks of residential units, schools and takeaway or fast-food premises.[325]

The identification and use of takeaways and high rises as indicators of crime and criminality is discriminatory as it labels socio-economically deprived areas as crime hotspots, leading to their targeting by police. This is a continuation of the police's historic targeting of deprived areas; for example, police stop and search in London is repeatedly targeted at more deprived areas and areas with more significant economic inequality.[326]

People in all three research discussions that Amnesty International conducted in Essex, Lambeth and Hackney described frequent police patrols of council estates and more deprived areas. A participant in Lambeth said that police were 'Mostly targeting Black and Brown communities, council estate areas'. Another said of an area in Brixton: 'estates policed. Police cars, police bikes', and another said there was 'Heightened policing in low socio-economic areas'.[327] In Essex, participants noted: 'On estates – more policing, searches', and in pointing out heavily policed areas in Southend,

they said: 'There's loads of estates'.[328] In Hackney, east London, the group said that 'Haggerston estates' were targeted by police.[329]

Dr Elliott-Cooper's view on Essex Police's risk terrain modelling crime prediction system using data on the physical environment to predict crime was that it was 'one way of the police, continuing to over police racialised and working class communities without explicitly having to say so.'[330] He noted that this deliberate policing of certain neighbourhoods was part of a cycle of discriminatory policing:

> [W]e should be unsurprised that the kind of built environment which is targeted by the police will not be semi-detached houses with a white picket fence. They'll be council estates, it will be inner city urban areas which are overpoliced, not wealthy suburban areas, right? So we'll see the ways in which this purportedly geographical approach and thus purportedly more scientific and objective approach to policing, is in fact simply reproducing these existing problems.[331]

Risk terrain modelling: policing outcomes, intervention, and enforcement

Essex Police has said that in advance of police going to areas identified by risk terrain modelling, it trained officers participating in the initiative. It used training materials provided by the developer, and '[drew] on prior research and implementation of RBP in the US'.[332]

> The training forum ended with an information briefing on the target areas, along with maps detailing the precise geographies and risky settings within them.[333]

Essex Police officers were given a 'menu of intervention activities to be performed in these areas'. The force 'discussed the mechanisms of intervention activities and how they could be used to disrupt the risk narratives for community violence at and around risky places'.[334]

This official designation of areas as 'risky' in relation to crime and criminality predisposes police to see people and behaviours in those areas as criminal. This increases the likelihood of intervention against those areas and their inhabitants.

A participant in one of Amnesty International's other discussion groups echoed this sentiment around designating areas and people as risks: they said the police 'already have an idea of, this is where crime happens, or this is where dangerous people are'.[335] Another participant noted that police 'feel like it's a more hostile environment working in these areas'.[336] Another made a wider point that 'the relationship between culture and crime is that there's a criminalised culture, and whichever person fits into that criminalised culture then becomes like a criminal'.[337]

Essex Police said that in the policing response to the areas identified by the risk terrain modelling 'No tactics were discouraged, and officers were advised to use all powers at their disposal'.[338] In the areas identified, Essex Police asserted a 'Police presence' consisting of 'a mix of uniformed and plain clothes officers on routine and directed patrols.'[339] The intended purpose of these was for 'risk reduction and crime prevention', as it was considered that 'officer presence would increase the perceived risk of apprehension and act as a general form of deterrence.'[340]

Essex Police stated that this manifested as 'Visible policing (routine and directed patrols),' 'Order maintenance (stop and account, proactive engagements)' and 'Place management (quality of life defects, business and building checks).'[341]

Dr Williams describes how this use of geographical predictive systems to label areas and communities as risky results in a view and policing response that 'Within that geographical space there is no innocence. There's a threat and a risk'.[342] He discussed how the use of these systems negate the presumption of innocence:

> The presumption of innocence cannot be applied to Black communities, because institutionally, we've already ascribed the risk placed upon those communities [–] whether that's [by] Risk Terrain Modelling [...] crime is attached to the geographical area. Anybody therefore caught within that geographical area is not afforded that [...] presumption of innocence. They're afforded a presumption of criminality and [...] what also frames the police officers' notions of risk and riskiness and criminality, is a briefing that they'd received earlier.[343]

This is an oft-repeated theme in the policing of certain areas and communities. At its worst the approach can have deadly consequences. A 2023 analysis of black men killed by police considered how certain communities, often racialised, are 'made subject to over-policing on the basis of (mis)constructions of them as culturally predisposed to an array of criminal activities.'[344] It discussed the killing of young men by police who had been 'warned' of certain criminal activity in certain areas:

> the fatal police encounters [...] were triggered by institutionally sanctioned notions of criminality that precipitates and guides the suspicions of police [...]. As such, the police encounters were initiated not by the behaviour of those who are killed by the police, but by the police and state's response to the racialised constructions of contemporary crime and criminality.[345]

Essex Police's 'place management' interventions were described as 'notifying responsible local authorities of place-based factors contributing to violent crime risk narratives', giving the examples of 'signs of social malaise such as broken street lighting, insecure buildings, and broken windows.'[346] This was justified on the basis that:

> A key theme across the targeted areas was the presence of environmental disorder, damage to buildings and property left unresolved and discarded items including bathtubs, mattresses and supermarket trolleys causing visible social malaise in public spaces.[347]

The place management elements of the project included police raising 'quality of life defects,' described as 'street lighting defects, insecure buildings, broken windows, or other signs of social malaise' to partner organisations ('Basildon Council, Essex County Council licencing and trading standards, Essex fire and social housing providers').[348]

One participant in an Amnesty International discussion group described what they saw as racial and socio-economic segregation in a deprived area of Basildon, Craylands, which led to more heavy policing:

> they take all the socially deprived and ethnically diverse people, and they dump them into Craylands, they dump the people in temporary housing in all these places, these people that need food banks, these people that are literally grinding to keep their electricity on. They're just chucking us in all these shit holes. And then they expect us not to be able to fend for ourselves.[349]

Another participant described Vange, also targeted by the risk terrain modelling predictive crime grid, as another 'Low-income area,' and said that here, police were 'active, monitoring drug-users. Trying to stop drug sales'.[350] By contrast, they said that Lee Chapel was a 'middle class area' and that there was a 'lack of police presence' there.[351]

The Essex study refers to an example of how the risk terrain modelling-led approach targeted 'youth nuisance,' where young people were prevented from meeting in certain areas:

> In one of the intervention areas an officer identified that part of the area had a row of insecure and disused garages where the space was thought to encourage the congregation of youths, who were able to gather in a concealed sheltered location. Residents had previously reported concerns about youth nuisance in the area which made them feel unsafe. The officer was able to resolve the issues by working with the LA to arrange for the unused garages to be more secured.[352]

Katrina Ffrench of UNJUST also described this approach as the police targeting:

> who are the undesirables in this area, how do we monitor them? [...] it comes from identifying problem makers, getting rid of them with all sorts of dispersal notice, or putting things in place that mean they can't congregate in certain places, and making people not feel like areas belong to them.[353]

Table 3. Interventions by Essex police in areas identified by risk terrain modelling

Type	In treatment area	Not in treatment area	Total
Routine patrol	330	7	337
Directed patrol	550	10	560
Plain clothes patrol	180	2	182
Business/building check	143	30	173
QOL defect	90	10	100
Stop and account	71	11	82
Total	1,364	70	1,434

Source: 'Basildon RTM Evaluation', Table 5.2, 'Fidelity check of intervention activities by location'[354]

Table 3 breaks down the interventions by Essex Police in the RTM-identified areas in Basildon. The stark disparities in interventions risk violating the right to non-discrimination because the targeted policing and criminalisation of these areas is based on information including data on deprivation which is discriminatory. There is also evidence of racial profiling and discriminatory policing outcomes in the targeted area, including stop and search and use of force, discussed below.

How Essex Police's use of risk terrain modelling is discriminatory

From September 2020 to March 2021 in Basildon, when these policing outcomes were recorded under this RTM-influenced policing strategy, Essex Police disproportionately

used stop and search and physical force against Black and racialised communities, amounting to racial profiling and violation of their fundamental rights.

The force stopped and searched more people in Basildon than the rest of the entire police force area.[355] They stopped and searched Black people in Basildon almost 3.6 times more than white people, and stopped and searched people of Mixed ethnicity twice as much as white people.[356] The majority (71 per cent) of stops and searches during this time resulted in no further action.[357] In the same period, in Basildon, Essex Police used force against Black people almost four times as much as white people, and used force against people of Mixed ethnicity 1.8 times more than white people.[358]

As described in detail in Section 3.1.1, Essex Police's use of risk terrain modelling under the Grip programme between 2021 and 2023 contributed to racial profiling and racist policing across the force's area. Police targeted Black people and people from ethnic minority backgrounds for stop and search more than they did white people, and used force against people from Black and ethnic minority backgrounds more. The force itself noted an 'upward trend' in disproportionality. [359]

Essex Police risk terrain modelling analysis of Basildon and the surrounding areas showed the alleged crime hotspots.[360] In Figure 12a-d target areas are identified by the black grids inside the shaded areas. Vange and North Basildon were targeted for police intervention.

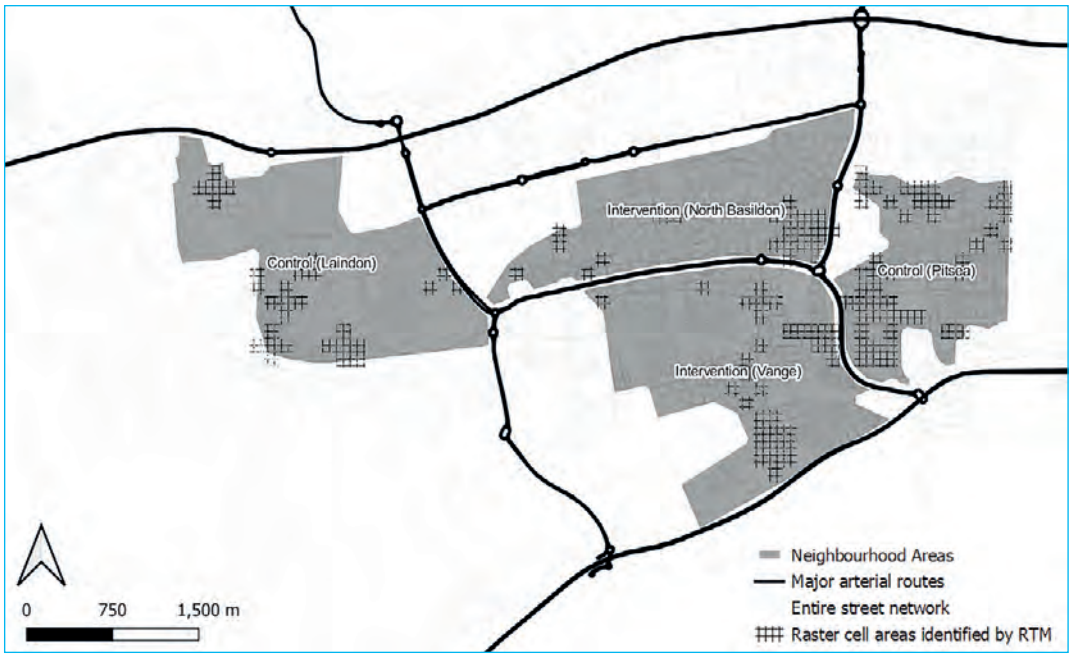

Figure 12a: Neighbourhood policing team zones in Southend: alleged crime hotspots for 'intervention' and 'control' are shown as black grids on the map. © OpenStreetMap contributors. Feature layers contain Ordnance Survey data © Crown copyright and database right 2020.

DEMOGRAPHIC ANALYSIS

Amnesty International has conducted a demographic analysis of the areas profiled and targeted in the Essex Police risk terrain modelling geographic crime prediction map.

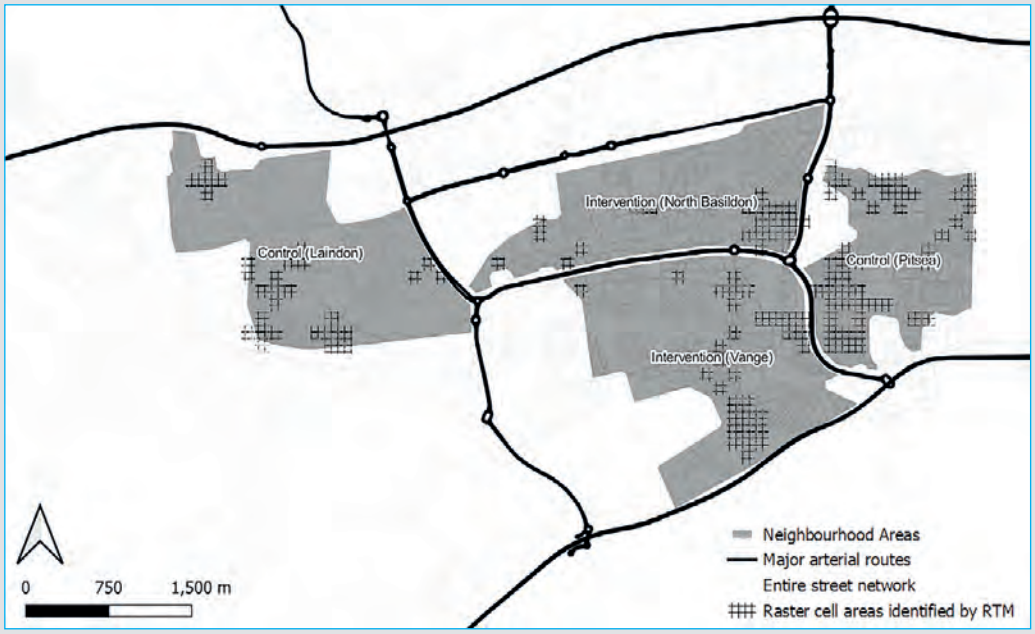

Figure 12b: Neighbourhood policing team zones in Southend: alleged crime hotspots for 'intervention' and 'control' are shown as black grids on the map. © OpenStreetMap contributors. Feature layers contain Ordnance Survey data © Crown copyright and database right 2020.

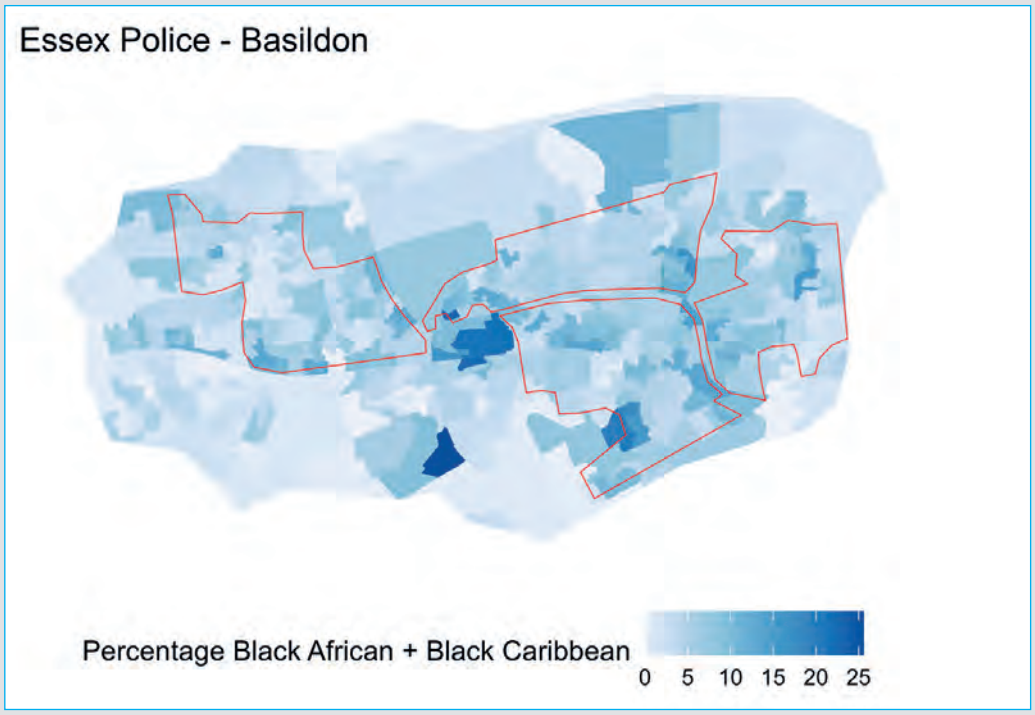

Figure 13: Distribution of Black African and Black Caribbean residents in Basildon, Southend
Source: Map by AIUK

Figure 13 shows the population of Black African and Black Caribbean residents who live in the targeted areas. The predicted crime grids in the Essex Police risk terrain modelling map correspond to areas where there is a higher population of Black African and Black Caribbean residents.

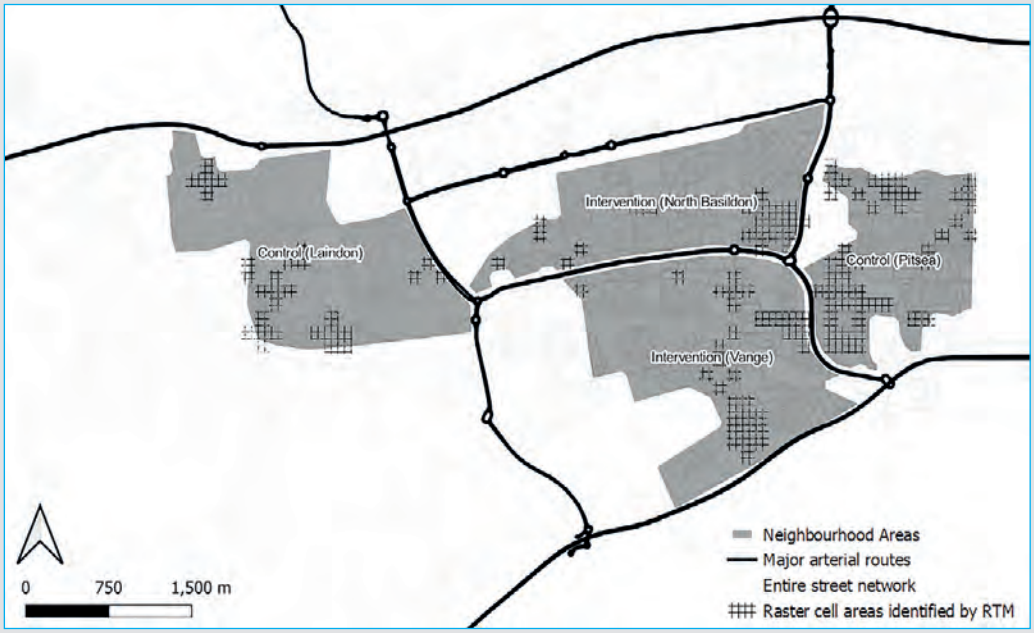

Figure 12c: Neighbourhood policing team zones in Southend: alleged crime hotspots for 'intervention' and 'control' are shown as black grids on the map. © OpenStreetMap contributors. Feature layers contain Ordnance Survey data © Crown copyright and database right 2020.

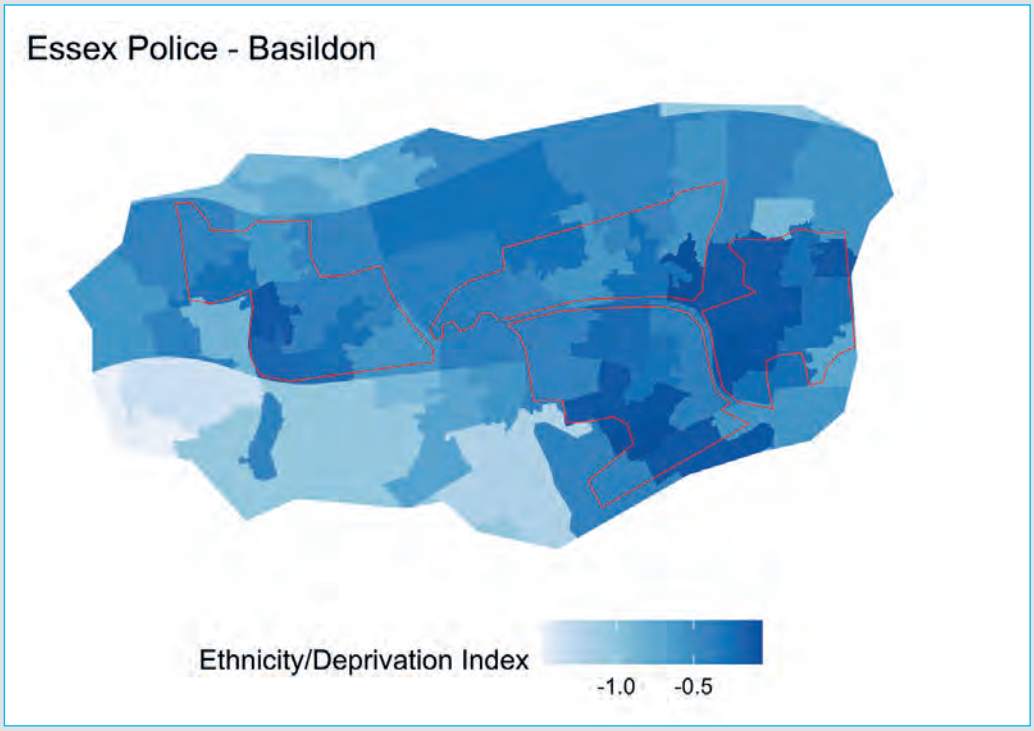

Figure 14: Ethnicity and deprivation in Basildon, Southend. ***Source:*** Map by AIUK

Figure 14 shows a combination of Black African, Black Caribbean residents, Asian Bangladeshi residents, Asian Pakistani residents and the levels of economic deprivation in those areas.[361] Again here, the predicted crime grids in the Essex Police risk terrain modelling map correspond significantly to areas where there is a higher population of more deprived Black African, Black Caribbean residents, Asian Bangladeshi residents and Asian Pakistani residents.

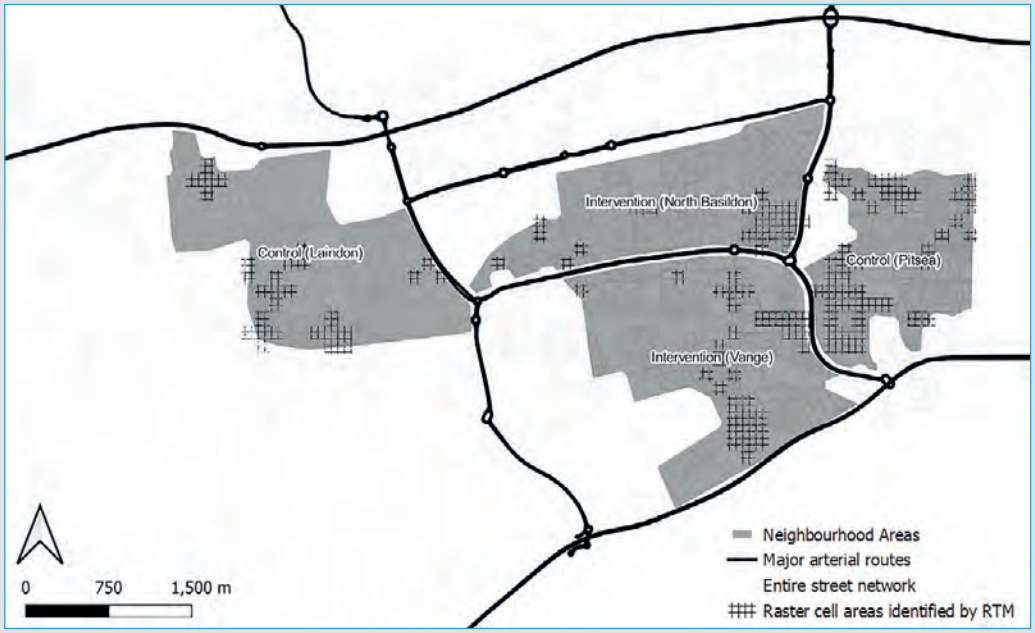

Figure 12d: Neighbourhood policing team zones in Southend: alleged crime hotspots for 'intervention' and 'control' are shown as black grids on the map. © OpenStreetMap contributors. Feature layers contain Ordnance Survey data © Crown copyright and database right 20

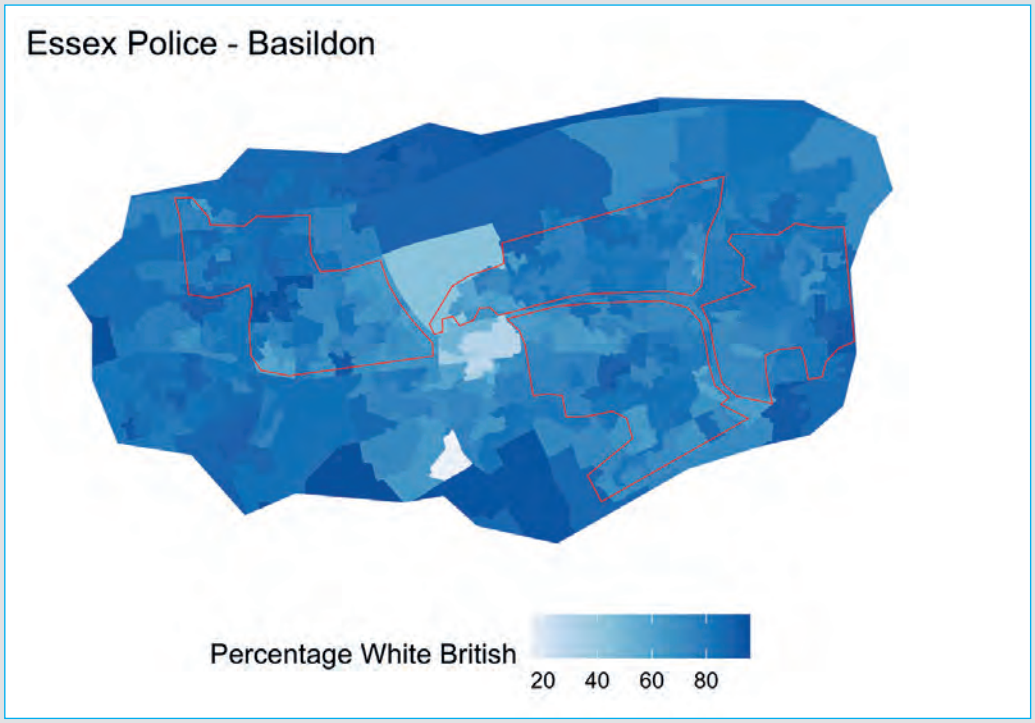

Figure 15: Distribution of White British residents in Basildon. ***Source:*** Map by AIUK

Figure 15 shows the population of white British residents in the targeted areas. While there is a high population of white British people throughout the area, there is no clear correlation between the predicted crime grids in the police map and areas with the highest concentrations of white British people.

These maps show that the use of risk terrain modelling by Essex Police in Basildon results in the racial profiling and targeting of Black and racialised communities, particularly deprived Black and racialised communities.

DEMOGRAPHIC ANALYSIS continued

The Essex youth group Amnesty International spoke with was situated inside one of the predicted crime grids on Essex Police's risk terrain modelling map. Participants noted that a large school, Basildon Lower Academy, was within the predicted crime grid. They said this was a target for police, and a likely reason the risk terrain modelling labelled the area as a crime hotspot.[362]

Elsewhere in Basildon, participants described Laindon Hills as a 'posher area' where there were 'no police'.[363] They said Somercoates, where there was 'anti-social behaviour' was 'heavily policed'.[364] One participant said that police 'attack Black people a lot'. Another said police were 'targeting black areas, and they're treating us like crap because we're Black people, and we're getting stereotyped.'[365]

Another participant said Essex Police ignored the use of Class A drugs in certain areas of Essex, instead targeting other drug users, specifically Black and racialised people:

> Class A is the worst. So why are you brushing it to the side? It doesn't make any sense. And you don't check Billericay. You check Basildon with areas of Black and Asian people […] to catch weed.[366]

Essex Police has stated that it did not conduct a Data Protection Impact Assessment or an Equality Impact Assessment of its use of risk terrain modelling or other hotspot mapping that it continues to use.[367]

Chilling effect

A 'chilling effect' occurs when the actions of a state cause people to refrain from exercising their human rights, or significantly change how they exercise their rights, for fear of the consequences. The state action need not be the only, or even main, reason for this behaviour change. A chilling effect is especially significant in contexts where states fail to enact adequate safeguards, including transparency, around the use of surveillance tools, such that people are not able to know whether they are under surveillance, or how such surveillance may impact on their rights.

The UN Human Rights Committee recognises the concept of a chilling effect, noting the use of data collection in the context of assemblies.[368] The European Court of Human Rights has also recognised a chilling effect in relation to the rights to freedom of expression and peaceful assembly.[369]

Essex Police acknowledged in its own evaluation that 'Unintended outcomes identified would be […] public avoiding RTM areas due to a negative perception of them as being dangerous'.[370] As a result Essex police officers were 'instructed to avoid labelling the areas as "violent crime zones" and providing neutral reassuring responses if questioned about their presence in the areas'.[371]

Participants in the Essex discussion group said that if police were targeting certain areas, they would avoid those areas. Some said they already avoided specific areas they knew to be targeted, such as Southend town centre, Craylands and Somercoates.[372] One said that if police target one area specifically 'then people just go to the other area.'[373] Zara Manoehoetoe of Kids of Colour and the Northern Police Monitoring

Project also described how this chilling effect operates when people are aware of an increased police presence in an area:

> straight away the community responds by sharing that information and it naturally does lead to people not going through that way […] even people who aren't at risk of becoming criminalized […] they just don't want the police interactions.[374]

Dr Elliott-Cooper said that this method of pre-emptive and targeted policing of certain areas was 'going to erode the sense of community which is necessary for improving public safety and there's going to be less likely to be the kind of community infrastructure we need to improve public safety.'[375]

The 4Front Project's Lead Community Organiser Hope Chilokoa-Mullen described the impact of the chilling effect on people:

> I think the ongoing presence in their lives, so even if they're not being arrested, it's a constant. Like you might be stopped when you're driving, or even if you just know that there's going to be police patrols in a certain area, it is no longer then safe to really be in that area in the same way. So I think also they're having to alter their movements based on how policing is being done in their area. This is a more insidious kind of way that policing impacts their life. It's not, it doesn't involve, 'violence,' like obvious police brutality. But it has a long lasting impact.[376]

Essex Police's claimed impact of the use of risk terrain modelling

According to Essex Police's own analysis, risk terrain modelling had no clear impact on crime levels. Instead, it reinforced discriminatory policing in Basildon.

Essex Police has stated that the initial implementation of risk terrain modelling 'reduced crime significantly and returned police savings of £106k', with 'community violence reduced -45%', representing '90 less crimes'. It said 'Victim-Based Crime'[377] fell by '251 offences'.[378]

However, the period in question occurred during the Covid-19 pandemic and successive lockdowns when people were required to stay at home and limit social contact. The Essex Police officers' study acknowledges that 'there remains an unmeasurable limitation in the timeline where we're unable to disentangle the potential impact of Covid lockdowns'.[379]

Further, Essex Police has admitted that it was not possible to determine which of the intervention activities (visible policing, order maintenance, place management) could explain the changes in crime.[380]

The Essex Police-backed academic analysis of the risk terrain modelling implementation acknowledged that 'within a few weeks of the project ending, community violence began to increase in the intervention areas'. It said that just 12 weeks after the end of the initial intervention period in March 2021, the two target areas 'were experiencing similar levels of community violence' to those before the implementation.[381]

There is no conclusive evidence from the initial pilot or subsequent studies of Essex Police's implementation of risk terrain modelling that it had any significant impact on crime. Yet there is evidence that the use of the system reinforced and contributed to racial profiling and racist policing.

The future of hotspot predictive policing in Essex

Even though the internal reviews and external studies of Essex Police's initial implementation of risk terrain modelling showed no definitive impact on crime, in its 2021 evaluation Essex Police recommended an extension of the risk terrain modelling licence. The force also recommended further risk terrain modelling tests 'across a larger area of the Force,' as well as 'a business case and plan to implement RTM as a core neighbourhood policing crime reduction strategy.'[382]

Essex Police has, however, said that it recently stopped using the system, although the force continues to conduct geographic predictive policing using other software, under the Grip programme described above in Section 3.1.1:

> more recently the version use [sic] for the financial period 2023 to 2025 does not make use of Risk Terrain Modelling, we simply mapped the location of offences to identify test / control areas, this approach was reviewed and approved by the Home Office (using open source mapping software).[383]

3.2.2 Metropolitan Police: Risk terrain modelling

The Metropolitan Police Service (MPS) has been using the risk terrain modelling system for geographic crime prediction in London since March 2021.[384]

The force has described risk terrain modelling as a 'new AI technique' which it uses 'to proactively target violence hotspots.'[385] It has justified its use of risk terrain modelling as 'preventing and detecting crime', and has said that it is 'using a methodology proven in the US to reduce crime circa 30%'.[386] It has also said that it will 'save the time of frontline officers' and 'allow more effective deployment'.[387] This form of geographic predictive policing is central to the Metropolitan Police Service's policing of London. The force has said that risk terrain modelling was fully implemented into MPS standard practice by 2022, with all basic command units and several specialist teams being allocated licences and training. It has said that RTM analysis and advice was 'regularly assisting frontline policing'.[388]

The force stated that it would have 'a total of 15 users of the system' who were 'trained in interpreting the results'. This would include 'three RTM specialists who will be trained to use the system and scrutinise the processing'.[389]

The Metropolitan Police Service told Amnesty International that 'The scale and speed at which data pervades society means that we, as a service, have to keep pace with what data & technology has to offer'. As a result, it said that 'We have a strategic commitment to be precision-data-driven' and that the force 'need analytics to aid us in deriving value from the data'.[390] However, the force denied using any predictive systems, stating that 'The MPS is not currently utilising any predictive systems.' It did acknowledge that 'being more accurate in where we target crime prevention' was 'valid and lawful uses of predictive data systems that we will pursue in time.'[391]

How the Metropolitan Police Service uses risk terrain modelling for geographic crime prediction

As noted above, risk terrain modelling is described by its developer as a tool for creating a 'prediction' to 'represent the expected count of outcome events'.[392] The Metropolitan Police Service has described risk terrain modelling as an analytical tool that identifies 'the environmental conditions that may lead to crime'[393] It says risk terrain modelling 'brings multiple sources of data together by connecting them to geographic places' and

then 'performs statistical calculations to identify which factors correlate with the crime type of interest.[394] The system then produces a map where 'areas of high risk' of crime are highlighted.[395] The force says that:

> The output can be used by analysts to prioritise further analysis and provide an evidence base to ensure officers are using the most appropriate tactics and deployments to tackle the issue. This helps the MPS to use its resources efficiently and effectively to prevent further crime and ensure public safety.[396]

Dr Patrick Williams, Manchester Metropolitan University, has critiqued this notion that police use of predictive and profiling systems are in any way efficient or effective:

> What it allows them [police] to claim, is that they're more efficient, more effective, they're using cutting-edge tools. They are fighting crime. What do they call it? 'Intelligence-led policing'. That essentially becomes the veil through which they can claim to be effective at what they are doing [...] And I think that's a primary driver for tech, it's why there's always these solutions and proposals for different ways of doing police work as a way of trying to demonstrate their effectiveness or efficiency.[397]

Dr Williams described police use of these tools as 'just the latest incarnation of that propaganda' that policing is successfully fighting crime. He said it is 'a way in which they present themselves as being effective, efficient and protecting the public', despite the fact that 'crime rates and crime statistics and police figures demonstrate that they're not effective'. Dr Williams said that 'you can't 'bring tech in as the mirage, as a mask, as a plaster, for these complex issues'.[398]

Zara Manoehoetoe also challenged the notion that these systems are efficient: 'they're efficient in the sense that they can generate information, but whether that information is correct is a completely different conversation'.[399]

The data the Metropolitan Police Service uses in risk terrain modelling

The Metropolitan Police Service has said that it uses three pieces of information about a crime in its risk terrain modelling system: 'crime type (including sub-categories), geographical coordinates of the crime location and date/time of the offence'.[400]

The force uses its Crime Recording System (CRIS) 'to provide incident data for Risk Terrain Modelling', alongside 'data about the landscape, such as points of interest, facilities, and features of the built environment to understand patterns of public safety problems'.[401]

The Metropolitan Police Service gives examples of data sources including 'crime types and locations, locations of pubs and bars, public transport locations, tourist attractions, etc' as well as 'entertainment venues, schools, tube/bus stops, ATMs'.[402]

The force acknowledges using the home addresses of 'known offenders' in its risk terrain modelling predictions:[403]

> RTM will utilise home addresses of known offenders. Based on the principles of Environmental Criminology, criminals prefer to offend close to home. This is based on the […] desire to feel safe within their offending space […] it is important that addresses are accurate to within a few metres. Whilst it has been considered using data at a postcode level, this limits the effectiveness of the analysis.[404]

The Metropolitan Police Service justifies the use of home addresses 'to within a few metres' by stating that 'individual addresses are not included in the output of the system.'[405] The force repeatedly insists in the risk terrain modelling Data Protection Impact Assessment that 'The [RTM] project seeks to produce outputs devoid of personal data.'[406] However, the software's outputs, by using coordinates of people's homes as a data input, intrinsically rely on targeting individuals, undermining the force's attempts to claim otherwise.

What the risk terrain modelling predictions are used for and the places targeted

The Metropolitan Police Service has said that risk terrain modelling predictions are used for 'intervention plans and problem solving strategies […] in high volume crime hotspots'. It says the predictions 'provide an evidence base to ensure officers are using the most appropriate tactics and deployments to tackle the issue'.[407] The force acknowledges that risk terrain modelling predictions are merely 'correlations', stating that '[t]he RTM tool shows correlations between the crime type and local geographic factors.'[408] Despite this, these predictions are then used to plan policing response and enforcement, including stop-and-search locations and preventative patrols, in RTM-predicted areas.[409] The software was trialled by police in west and south London and is now in use across the city.[410]

How risk terrain modelling for predictive policing is discriminatory

The Metropolitan Police Service's use of risk terrain modelling contributes to and reinforces racial profiling and discriminatory policing in London.

An initial period of RTM-influenced policing targeted the north of the boroughs of Lambeth and Southwark from September 2020 onwards. Between December 2020 and October 2021 Lambeth had the second highest volume of stop and search of all London boroughs.[411] In the same period, people of 'black ethnic appearance' (as defined by the Metropolitan Police Service) had the highest rate of stop-and-search encounters per 1,000 population of any ethnic group: they were stopped and searched more than four times more than people of white ethnic appearance.[412] Yet 80 per cent of these stops and searches resulted in no further action.[413] In the same period, Lambeth had the second highest volume of police uses of force in all London boroughs, and police used force most against people recorded as 'black or black British'.[414]

In Southwark in the year ending March 2021, Black people were stopped and searched 3.3 times more than white people.[415] Police used force against people in Southwark at least 8,924 times between September 2020 and September 2021, and 45 per cent of those times it was against 'black or black British' people.[416]

In total, between 2019 and 2020, the MPS stopped and searched Black people 305,196 times. However, 267,056 (87 per cent) of these interventions resulted in no further action.[417]

Figure 16 shows a Metropolitan Police Service risk terrain modelling map of south London, including areas in the north of Southwark and Lambeth, with so-called predictions of areas where 'Serious Violence' will occur. The darker the colour of the square, the higher the alleged risk of the serious violence occurring, according to the police risk terrain modelling system. The darker squares in the grid are concentrated around the Elephant and Castle, Walworth Road, London Bridge and Waterloo areas, with other squares clustered along the Old Kent Road and throughout Bermondsey.

Figure 16: Metropolitan Police risk terrain map of the Central South Basic Command Unit area (Southwark and Lambeth).[418] ***Source:*** MPS

The force says that this shows 'a typical output for a RTM analysis run', and focuses on the Central South Basic Command Unit.[419] The map shows the areas where, according to the system, there is an alleged significant 'risk of serious violence occurring'. The darker the area, the higher the supposed risk.[420]

DEMOGRAPHIC ANALYSIS

Amnesty International has conducted a demographic analysis of the areas profiled and targeted by the Metropolitan Police Service risk terrain modelling system.

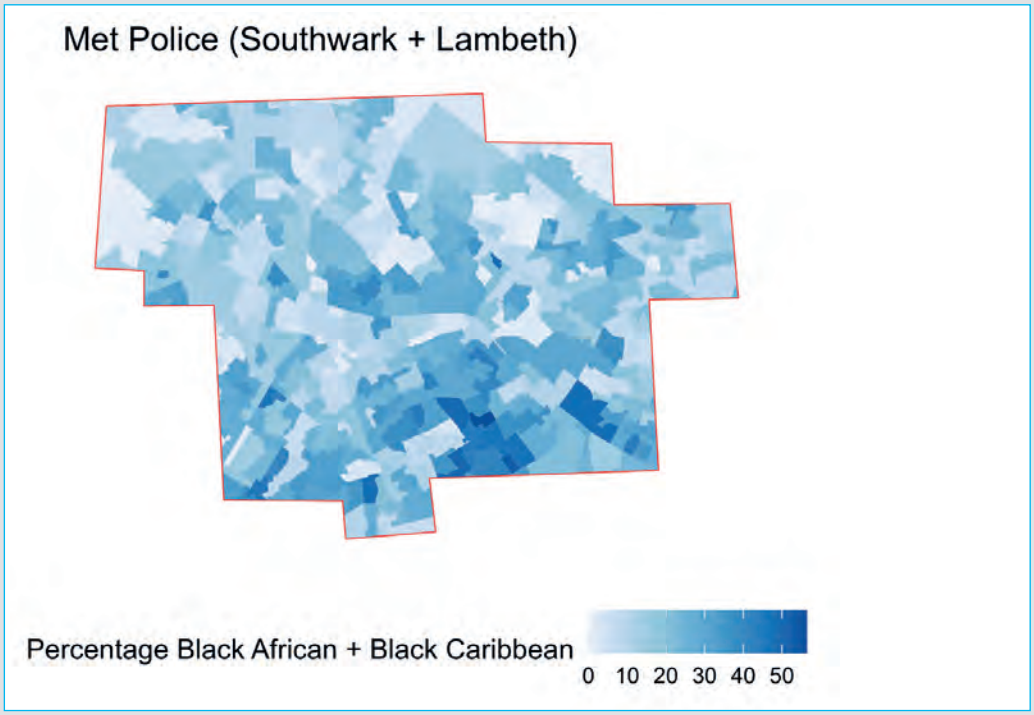

Figure 17: Distribution of Black African and Black Caribbean residents in Southwark and Lambeth
Source: Map by AIUK

Figure 17 shows the population of Black African and Black Caribbean residents who live in the targeted area in north Lambeth and Southwark. The areas predicted by the Metropolitan Police's risk terrain modelling system to have an increased level of 'Serious Violence' correspond to areas where there is a higher population of Black African and Black Caribbean residents.

Figure 16a: Metropolitan Police risk terrain map of the Central South Basic Command Unit area (Southwark and Lambeth). ***Source:*** MPS

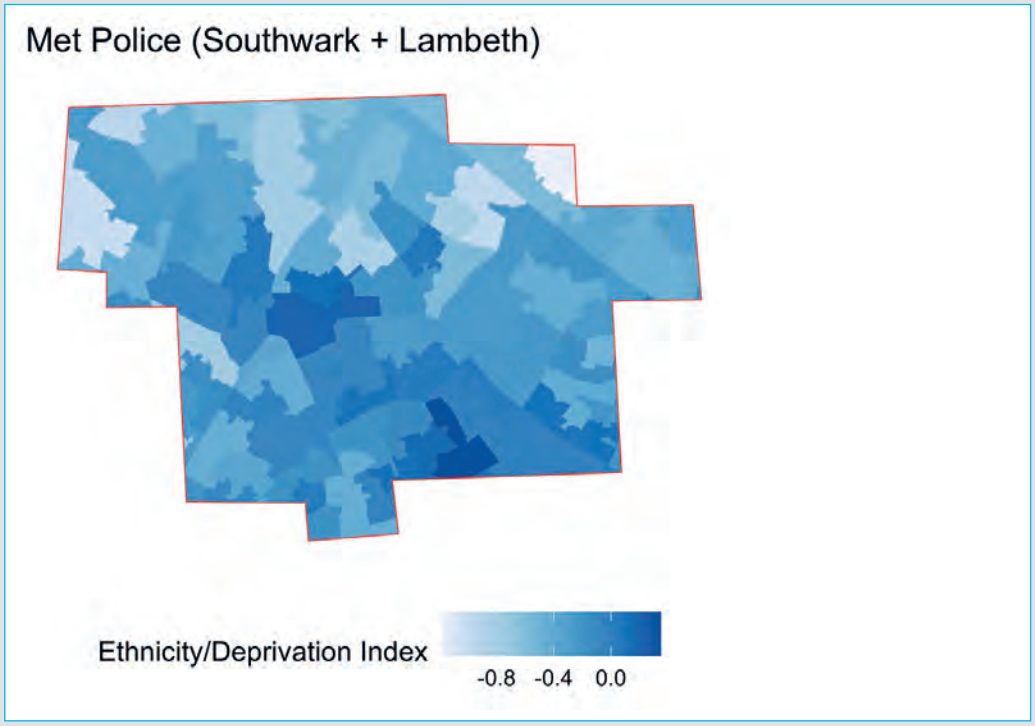

Figure 18: Ethnicity and deprivation in Southwark and Lambeth ***Source:*** Map by AIUK

Figure 18 shows a combination of the levels of deprivation and the population level of Black African residents, Black Caribbean residents, Asian Bangladeshi residents and Asian Pakistani residents in the corresponding area.[421] The areas where the risk terrain modelling system predicted serious violence would occur correspond significantly with the areas with a higher population of deprived Black African, Black Caribbean, Asian Bangladeshi and Asian Pakistani residents.

Figure 16b: Metropolitan Police risk terrain map of the Central South Basic Command Unit area (Southwark and Lambeth). ***Source:*** Metropolitan Police

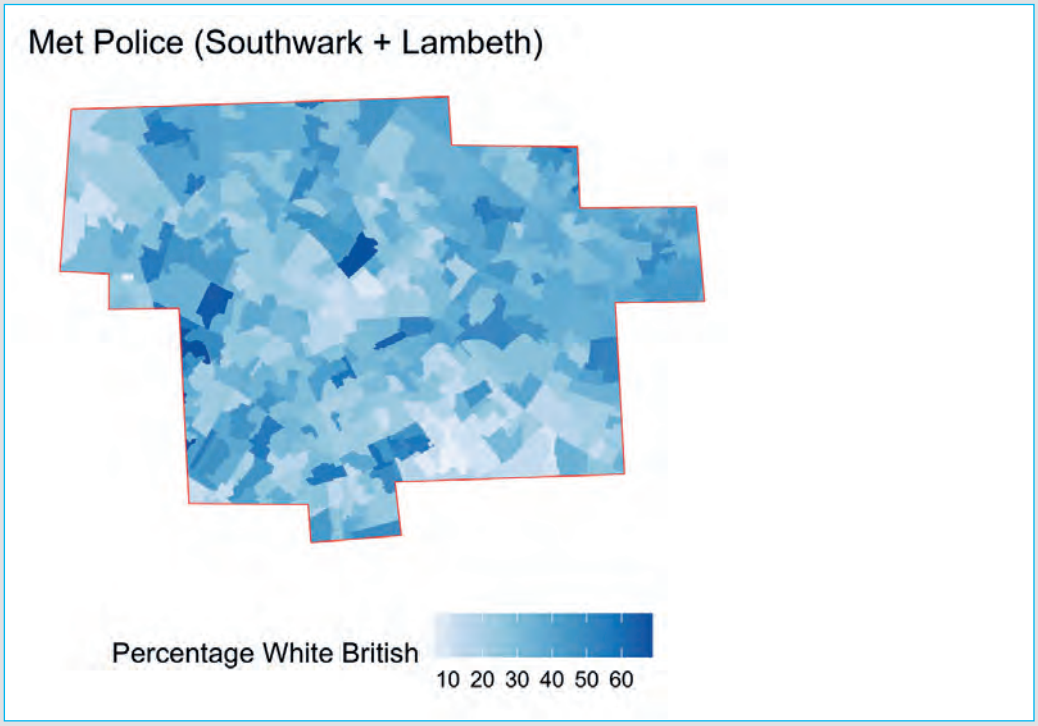

Figure 19: Distribution of White British residents in Southwark and Lambeth.[422] ***Source:*** Map by AIUK

Figure 19 shows the population of white British residents in the targeted areas. The areas where the system predicted serious violence are predominantly areas with very low populations of white British people.

These maps show that the use of risk terrain modelling by the Metropolitan Police Service results in the racial profiling and targeting of Black and racialised communities, particularly deprived Black and racialised communities.

In Lambeth, people told Amnesty International that the areas identified by the Metropolitan Police Service's predictions are repeatedly targeted by police.

One participant, looking at the police risk terrain modelling map, said:

> Especially with the dark spots, because I used to live in Walworth, that kind of corresponds to where East Street Market is, where the estates are around that area.[423]

Another agreed, saying that in relation to Walworth Road, there were 'lots of school kids, shops, urban life,' and that police targeted the area with stop and search. Another said police are in Walworth 'on East Street a lot, bothering the market.'[424]

People in Lambeth also said that the Heygate estate in Elephant and Castle 'used to be a targeted spot by police for criminal activity' but then it was 'knocked down and replaced with high rise and student accommodation and is now a lot less policed'.[425] One said that Waterloo 'used to be policed but now it's gentrified they leave it be.'[426] Another said: 'My brother was stopped and searched' by police and 'asked if he was a drug dealer' on the Old Kent road, an area marked by grey risk prediction boxes on the map.[427]

DEMOGRAPHIC ANALYSIS continued

People in Lambeth noted that the areas profiled as higher risk by the system, as with the Essex risk terrain modelling predictions (see Section 3.2.1), correlated with council estates and schools. Participants described 'patrols in estates' in Southwark. One said: 'I used to live in Bermondsey and yeah, the darker dots are where the estates are, and where schools are. It really matches up.'[428]

Others pointed out Harris Academy in Bermondsey, and said that 'school areas tend to have police officers stationed,' mentioning 'police typically around south London schools'. Another said:

> I went to school in Lewisham but my school at every single point where there were shops, or where kids would go after school to get buses, police officers would be stationed there.[429]

The hotspot label: Living with the consequences

Hope Chilokoa-Mullen of The 4Front Project described what happens when an area has been profiled by police, labelled as criminal, and targeted by police. Referring to the Graham Park estate in Colindale, north-west London, Chilokoa-Mullen said:[430]

> We know that Colindale and the Graham Park estate has been identified as a crime hotspot by the police. Which means that we do get increased police patrols. I think also – and again it's always hard to know whether it's just because they're young Black kids or because they're young Black kids in a crime hotspot – but even when they are stopped and searched, there's a massive, disproportionate use of force.
>
> We've had young people as young as 15, 16, put in handcuffs on the floor, just because, for example, they might have been riding a bike, and there are alleged reports of kids on bikes in the area selling drugs. Obviously that is not a reasonable justification to have someone face down and in handcuffs under 18. But I think we see this massive, disproportionate use of force, and it is justified by the fact that Graham Park has been labelled a 'high crime area.' It's labelled a crime hotspot. So when the police enter the area, they're in the mindset of 'we're in a dangerous community – the people here are dangerous.' It doesn't matter if they're young, they're young people, they're still 'dangerous' and therefore 'we can police them violently' and they do police them violently.
>
> We can tell them: 'This is an illegal stop and search. Do you have grounds to do this?' But they'll do it anyway. And I think there is some kind of confidence that they know that they can get away with it and because it is seen as a sort of dangerous area, it's justifiable to police it in this violent way.[431]

The Metropolitan Police Service has admitted the potential for discriminatory impact of risk terrain modelling crime predictions on groups based on multiple protected characteristics, including age, race, and religion or belief.[432] The force said that:

> If older people's care homes, council estates or schools were to be identified as crime drivers, mostly persons of certain age groups would be the target of intervention measures.[433]

It has also said that 'Areas highlighted as having an increased risk of crime occurring may contain a disproportionately high population of certain race/ethnicity groups' and 'may include places of worship or places of cultural importance for groups.'[434] The only mitigation the force has given in relation to this potential discrimination is that 'as a result of the information on the RTM we will police and problem solve the areas in a proportionate and reasonable manner'.[435]

The Metropolitan Police Service acknowledged that there is a 'class of person [...] who may be affected as a result of the risk terrain modelling and in particular the policing activity driven by it', as this will lead to 'heightened policing activity in a particular location, and a greater possibility therefore of being interfered with by the state'.[436]

In Lambeth the people who spoke to Amnesty International were clear about the way the Metropolitan Police Service targeted certain areas and communities. They said police targeted 'Black and brown communities. Men targeted more than women. School kids.'[437] They described police as 'very aggressive' in Brixton, and said police 'target black men, especially in these areas [Brixton]'. Brixton market was 'more policed than Brixton village' and by 'aggressive policing', they said.[438]

In Hackney, east London, people said heavily policed areas were subject to 'patrols and racially biased policing'. They said 'Haggerston estates' and 'council estate areas' were targeted, and that police were 'mostly targeting Black and Brown communities, council estate areas.'[439] Participants in this discussion group said police targeted 'people chilling' for 'anti-social behaviour' near Hackney Downs, and that there were 'regular police patrols' on Homerton high street, with a lot of stops and searches in nearby Hackney central. By contrast, in London Fields they said there was 'less policing here since more white people moved in'.[440] One said of this policing tactic that 'it's not fair to over-police areas the state has systematically underfunded and deprived, and perpetuate racist systems'.[441]

A Lambeth discussion group participant also described why they considered this method of policing certain areas to be racist:

> they [police] need to be seen to do something. So they'll argue that we're just looking at police data, and that is informing what areas we look at, but when you go looking for something, you're going to find it. If you over-police an area, of course, you're going to find more crime in that area, because you're constantly there and always looking for something. So with the mapping of areas: it's already been declared that they're [the police] institutionally racist. So that mapping is part of those systems within the institution that cause discriminatory practices in policing, and then that relates with how they relate with the community.[442]

A research discussion participant in Hackney said this form of predictive policing 'targets and profiles entire areas. It targets you based on the community you live in'. They said it was 'a clear example of how racism structures policing'.[443] Another said: 'It's not fair to make predictions about an area because it's predominantly working

class and has a large Black and Brown population'.[444] Another described the structural issues this form of policing exacerbated:

> It's quite a negative thing to say, how can you say based on assumptions that this area has crime, to blame a population in an area, a community. It's not fair to over-police areas that have these challenges because of intentional underfunding, and to now [be] adding police to a situation that you've created as a part of the state system, is just adding to the problems of the community that you claim you want to protect.[445]

Since the force-wide adoption of risk terrain modelling in 2022, the Metropolitan Police Service stopped and searched 'black or black British' people 3.7 times more than white people.[446] In the same period, police used force against Black people 3.4 times more than white people, and 3.5 times in 2023.[447] In the year ending March 2023, the MPS stopped and searched Black people almost three times as much as white people.[448] Alleged items being searched for were found in just 18.6 per cent of these interventions.[449] In the year ending March 2024 the force was four more times likely to stop and search Black people than white people across London. More than two-thirds (67 per cent) of the force's stops and searches resulted in no further action.[450]

3.2.3 Other forces: Merseyside Police

Merseyside Police conducts hotspot mapping as part of the Grip programme, using risk terrain modelling technology provided by Simsi, Inc.[451] Merseyside Police has said that it is using the system 'to answer the "where and why" of serious violence across the region, to support crime prevention and to enhance public safety.'[452] It has said that it uses it 'to support hotspot policing' which it describes as 'a tactic which involves operating intensive, high-visibility foot patrols for short periods of time within specific areas'.[453]

The force said it has not assessed or reported on its use of the system, nor conducted any human rights, equality or data protection impact assessments. It said this was because it had carried out 'internal consultation with users and analysts' and 'no human rights or data protection implications were identified'[454] even though it acknowledged that 'discrimination was not considered in the early stages of analysis'.[455] In April 2024 Merseyside Police said that it no longer used risk terrain modelling.[456] It later said this was because 'the costs outweighed the current benefits of system utilisation',[457] and that the system 'validated what was already known in terms of risk factors relating to locations and environments.'[458]

The force said it had conducted a review 'by the Performance, Analytics and Evaluation senior leadership team [...]'. This led to the decision to stop using risk terrain modelling.[459]

The force refused to provide the costs of the software or its operation when asked, stating that 'The cost [of] this software is determined on a bespoke basis which will differ dependant [sic] upon the requirements' and that 'Companies who provide this software can be approached for costings.'[460]

3.3 Other tools in use by UK police forces

3.3.1 Police Service of Northern Ireland

The Police Service of Northern Ireland (PSNI) has said that it conducts hot-spot mapping of crime in geographic areas, for multiple crime types.[461] Police in Northern Ireland are allegedly looking into developing and using new data-driven and automated technologies 'to support officers in solving crimes and other duties'.[462] This is particularly concerning in the context of police data-gathering in Northern Ireland, which has targeted hundreds of journalists and lawyers.[463]

A recent report raised concern about the 'absence of significant consultation by the police, the Department of Justice, or the Northern Ireland Office on issues of privacy'. The report said the force 'must continue to strive to become more transparent'.[464]

3.3.2 Merseyside Police

Merseyside Police has been using a tool called Delphi Geo Spatial Analysis for geographic crime prediction. The force described it as an 'in-house built reporting tool' which is 'designed to show hotspots and time and day profiles of crime and incident patterns.' It has said the tool can also be used to show 'offender addresses'.[465] The force has also acknowledged using ArcGIS (Geographic Information System) for crime mapping, 'to assist in their Serious Violence analysis, although this is not widely used.'[466]

3.3.3 Other forces

Other geographic tools known to have been used by UK police forces include:

- NEC Software Solutions Ltd 'xd' software for geographic crime prediction.[467] The developer NEC Software Solutions Ltd claims xd software is used by 25 UK police forces and that it can 'understand areas with higher crime risks'[468] and 'help you to predict and prevent future crimes'.[469]
- MapInfo,[470] another geographic crime hotspot mapping and prediction tool. Forces known to have used it include the Metropolitan Police Service, West Midlands Police, British Transport Police, Norfolk police, Suffolk Police, Hampshire Police and Devon and Cornwall Police.[471]
- ESRI ArcGIS, a geographic information system used for crime mapping and analysis. This is known to have been used by Avon and Somerset Police, City of London Police, Hampshire Police, Humberside Police, Thames Valley Police, South Yorkshire Police and West Yorkshire Police.[472]

4. Individual-focused predictive and profiling tools

> 'essentially you're stereotyping people, and you're mainstreaming stereotyping.'[473]
> **Dr Daragh Murray, Queen Mary, University of London**
>
> 'Effectively, what it does, is allow the police to punish people using it, for as long as they want to. They can say, okay, it doesn't matter if you offended 13 or 14 years ago for something, you're known to us for this, and therefore we're going to assign a score to you. So it's risk scoring, it's profiling, often racist profiling.'[474]
> **John Pegram, Bristol Copwatch**
>
> '[W]e've had members who have been stopped and told 'You've been stopped because you're on a database.' They don't know what database it is […] I suppose that's the point […] that you're not really meant to know how it's used.'[475]
> **Hope Chilokoa-Mullen, the 4Front Project**

Amnesty International has found that 11 police forces across the UK have used individual prediction, profiling, or risk prediction tools[476] to predict the risk of someone committing a crime in future, to predict people's likelihood of reoffending and otherwise to profile individuals as potential criminals.

Police in the UK use these systems to give individuals a 'risk score' (such as low, medium or standard, or high, or a percentage). The score can influence whether an individual is monitored more closely by police, whether they are subject to additional policing such as questioning or stop and search, or face other criminal legal system consequences.

These risk predictions, scores and profiles can be – and are – shared with other state authorities and service providers, including: youth offending services; the Crown Prosecution Service; and prison and probation services, potentially influencing decision-making in the criminal legal system. They can also be shared with other authorities, including the Department for Work and Pensions, local authorities and unspecified third-party agencies or organisations, potentially influencing critical public services decision-making.

4.1 Metropolitan Police: Violence Harm Assessment

The Violence Harm Assessment (VHA) is an individual crime prediction and risk assessment tool used by the Metropolitan Police Service (MPS) in London.[477] The force uses it to 'identify and risk assess individuals involved in violence in London'.[478] The VHA has been in use since 2020.[479]

According to the Metropolitan Police Service, the Violence Harm Assessment attempts to measure risk by 'scoring individuals across London for violence and weapons offences and intelligence [that police hold about individuals], and provides a single score that allows an assessment of the risks they pose.'[480]

An individual will be profiled by the force and appear on the Violence Harm Assessment list if they are:

> included in at least four separate reports (crime incident or intelligence log), two of which must be a crime report, or feature in three crime reports where the harm score of those reports is 2500 or greater[481]

and

> one of the violent crimes, where the individual is a named suspect in the reports must have taken place in the last twelve months unless the individual has been in custody.[482]

The force says that it includes 'intelligence' (see the note on language, page 15) in the assessment, including on alleged robbery, knife and firearms offences that have occurred in the last six months.[483] The system uses data from the Police National Computer (PNC) and Police National Database (PND), and from other policing systems.[484]

The force has said that it will not inform any member of the public that they feature on the Violence Harm Assessment. It also says that data subject access requests from individuals asking if they are on the Violence Harm Assessment list will be considered 'on a case by case basis against the statutory exemptions and the level of risk the individual presents and risks of notification to the individual'.[485]

Hope Chilokoa-Mullen told Amnesty International about the impact of this secrecy on members of The 4Front Project:[486]

> [W]e've had members who have been stopped and told: 'You've been stopped because you're on a database.' They don't know what database it is […] I suppose that's the point of it […] that you're not really meant to know how it's used.[487]

The Metropolitan Police Service describes the Violence Harm Assessment scoring system as using:

> […] a hybrid scoring system which has come from scoring methods designed by the Cambridge Harm Assessment (CHI) and Office for National Statistics (ONS) and are based on sentencing levels. Crime report data is scored purely on sentencing levels with scores reducing by a third after every 12 month period. Intelligence data uses sentencing levels with a proportion of the score based on the strength of intelligence.[488]

According to these criteria an individual does not need to have been convicted of any crime to be included on the Violence Harm Assessment. This clearly engages with the presumption of innocence, as under this tool, individuals can be profiled and labelled as violent without evidence or conviction.

Further, the use of police intelligence as a significant factor in this predictor is problematic. Police intelligence does not amount to evidence of a crime or conviction, and its use as information to profile and label individuals as violent offenders is a violation of their right to be presumed innocent. As Katrina Ffrench of UNJUST noted:

> They [the police] already have perceptions around what criminality is, or how people behave, or what they do in particular areas, and that discrimination is going to bake in other forms of discrimination or perception that is made into intelligence when it isn't.[489]

In addition, the Violence Harm Assessment includes data on 'The presence of intelligence in rolling 12 month period linking individual to criminal network / gang – Name of network/gang'.[490]

Amnesty International has set out the issues with police intelligence in its report on the Metropolitan Police Service's Gangs Matrix.[491] Examples of police intelligence that was deemed to be enough evidence for an individual to be labelled a gang member include being stopped and searched with someone else who was on the Gangs Matrix database, and vehicle number plate records showing the individual travelling in convoy with other 'gang nominals'.[492]

Hope Chilokoa-Mullen of The 4Front Project told Amnesty International how people can be criminalised because of the area they live in, and the people they are friends with and spend time with:

> The simple fact of where you live can mean that you're classed as a gang member. Well, then what are young people who grow up on a estate meant to do? Because they don't choose that, but yet the fact that they're classed as a gang member can then mean that they're actually rejected from housing. [...] And they have a group of friends, and then they're told that group of friends they can't associate with because that's also a gang. So because where they live, who they're friends with, and maybe they make drill music. And now that's also a sign of their [being] gang members. So it's like all of the outlets that young people have been criminalised. So I think it's very hard as a young person growing up in that environment to feel like you have any options or that you have anyone who can support you, especially if the services are meant to be supporting you are also criminalising you.[493]

Zara Manoehoetoe described the 'stereotypes around specific racialised communities' by which police criminalise young people by association with other young people and the areas where they live and spend their time:

> The police say: 'This young person was stopped and searched, and they were known to be associated with, X, Y and Z, and we know that they visit these areas.' And actually, these are just completely normal things for young people to do and places for them to go in their local area, and people that they should be friends with because they've grown up together. And all of a sudden, [the police] creates and constructs these narratives.[494]

In the Metropolitan Police Service's Equality Impact Assessment of the Violence Harm Assessment, stakeholders across London repeatedly compared it to the Gangs Matrix,[495] a database and profiling system used by the MPS to profile young people as alleged gang members. The Gangs Matrix was found to be in breach of data protection laws by the Information Commissioner in 2018.[496] In October 2022, following a legal challenge,[497] the force committed to a 'redesign' of the database.[498] In February 2024 the force discontinued its use of the database.[499] The Metropolitan Police Service has acknowledged that the Violence Harm Assessment is the 'adapted' replacement to the Gangs Matrix.[500]

4.1.1 The outcomes and impact of the Violence Harm Assessment

The Metropolitan Police Service has said that the 'VHA is not policing action itself, but it may be the reason that the Met decide to undertake policing action.'[501]

The force has said that the Violence Harm Assessment will be 'a proactive and reactive tool'.[502] The MPS says it will be used 'as an intelligence tool within policing to prioritise and drive operational activity'[503] and 'to prioritise, focus and direct resources to deal with individuals who pose the greatest risk of violence in London', including via 'targeted policing interventions'.[504]

The Standard Operating Procedure of the Violence Harm Assessment states that 'a range of policing options' may be used against individuals profiled without specifying what these are or may be,[505] referring to the College of Policing's 'Menu of tactics'.[506] The force has said that it will share information and intelligence on people profiled by the Violence Harm Assessment, with 'external partners' but did not specify who these were.[507]

4.1.2 How the Violence Harm Assessment is discriminatory

Unsurprisingly, as a result of the information used to make Violence Harm Assessment 'predictions', the data on the individuals subject to these predictions show that its application is discriminatory and amounts to racial profiling.

As of May 2024, 1,413 individuals were 'assessed as meeting the inclusion criteria' for the VHA.[508] Of these individuals, 329 (23.2 per cent) were identified by police as 'White', 942 (66.6 per cent) were identified as 'Black', 91 (6.4 per cent) were identified as 'Asian' and 51 were identified as 'Other'. Of those profiled by the VHA, 405 (28.6 per cent) were under 18, and 612 (43.3 per cent) were aged 18-24.[509]

As of August 2024, 1,307 people met the Violence Harm Assessment inclusion criteria. Of these, 870 (66.5 per cent) were identified as 'Black', 299 (22.8 per cent) as 'White (Northern and Southern European)', 75 (5.7 per cent) as 'Asian (Indian subcontinent)', and 56 (4.2 per cent) as 'Arab / North African'.[510]

These figures clearly demonstrate the discriminatory application of the Violence Harm Assessment against Black people, and show how the discriminatory Gangs Matrix is still alive, under a new name.

The force's response to this disproportionality in the Violence Harm Assessment Standard Operating Procedure is that: 'Police data indicates that young, black men are disproportionally represented as offenders of serious violence. The VHA is reflective of this.'[511] In a strange contrast, the force also states that:

> If any user of the VHA notices trends that suggest there is disproportionate effect or impact on people who share a protected characteristic, they should notify the Met Intelligence - MO2 Nominals and Central Tasking team as soon as practicable.[512]

The Metropolitan Police Service has itself noted that issues with the Violence Harm Assessment include: the adultification of children;[513] the Rationale for Suspect over Convictions and how using 'suspect' could risk racial disproportionality if wrongly named;[514] and that this leads to a 'possibility of disproportionality due to some communities / areas being "over policed" leading to greater reports'.[515]

A Lambeth discussion group participant gave their view on how these so-called predictive systems target Black and racialised communities: 'They just want to accuse like, it's usually Black and brown young boys that they assume are just doing potentially illegal things or whatever.'[516]

Hope Chilokoa-Mullen of The 4Front Project described how this form of profiling was often criminalising 'normal behaviours':

> One of the big things is [...] the criminalisation of just normal behaviours, and so the fact that you're not only aware that everything you're doing is being surveilled, but also that normal things that a normal young person should be able to do, like make music or hang out [...] in the area they live with their friends, can then be used against them by the criminal legal system. [...] and it's also information that can be collected on them, I think. It makes it really hard for a young person to live a normal life that a young person should be able to live. We know these systems are incredibly racist because policing in general is incredibly racist. So the normal behaviour of a young black teenager is already being perceived as dangerous or disruptive or whatever, and the police now have actual powers to record that as if it's fact and then that can be used against someone [– it] is incredibly harmful.[517]

A participant in the community workshop in Hackney said: 'Profiling is another word for prejudice.'[518] They said that it was 'just a way for police to market what they are doing as "data-driven" to cover up racism'.[519] Another agreed, saying that 'is it really crime prediction, if you're over here profiling and you're just using crime prediction as just a word to hide the mistakes that you're making?'[520] Another said that, ultimately, it was:

> a branding exercise by the police to try and make racist policing not sound like racist policing. They say it's data-driven, its scientific, all the scare quotes obviously, except often this is like an Excel spreadsheet, they've just written some numbers down. So we've got to break through that illusion.[521]

4.2 Essex Police: Knife Crime and Violence Model (Fearless Futures)

Essex Police uses an automated individual risk assessment system called the 'Knife Crime and Violence Model' to assess the risk of a person's likelihood of committing a crime in future, specifically 'using a knife to commit serious violence'. Essex Police also refers to the system as 'Fearless Futures'.[522] It began using the system in June 2021.[523]

The Office of the National Police Chief Scientific Adviser has said Essex Police developed the tool so as not to focus 'only on investigating crime after it has occurred', and as an 'innovative' way 'to predict and prevent future crime'.[524]

Essex Police worked with the University of Essex on the Knife Crime and Violence Model, with the model assessed by the Essex University Chief Scientific Advisor.[525]

4.2.1 Predictive or not?

Essex Police has repeatedly denied that the Knife Crime and Violence Model is a predictive system. In one FOI request response it described the system as 'a risk model' which 'uses an algorithmic approach to determine risk'. The force stated that

'however, this is not predictive'.[526] In another FOI request response, the force said that 'Essex Police do not use any technology that incorporates prediction'.[527]

By contrast, on its website Essex Police has said that the tool is used 'to best predict whether an individual is on the trajectory towards using a knife to commit an act of serious violence'.[528] The Office of the National Police Chief Scientific Adviser also says that 'Essex Police have come up with new methods of predicting crime, which involves a lot of complex and interesting algorithms – if only Hercule Poirot had this capability too!'[529] It said the Knife Crime and Violence Model 'assigns a risk score against individuals known to the police, so it predicts whether an individual is on the path towards using a knife to commit a crime or act of violence'.[530]

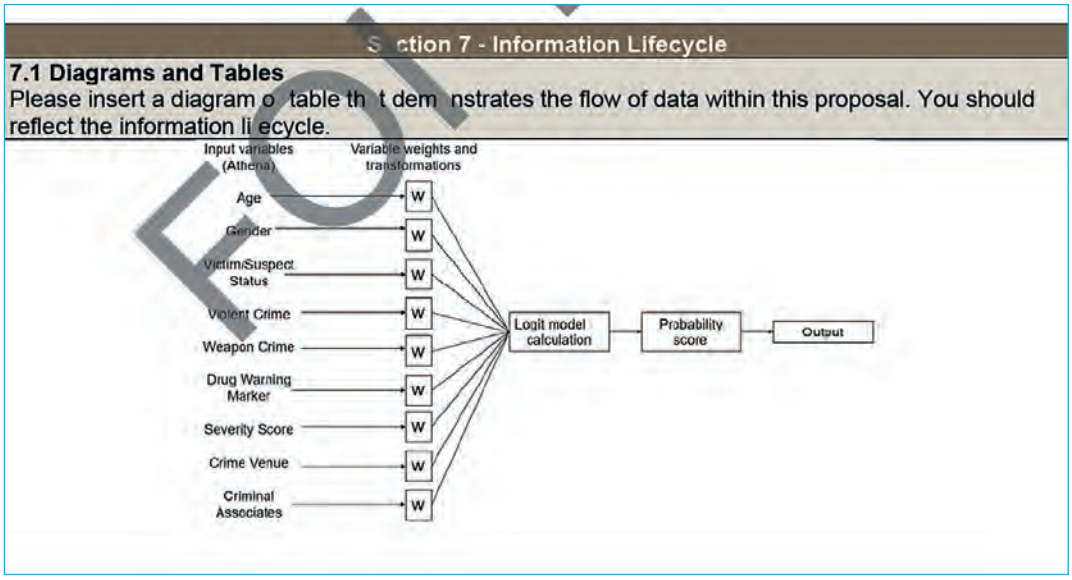

Figure 20: Diagram of the Knife Crime and Violence Model algorithm. ***Source:*** Essex Police, Knife Crime and Violence Model Data Protection Impact Assessment[531]

4.2.2 How Essex Police's Knife Crime and Violence Model works

Essex Police has said that the Knife Crime and Violence Model aims to 'prospectively assess those at heightened risk of becoming involved in serious/weapon [knife] enabled violence', specifically 'new knife or violent offences in the next 12 months'.[532] It says the model uses 'proximate risk factors available in police crime record data'.[533]

The force describes the Knife Crime and Violence Model as a 'data model tool' which uses 'police-derived (factual) data' to 'assign a probability/risk score against individuals'.[534] It uses four years of data to create a 'rolling data scoring sheet of approximately 65-70,000 records concerning 5,000 individuals' in the Essex Police force area.[535]

This probability score is calculated using the following information:

- Age
- Gender
- Drug warning marker
- Number of criminal associates/co-accused [also described as 'peers (co-offenders)']
- Prior suspects for violence with injury, possession of weapons and drug offences
- Prior victimisation for violence with injury
- Venue district last/current/most recent offence.[536]

The use of data on criminal associates risks violating the right to freedom of association. Restrictions on this right must meet all elements of a stringent three-part test: they must be provided by law; be demonstrably necessary and proportionate (the least restrictive measure to achieve the specified purpose); and pursue a legitimate aim. Due to their over-representation on police databases, Black and racialised people will be at much higher risk of such criminalisation, leading to further discrimination against them.

As well as data on whether an individual has a 'drug warning marker', the system includes 'mental health' markers on police systems.[537] It is unclear what weighting is given to this information, but it is of great concern that information on individuals' health may be used to profile them or predict alleged future criminality. Amnesty International has previously concluded systems such as Prevent, which operate on a similar 'gut feeling', discriminate against disabled people, particularly neurodiverse and autistic people.[538] Systems which increase the risk of differential treatment based on a prohibited ground – such as ethnicity or disability – are only legally permissible where there is an objective and reasonable justification. This requires that the difference in treatment pursues a legitimate aim and that there is reasonable proportionality between the means employed and the aim. In other words, the means must be appropriate, necessary and proportionate.

Essex Police has stated that the Knife Crime and Violence Model also uses data from unspecified 'other third-party organisations'. Essex Police has said it contacts such third parties 'where it is felt' the organisation is 'likely to hold data about a data subject […] that will assist the assessment of that individual'.[539] Essex Police did not specify who the third-party organisations were.[540]

The Knife Crime and Violence Model is an automated assessment. Essex Police says no decisions are made on automation alone but acknowledges that it 'does automate some of the analysis needed in order to group and score individuals based on certain factors'.[541] It says that it manually assesses all individuals who are profiled to have a score of '<0.3'.[542] However, all those profiled with a risk score of above 0.3, or 30 per cent, are considered 'most susceptible to future knife crime involvement' and are targeted by Essex Police for future intervention.[543]

A standard operating procedure was developed as part of the Knife Crime and Violence Model, in order to assess the priority level of those assessed.[544] Essex Police did not provide this to Amnesty International, despite being specifically asked via Freedom of Information request. The force stated that it held no information in relation to this.

There are fundamental problems with the use of statistical models for predicting people's behaviour. Dr Daragh Murray described this form of data-based profiling as:

> based essentially on statistical probability and because of that it means that it's based on correlation and not causation. […] typically, if it's going to be accurate, it's accurate at a group level and not an individual level. And I think those are two really core components that influence how useful the tool can be or what it can do. But that are often skipped over. They have really big implications when it comes to particularly individually focused risk assessments.[545]

Dr Murray went on to say that 'essentially you're stereotyping people, and you're mainstreaming stereotyping, you're giving a scientific objective to stereotyping'.[546]

4.2.3 The outcomes and impact of the Knife Crime and Violence Model

The Knife Crime and Violence Model has been described as 'stopping crime before it happens'.[547] Essex Police says the model is used by specially trained staff to deploy support services and prevent harm to others in the future.[548]

After an individual has been assessed and profiled as more than 30 per cent likely to commit knife crime according to the system, police will visit them 'to discuss the support that could be available and seek cooperation'.[549] Essex Police has admitted that the tool could influence officers to police the individuals on the list in a targeted way.[550]

The Knife Crime and Violence Model predictive risk score and individuals' data is shared with the National Probation Service,[551] the Youth Offending Service, and Essex Police Integrated Offender Management.[552] The predictive score is also shared with the Crown Prosecution Service and is used as part of 'sentence planning'. This means it may affect the criminal justice sentences imposed on individuals assessed by the system.[553] An individual's predictive score is also shared with the Prison Service, which means it may influence decisions in relation to their prisoner categorisation or other prison risk assessments.[554] The risk score is also shared with the Department for Work and Pensions.[555] This gives rise to the potential for this prediction to lead to non-criminal justice punishments, affecting individuals' ability to access employment support or gain employment.

Hope Chilokoa-Mullen of The 4Front Project spoke about what happens to individuals who are profiled by these police systems, and whose information is shared with other agencies and public service providers:

> most of our members have been excluded from school for [a] time, not only because the schooling system does not support them, but particularly around police databases. That can be passed on to their colleges and then they can be, and have been, kicked out of college. We have a lot of young people who have either had their driving licences removed or have been blocked from getting a driving licence again because of information from the gangs matrix or similar databases. If you're getting a job, all this information shared with the DWP [...] with housing, it's not even just that a young person might be rejected from social housing, but also that their family can be told they have to move if they're in council housing. The whole family can be told and have been told.[556]

As of 17 June 2024, Essex Police had assessed 1,025 individuals via the Knife Crime and Violence Model, giving them a 'predictive score'. Of these, 166 people were profiled as meeting the criteria.[557]Essex Police could not provide demographic data, such as ethnicity, on the individuals profiled.[558]

In March 2023 the Office of the Police Chief Scientific Adviser recommended that the Knife Crime and Violence Model be 'expanded' for 'a longer period of time' and in 'more locations'.[559]

4.3 Avon and Somerset Police: Qlik Sense Offender Management App

Avon and Somerset Police uses a number of profiling algorithms through the Qlik Sense platform. These include the Offender Management App, which is designed 'to monitor risk levels of offenders',[560] and which has been in use since before 2016.[561] Avon and

Somerset Police procured Qlik Sense in 2016, and has said that it is 'primarily used as a visualisation tool to monitor demand, trends and harm.'[562]

Avon and Somerset Police said in 2021 that it had 'over 4000+ users of our analytics tools, ranging from frontline police officers through to back office and specialist functions'.[563] It has said that it has a 'clear mandate' from its Chief Constable 'for every part of the organisation to be driven by data'.[564]

4.3.1 Predictive or not?

The force has said that it doesn't predict people's likelihood of committing a crime:

> None of our predictive analytics assess the likelihood for an individual to commit a crime. We provide a risk score to aid professional judgement in making a broader and more detailed assessment. None of our models calculate the likelihood or probability to undergo any action or event.[565]

However, this is a technical, semantic distinction, as the force does provide risk scores:

> we provide a risk score to aid professional judgement in making a broader and more detailed assessment – none of our models calculate likelihood or probability to undergo any action or event.[566]

The scores are an assessment of the risk, or 'likelihood', of an individual committing a certain act. His Majesty's Inspectorate of Constabulary and Fire and Rescue Services (HMICFRS) described Avon and Somerset's use of Qlik Sense as 'us[ing] police data provided by Qlik Sense to help predict problems at an early stage'.[567] Elsewhere, the force has acknowledged that since 2013, it has deployed 40 to 50 models, mainly for classification and forecasting.[568] The force has acknowledged that some of the applications it uses 'would be considered predictive tools'.[569]

4.3.2 Offender Management App: re-offending prediction and risk profiling

The Offender Management App system uses historical data from police recorded crime data to profile people who are 'linked as an offender to crime'. It gives a re-offending propensity score of 0-100.[570] This score is combined with an 'individual's total harm score', which is a ranking system created by Avon and Somerset Police.[571] The force defines an 'offender' or 'being linked to crime' as including: just being a suspect or even 'possible suspect'; being given a fixed penalty; being put on a drugs education programme; having a community resolution or restorative justice outcome; being given a youth or adult warning or caution; being arrested, even if there is insufficient evidence to proceed against someone.[572] This is a very broad and wide definition of offending, including diversionary and alternative approaches to prosecution used for low-level offending, which allows the force to utilise this Offender Management App monitoring and profiling on an even wider cohort of people.

Avon and Somerset Police has said that the profiling under the Offender Management App means that 'every offender in our case management system, everyday, gets given a risk score'.[573] A risk score of 70 or more is classed as 'high', and a score of 40 or more is considered 'medium'.

The force has said 'The risk scores help to serve as an initial scanning tool for officers', and that they influence the prioritisation of offenders.[574] Somerset Council described

the process of profiling offenders via algorithms as creating 'lists of those known individuals'. It has said:

> Through algorithms we now draw across police systems to understand who those people are we have continued concern about [regarding] their risk, threat, and harm they can cause people in our communities. We are increasingly using Qlik to support the identification of risky people in our communities.[575]

Avon and Somerset Police has said that there are around 300,000 people on its Offender Management App, and that as many as 170,000 have been profiled with a risk score in the last 6 years.[576] This is a substantial number of people profiled to assess their so-called risk of committing crime in future. The force has said that no formal evaluation reports have been conducted on any of its Qlik apps.[577]

John Pegram of Bristol Copwatch said that the Offender Management App profiling was the 'most troubling' of the different predictive and profiling models that Avon and Somerset Police uses:

> So they look at how likely someone is to reoffend [...] based around the community they live in [...] how well known they are to the police. Effectively, what it does, is allow the police to punish people using it, for as long as they want to. They can say, okay, it doesn't matter if you offended 13 or 14 years ago, you're known to us for this, and therefore we're going to assign a score to you. So it's risk scoring, it's profiling, often racist profiling.[578]

He also said:

> the police are using data that is people's previous history, and they're using that to build an intelligence profile on people. And it's very assumptive, and it's very biased, and it's assuming because you've done something wrong in life, you're going to repeat the same mistakes again. You're going to go back to where you were, say, 15 years ago, three years ago, two years, even six months ago. And what it doesn't do is allow for the fact that people change and people rehabilitate.[579]

4.3.3 Outcomes from the Offender Management App

Avon and Somerset Police has said that its Integrated Offender Management teams 'focus on early intervention, but also on preventing reoffending through enforcement of the law if necessary.'[580]

The force has said its officers 'work with the offenders and actively seek pathways out of offending', including conducting 'unannounced home visits'.[581]

Avon and Somerset Police has said that it shares its profiling outputs with other, unspecified agencies including Bristol City Council:

> We share outputs with other agencies, mainly those that have requested support in an area and have shared data with us for this purpose. Bristol City Council share data with us and in return we have created [...] models for them which we share back.[582]

John Pegram spoke of his experience with Bristol Copwatch in relation to information sharing by Avon and Somerset Police:

> I've seen that happen as a caseworker. I've seen young people be profiled and information being shared between organisations. So the one thing we know the police are very good at doing is intelligence sharing [...] I think the fact that the police are able to draw on so many different sources for information and not be questioned is something that should be regulated a lot better.[583]

Pegram shared his view on the police's use of the Offender Management App and the issues with it:

> It's racist, it's incredibly discriminatory, and you can argue it's classist as well, because they look at people's background, working history, where they live. If you live in, say, a deprived community, you're more than likely going to be given a high risk score, or if you're known to the police [...] they'll say this person is likely to reoffend because they haven't changed from what we can see. But no one's ever sat down with the individual. No one sat down and said, 'What's going on in your life?' That's my issue with the whole pre-crime policing model, as well as it's very much a predictive 'this is going to happen', but you can't base that on something that happened 15 years ago. You can say, 'Okay, we might know this person, he's known to us, but we don't know where that person is now in their life.' Having been through the criminal justice system, it's obvious it's very close to my heart, because I had, about four years ago, someone say to me, 'The law is not meant to punish you forever.' And it seems to me that's what predictive policing allows for.[584]

CASE STUDY Avon and Somerset Police individual profiling

Amnesty International spoke to an individual, David*, who has been profiled by one of Avon and Somerset Police's individual profiling systems and given a 'risk score'. He told Amnesty International: 'Unfortunately, I'm one of 250,000 people who've been risked scored by Avon and Somerset Police.'[585]

David found out he had been profiled after he submitted a subject access request to the Avon and Somerset Police. The force has confirmed he has been profiled, but they won't tell him any more than that, or what his risk score is. According to David the police called him a 'standard risk' but he said the force 'won't give me the number [risk score] that applies to me.'[586] Describing his experience with police, David said: 'I was being stopped searched regularly by police from the age of 16. I've been stopped and searched over 50 times.' Of his experiences with Avon and Somerset Police he said:

> In 2016 I was stopped and searched [...] and I was handcuffed on the spot, and I was stopped and searched for just putting a sticker on a lamp post. And they said that's potentially criminal damage, all this sort of stuff. They confiscated my stickers. I'd been at a gig, I think, and I was walking back, basically. And that was pretty bad. I thought there's no need to handcuff me on the spot [...] they were heavy handed.[587]

CASE STUDY Avon and Somerset Police individual profiling continued

David also spoke about being repeatedly targeted by police at demonstrations. He felt that the level of monitoring and targeting he was facing from the police was excessive and that he was being specifically targeted. So David submitted a subject access request to Avon and Somerset Police to find out what data they held about him.[588]

In the response to the Subject Access Request, Avon and Somerset Police confirmed to David that he:

> has been supplied with a copy of his personal data as held on Storm/ Assist and Niche – our crime recording systems following a previous Subject Access Request. His personal data is being processed through the Offender manager App, this includes his name and date of birth which is collated from a number of systems including Niche (our crime recording system) and Storm which records call logs.[589]

David found out that the force held incorrect data about his criminal record.[590] He feels this is probably the reason he has been risk scored by the force. He asked them to correct their record. The force replied that they were unable to, but would 'note his comments'. It took a legal challenge to get them to change it.[591]

Avon and Somerset Police refused to provide any information about David's risk score. They said in a general template exemption, that it could prejudice police tactics, investigations or inquiries if people knew details about this profiling system:

> We have applied a restriction to your client's right to access any personal data in respect of any score attributed to him / his name and record because it is information which relates to the prevention, detection, investigation or prosecution of criminal offences or the execution of criminal penalties, in accordance with:
>
> • Section 45 (4) (a) – to avoid obstructing an official or legal inquiry, investigation or procedure
> Disclosure of information relating to Police tactics, procedures and operations is likely to obstruct future inquiries and investigations.[592]

David described the long and painful process of trying to find out what Avon and Somerset Police's records about him were and how they had profiled him:

> they [Avon and Somerset Police] came back with an exemption, 'prevention of crime'. Basically what they said was, [my] data is being processed. So at that point, I spoke to my legal team, and they said, it does look like you've been risk scored. […] Then they went back and they challenged the exemption. The police then came back and said [my] data was being processed by the offender management app and they won't release it. They're still using the same exemption. […] But then they've said I've been assigned a risk store […] And they basically said 'standard risk', but they won't give what number [risk score] that is, whether that be 30% whether that be 40%, 50%, 60% […] and they won't say what the interventions are. And they also won't really tell my solicitors what it actually means. So we're going to see if we can challenge that.[593]

CASE STUDY Avon and Somerset Police individual profiling continued

David said the impact of policing and profiling has left him traumatised and with a diagnosis of anxiety and post-traumatic stress disorder (PTSD). He said:

> I feel my overall experience with Avon and Somerset police is […] very much a negative one. […] I think a lot of that is knowing what I went through in my youth. That caused me to feel very wary of them as an organisation. […] I find it very difficult to put any degree of faith or trust in them. And I'm sure some of that is going to be from past trauma that I'm carrying from them. I have therapy every week about some of the stuff that I've been through because of the police and how they've treated me over the past say, three or four years. It's scandalous, to be honest. They made me feel like I don't have any rights at all.[594]

He said that the impact of being risk scored by Avon and Somerset Police and trying to get answers from them was re-traumatising him:

> It added to my PTSD quite significantly […] you need to be able to just heal from trauma, and you can't if you're constantly being traumatised by events.[595]

David described his attempts to find out why and how he has been profiled by Avon and Somerset Police as fighting on behalf of the 250,000 others who have been profiled by the force:

> I look at it as something that has happened, not just to me, but I think OK, so if that's happened to me, that's also going to have happened to many other people. What we're trying to do is just show people that there is a way you can challenge the police if they are using your data in such a fashion, you know, especially if they refuse to give you it. They need to justify their exemptions. And unfortunately, for what we've seen so far, they won't do it. It's almost like a brush-off saying, 'We can't give it to you, this impacts on intelligence. This impacts operations.'[596]

He said that finding out he had been profiled 'really explained how the police have been acting towards me for some time'.[597] but that Avon and Somerset Police will not disclose what 'interventions' they take against people who have been profiled:

> Look at what a standard policing response is, standard police intervention. What have they got? They've got batons […] they've got pepper spray, they've got tasers […]. We need to understand what harms are happening, but we really need to understand what the interventions look like.[598]

David described what justice would look like for him and others profiled by police in this way:

> I think justice for me would look like them [Avon and Somerset Police] abandoning their use of positive policing, and really stopping the harms that are impacting our communities. That's what I think justice would look like. They shouldn't be using that technology at all.[599]

4.4 Greater Manchester Police: Xcalibre 'gang' profiling

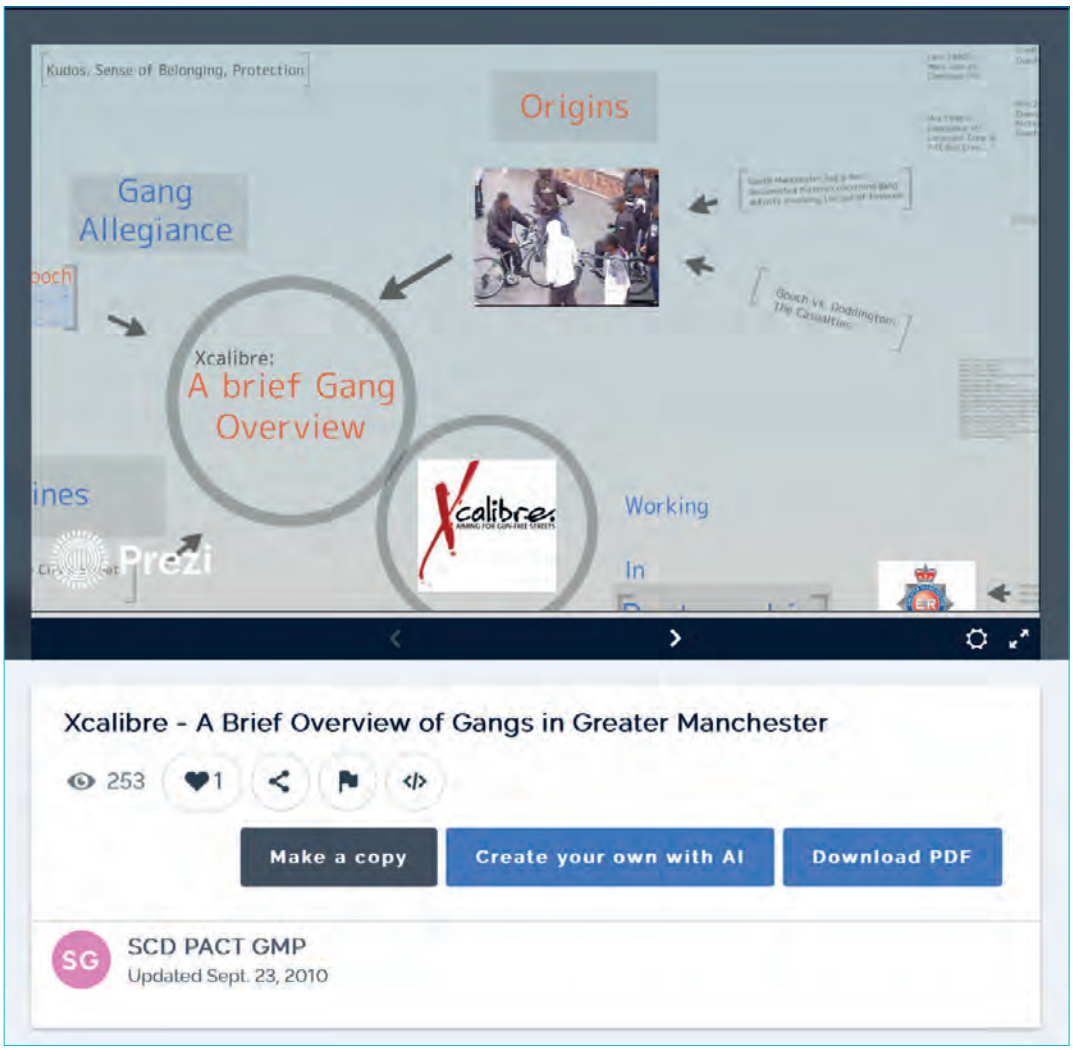

Figure 21: Greater Manchester Police presentation on XCalibre and profiling of alleged 'gangs' in Manchester, showing a group of young black men.[600] ***Source:*** Greater Manchester Police

In 2004 Great Manchester Police (GMP) set up a 'dedicated anti-gun crime taskforce' known as Operation XCalibre or the Xcalibre Task Force.[601] GMP has described it as 'the reactive police arm in order to go out and conduct enforcement around gang criminality and firearms discharges.'[602]

Greater Manchester Police said that in 2012-23, there were:

> in the region of 300 people who were of interest to XTF [Xcalibre Task Force] because of some form of association to the gang problem. This association could be as a gang related offender, a victim, or a person at risk (because of the dynamics of gang offending a person could well be all three).[603]

The definition of a 'gang' and 'active gang member' used by the force are incredibly broad, and even include other people's 'perceptions'. The Xcalibre Task Force defines a gang as 'A relatively durable, predominantly street-based group of young people, who see themselves (and are seen by others) as a discernible group. [They] Engage in a range of criminal activity and violence'.[604] A group can also be considered a 'gang' if they 'Identify with or lay claim over territory', 'Have some form of identifying structural feature', and are considered to be 'In conflict with other, similar, gangs.'[605]

A person can be deemed to be 'active within a gang context', if they are 'somebody who socialises and is seen to socialise or frequently be with members of a gang', and are the subject of a report or so-called intelligence from the Xcalibre Task Force.[606]

In 2014 GMP told a parliamentary inquiry that 30 per cent of young people in Moss Side, Manchester were 'involved in gangs'.[607] GMP subsequently admitted this was a mistake, and that the real figure was 0.03 per cent, or 886 people among the entire Greater Manchester population of 2.7m.[608]

The Xcalibre Task Force has said that it conducts an 'identification process of a person (who is in some way gang involved)' in order to 'monitor any criminal activity that may be gang motivated.'[609] Xcalibre officers have publicly acknowledged that they monitor music videos on the internet, including on YouTube, as part of their monitoring of alleged gang activity.[610]

The force will 'monitor' people it believes are involved in gang activity but will 'take action beyond that' if it becomes aware of a crime or 'incident that indicates that individual's involvement in some form of criminality that is or may reasonably be presumed to be gang related'.[611] The force has described tracking individuals labelled as gang members:

> The national mechanism is that we use the police national computer database whereby, if somebody is a self-confessed gang nominal or deemed by that police force to be associated with gangs and the like, a marker is placed on the PNC [Police National Computer] so that if that person travels from one area to another and a police check is done by an officer during a stop and search, it will flag up on the national database.[612]

This profiling has disproportionately affected young people from Black and racialised communities, amounting to racial profiling. A 2016 study found that 89 per cent of people on Xcalibre's database were from 'Black and Minority Ethnic' backgrounds.[613] Zara Manoehoetoe of Kids of Colour and Northern Police Monitoring Project told Amnesty International that 'while the GMP deny that there's a gangs database, we know that markers exist on their central main database, which is around association, affiliation, geographical area, at risk of serious crime, violence, that kind of stuff.[614]

Greater Manchester Police has said that one of its enforcement tactics against people it considers gang members is to ban them from attending certain events in Manchester:

> One of the tactics we have used successfully in Manchester is to prevent gang members or associates attending community events such as Parklife, EID, Caribbean Carnival, and Mega Mela, where there is the possibility of opposing gang members meeting and trouble developing. We therefore serve a banning letter on them and ensure that the officers placed on the entrances to the events are aware of who is not permitted entry. Again, whilst this has made for successful and peaceful events, one criticism is that the banning letters have previously been served on persons no longer associated with gangs. We therefore have to scrutinise our proposed list for banning letters and ensure each one has a sound rationale and has been served on the basis of the [Greater Manchester Police] definitions [of 'gang' and 'active gang member'].[615]

The force stated that these measures are in addition to preventing people from attending because they are in prison or 'exclusion zones incorporating the event'.[616] It admitted that the practice of banning individuals due to alleged gang affiliations had been going on since 2006.[617]

In 2022 Northern Police Monitoring Project published a letter on social media that Greater Manchester Police's Xcalibre had sent out to young people, banning them from attending the Caribbean Carnival of Manchester that year.[618] The police letter, addressed to an individual, stated that:

> The organisers have stated that no person is either a member of a street gang, affiliated to a street gang, perceived by others to be associated to a street gang and/or suspected to be involved in criminal activity will be allowed entry.

The letter said:

> This letter has been issued to YOU, based on an individual basis, as it is believed that YOU are either,
>
> A member of a street gang
>
> Affiliated to a street gang,
>
> Perceived by others to be associated to a street gang
>
> involved in criminal activity or
>
> Arrested at CCOM [Caribbean Carnival of Manchester] 2019/2020/2021
>
> Involved or linked to Serious Youth Violence
>
> You will not be permitted entry to the carnival as per the wishes of the organisers and the community.[619]

Northern Police Monitoring Project described their reaction as 'rage'. They noted that as many as 50 'young people in our communities' had received these letters from the police Xcalibre task force, preventing them from attending the Manchester Caribbean Carnival that year.[620] The group criticised this profiling, saying:

> The police, including GMP, label black boys 'gang members' with weak or non-existent evidence, conflate 'gangs' and youth violence, and build racist 'gangs' databases, all with an end goal of securing unjust prosecutions. Letters such as these are one of the many tactics at play in assigning the 'gang' label.[621]

Zara Manoehoetoe of Kids of Colour and the Northern Police Monitoring Project told Amnesty International that this was a form of pre-emptive punishment:

> Nobody's committed a crime, there's no evidence or intention that they're attending carnival to commit a crime, but the police have pre-empted that it's highly likely, and therefore already punished that person, and it's going to [...] ban them from entry.[622]

She said the majority of people targeted 'were, Black and brown, from communities situated in Hume and Moss Side and in those surrounding areas'.[623]

Following Northern Police Monitoring Project's publication of the letter police sent to young people, 12 organisations wrote to GMP and Manchester City Council asserting that the practice 'sustains and reinforces systemic racism within the criminal justice system, and in society as a whole'.[624] In 2023 Kids of Colour announced that GMP had chosen not to continue the practice of banning people from the event that year, after the organisation sent a formal judicial review pre-action protocol letter.[625]

The disproportionate representation of Black and racialised people on the XCalibre database is discriminatory and evidences the racial profiling that XCalibre conducts. This police tactic is also clear infringement of these young people's right to freedom of association. It continues the targeting of black cultural and music events, as with the Metropolitan Police's Form 696, which required events spaces to provide details to the police about the type of music played and the ethnic background of attendees.[626]

The GMP tactic of banning people from events in Manchester because they were perceived to be linked with gangs is one element of their so-called gang profiling. As Kids of Colour said at the time, 'these letters are a small part of a much bigger picture, that picture being unjust, racist "gangs" policing, a practice we know has affected many close to us.'[627] The Xcalibre Task Force sought to exclude people from a cultural event based on its data-based profiling of their alleged involvement in gangs.

Dr Patrick Williams noted that this kind of outcome was a key concern in relation to the use of predictive and profiling tools: 'The realities of how individuals are and will increasingly become digitally excluded from this society. Those individuals who are deemed as risky and problematic can therefore be designed out'.[628]

This form of pre-emptive profiling and punishment, without evidence of intent to commit offences, infringes the presumption of innocence. Zara Manoehoetoe from Kids of Colour and the Northern Police Monitoring Project said that 'the way in which these systems work is that you're guilty until you can prove yourself innocent. […] criminalisation is a justification for their existence […] There is the presumption that people need to be surveilled and that they need to be policed.'[629]

4.5 West Midlands Police: Integrated Offender Management (IOM) offender profiling and prediction

West Midlands Police (WMP) uses an automated 'predictive model' to profile individuals charged with offences for the potential future 'harm'[630] their offending may cause.[631] This machine learning tool is known as the Integrated Offender Management (IOM) system and has been in use since 2019.[632] As part of this mode, the force also profiles individuals to assess the current level of harm they have caused, called Recency, Frequency, Severity, Drugs and intelligence (RFSDi).[633]

The model was developed by its Data Analytics Lab (DAL) and 'supports the Force's strategic priority to Act with Precision in order to target the most problematic offenders.'[634]

The IOM system was initially used by two Local Offender Management Units (LOMU) during 'beta testing' from October 2021[635] until May 2022, in Dudley and Birmingham West Neighbourhood Policing Units.[636]

4.5.1 The data used in the Integrated Offender Management system

WMP uses data from the following databases in the IOM system:

> Crimes (crimes committed), IMS (intelligence), ICIS (custody), PINS (prison notification system), Corvus (intelligence and tasking system), OCG (organised crime group data), OASIS (the event logging system), SAS (stop and search) and DiP (drug intervention programme data).[637]

The force says that dataset goes back 20 years, with the variables calculated over the last eight years.[638] It includes data on vulnerable adults and children if they have been charged with offences, as well as people reported missing or being a victim of crime.[639]

The use of stop-and-search data in this model is highly likely to introduce bias and result in biased and discriminatory outputs. Stop and search is a policing tactic that is accepted as discriminatory, even by police.[640] As discussed in Section 3.1.2, stop and search is applied in a discriminatory way by police across the UK. In the West Midlands, Black and racialised people are disproportionately subject to stop and search despite no further action being taken in almost three-quarters of cases.[641]

The IOM system also includes police intelligence as a predictive factor, specifically if someone is mentioned in a police intelligence log.[642] The use of police reports risks bias entering the system. Subjective information which does not meet the threshold for evidence is used as evidence of potential criminality and to influence criminal justice outcomes.

The system uses data on people's 'networks', potentially criminalising by association. The use of data on people's use of drugs and alcohol also criminalises people for health issues.

West Midlands Police profiles 'suspects' of offences, who have not been charged or convicted. WMP has said 'the inclusion of "suspect data" […] would make these decisions more robust.'[643] Originally, this data was excluded from this profiling due to 'ethical considerations associated with "risk scoring" individuals who have not yet been charged with an offence'.[644] The West Midlands Police ethics committee meeting minutes document disagreement over including suspect data into the harm risk score with unidentified members of the committee expressing concerns and WMP saying the data is useful.[645] The data was subsequently added for use in the model.[646]

The result is that people who have not been convicted of offences are profiled and labelled as potential criminals. This is based on information about alleged offences. It risks infringing the right to be presumed innocent until proven guilty in a fair trial.

The numbers of people profiled by the Integrated Offender Management system

West Midlands Police has profiled a vast number of people using the IOM system. The force said in July 2023 that:

> Currently, 357,561 nominals are included in the model and given a harm score […] and a prediction as to the likelihood that they will become a high harm offender.[647]

WMP said that of those profiled, 297,297 were assessed as 'low harm', 39,065 as 'high/medium', 6,981 as 'high' and 470 as 'super high'.[648] The force acknowledged that this means the vast majority – 'over 80 per cent' – of those assessed have the lowest ranking, which raises a question over the need for such widespread profiling.[649] Even among those ranked 'super high', the force has said that 212 individuals are connected to 'acquisitive crimes', not violence.[650]

4.5.2 Bias and inaccuracy in the Integrated Offender Management system

West Midlands Police has acknowledged the potential for bias in its dataset:

> There is potential for bias to be present in the underlying dataset in terms of the recorded incidents of harmful / most harmful offences and within the intelligence reports.[651]

It further acknowledged that this bias leads to the repeated targeting of the same groups:

> Such biases may have arisen from a 'self-fulfilling prophecy' process in terms of the allocation of resources to locales / individuals previously noted for certain offences.[652]

WMP's internal analysis showed that Black people profiled by the Integrated Offender Management system are 2.4 times more likely to be in the high harm group than a north European (white) person.[653] This is clear evidence of the system's discriminatory effect and how it conducts racial profiling. It is another example of how the institutional and structural discrimination inherent in police and criminal justice data leads to discriminatory outputs.

The Ethics Committee is aware of this disparity, and yet agreed with West Midlands Police's use of the system. This raises fundamental questions about the fitness and purpose of the Ethics Committee.

West Midland Police has acknowledged that the IOM system makes mistakes including over-classifying individuals' risk: 'individuals who receive high harm scores but on further examination are assessed not to pose an immediate risk.'[654] One example given was 'people in prison' who are scored highly as posing a risk, despite being unable to pose any risk because they are in prison. The WMP's have reported that the system is: 'scoring a disproportionately large number of nominals as "high" or "super high", resulting in an unmanageably large list of individuals to review'.[655] One officer said: 'I have some doubt as to how that scoring is calculated'. The officer said of an individual assessed as 'super high risk' that, 'having looked at him I don't think he needs to be on that radar'.[656] Officers also reported that 'individuals who should be scored as high-risk are not currently being identified by the system'.[657]

An independent evaluation of the system found that 'no PCs or Sergeants report having confidence in the accuracy' of the harm risk score 'or assess that it has delivered operational benefit in their force area'.[658]

4.5.3 The outcomes of IOM profiling and prediction

West Midlands Police has said that officers can see the risk scores on 'an interactive dashboard'. They can use this to create lists of individuals, with their scores, 'based on

a geographical area, a crime category, such as acquisitive crime or an age group such as under 25s'. Officers can then 'target preventative interventions'.[659]

The force has said that the IOM outputs will 'case manage offenders away from offending and towards better lifestyle choices using a range of tactics', which it says are intended to '"control" and change'.[660]

It has been reported that Offender Managers are using the IOM predictions alongside those provided by the probation service.[661] One West Midlands Police Inspector has said:

> We use it now to take to Day One selection meetings with Probation. To confirm that Probation are also selecting the right people with their OGRS [Offender Group Reconviction Scale][662] scores.'[663]

West Midlands Police has said that the IOM predictions can influence people's licence conditions.[664] This means that this predictive tool, which the force has acknowledged leads to discriminatory outputs against Black people (amounting to racial profiling), which uses data on 'suspects', and which is known to over-classify people's risk, is being used to influence criminal legal system outcomes.

4.6 Thames Valley Police: Knife crime prediction

Thames Valley Police has said that it has developed a random forest machine-learning tool 'to predict if a perpetrator in any reported crime would commit a knife crime within 1-year'.[665]

The model used Thames Valley Police's reported crime data, totalling 'over 54,000 unique crimes, involving over 26,000 unique perpetrators'.[666]

The force has said that the information used to profile individuals includes the 'total number of times they have been a perpetrator of violent crime', the 'recency of latest knife crime perpetration', and variables regarding an individual's 'co-offenders', such as co-offenders' 'previous knife crime perpetration'.[667]

This model produced 'over 64,700 events generating a prediction', 7 per cent of which allegedly identified an individual who was predicted to commit a knife crime within one year.[668] The model did not work. The force admitted that 'of all those predicted to commit a knife crime, just 1 in 5 actually do.'[669]

4.7 Hampshire Constabulary and Thames Valley Police: Domestic Abuse Risk Assessment Tool (DARAT)

Hampshire Constabulary and Thames Valley Police have been developing an automated prediction tool, using machine-learning, to assess the risk of domestic abuse occurring in future. The tool has not been deployed for 'live testing' or operational use and was put on hold in February 2024.[670] However, given the broader trend of the increasing use of automated profiling and risk assessment systems in policing, the extensive development and in-depth level of detail provided on the use of this system is a useful indicator of how such systems will be used by UK police.

Hampshire Constabulary and Thames Valley Police say that the Domestic Abuse Risk Assessment Tool 'helps police officers to effectively grade the risk of future harmful

incidents of domestic abuse, so that actions can be taken to reduce the forecasted risk.'[671] Hampshire Constabulary and Thames Valley Police state that tens of thousands of domestic incidents take place each year but due to the complexity of cases, officers are unable to assess the risk of future domestic harm without a tool such as DARAT.[672] DARAT is a machine-learning tool[673] which the forces say will include 'an automated notification step'.[674] DARAT classifies individuals into several risk categories: 'standard risk' ('There is no domestic offending within the forecasting period'), 'medium risk' ('There is domestic offending within the forecasting period, but it is not of a type that would place it in High Risk'), and 'high risk', where certain offences are predicted for which there is a serious risk of, or cause of, serious physical or mental harm, or death.'[675]

DARAT incorporates two different models, one focused on predicting suspects' risk of reoffending, and another which predicts both victims and suspects' risk of being involved in a future occurrence of domestic abuse.[676]

The data used by the forces in the DARAT system included:

- Historical occurrences relating to suspect;
- Previous domestic incidents as victim and suspect (high and medium, and then high risk incidents);
- Previous violent offences as victim and suspect;
- Sum of crime harm in two years as victim and suspect;
- Prior suspect records (drugs offences; weapons offences; harassment offences; breaches of orders).[677]

Hampshire Constabulary and Thames Valley Police said that DARAT will be incorporated into decision-making in two different ways: one mechanism where DARAT produces a risk score about an individual for the supervisory officer in making their decision, and a second mechanism where it will be used 'to identify cohorts of individuals' for 'behavioural or needs based interventions from commissioned service providers or statutory offender management'.[678]

Hampshire Constabulary and Thames Valley Police said that DARAT will provide them with 'More accurate predictions of harm', including 'A defined window of prediction, so that when predictions are made, officers know the period within which that harm is likely to occur'.[679]

The forces say DARAT, once implemented, 'will be used every time there is a new domestic abuse occurrence recorded'. They say that the DARAT predictions will be used by supervisory officers when they review risk and make decisions 'to determine what actions will occur'.[680] The forces insist that 'The decision will be a human one, as it is now' but that decision 'will be made after consulting the recommendation from the model'.[681]

4.7.1 Bias and inaccuracy in the DARAT system

Hampshire and Thames Valley acknowledge a number of potential issues with the system. This included 'model bias':

> There is bias in data held by public sector organisations, and this will create bias in any model that is produced from these data. These biases can lead to differential treatment and provision of services, or to differential enforcement.[682]

The forces also acknowledged the potential for 'Model Unfairness', whereby 'Unfairness can occur through bias of data', and other impacts, such as 'professionals turn to just relying on the model without making their own decisions to override it when they should do so'.[683]

Thames Valley Police and Hampshire police stated that they had not conducted any assessment of the predictive accuracy of DARAT.[684] The forces did conduct a comparison between DARAT and a former risk assessment model, DASH (Domestic Abuse, Stalking and Honour Based Violence Risk Identification, Assessment and Management Model),[685] which stated that 'The best performing DARAT model was able to predict risk correctly in 40% more cases than DASH' and that 'The best performing DARAT model was showing capability of correctly identifying at least three times more high harm outcomes than DASH'.[686]

The force also provides the caveat that:

> These findings should be treated as indicative and are no guarantee of the accuracy of a model that could be used in a live setting.[687]

The force also stated that it does not have any internal policies or procedures in relation to its use, nor has it conducted Data Protection Impact Assessments or Equality Impact Assessments.[688] Originally, Thames Valley Police said in response to a Freedom of Information request that 'there is no information held' in relation to their use of predictive policing [689] However, Thames Valley Police did provide a link to details of the 'Domestic Abuse Risk Assessment Tool' (DARAT) in the same FOIA.[690]

The forces estimated the costs of DARAT as £200,874, incorporating the following:

> Compute costs (cloud computing): £874 (2023/24 FY)
>
> Staffing cost: £70,000 (2022/23 FY), £70,000 (2021/22 FY), £60,000 (2020/21 FY).[691]

The forces qualified this amount, saying that:

> The programme was stopped whilst the system was still in development. We do not hold full development costs, as the work has been completed by internal resources part funded by some external grants.[692]

Funding for DARAT was provided through the Domestic Abuse Perpetrator Programme Fund in 2022/23.[693]

5. Human rights consequences of predictive policing

Predictive policing systems used by police in the UK are leading to violations of people's rights to equality and non-discrimination, a fair trial and the presumption of innocence, privacy, and freedom of assembly and association.

5.1 Discrimination

The European Court of Human Rights (ECHR) defines discrimination as 'treating differently, without an objective and reasonable justification, persons in relevantly similar situations'.[694] Under this definition there must be a causal link between the prohibited characteristic, such as race, religion or disability, and the difference in treatment. But the characteristic need not be the only reason for the treatment. Nor does any such treatment need to refer explicitly to the prohibited characteristic or apply exclusively to the people possessing it.[695]

The UN Special Rapporteur on racism has made clear that the International Convention on the Elimination of All Forms of Racial Discrimination:

> establishes a legal commitment for all States parties to engage in no act or practice of racial discrimination against persons, groups of persons or institutions and to ensure that all public authorities and public institutions, national and local, shall act in conformity with this obligation. Instead, States parties must pursue by all appropriate means and without delay a policy of eliminating racial discrimination in all its forms.[696]

Police use of predictive, profiling and risk assessment systems is leading to racial profiling, discrimination and discriminatory treatment in breach of the UK's national and international human rights obligations.

Use of these systems results in racial profiling and the disproportionate targeting of Black and racialised people and people from lower socio-economic backgrounds. This leads to their increased criminalisation, punishment and a greater likelihood of violent policing.

As stated earlier in this report, the data used to create, train and operate these systems is imbued with the structural and institutional racism and discrimination inherent in policing, while the way the systems are set up, focusing on certain crimes, can also lead to discrimination.

The Metropolitan Police Service told Amnesty International that 'We acknowledge your findings on disproportionality and the inherent bias in crime data' and that there was 'Disproportionality in the use of police tactics based on such data' and 'further collection to compound this', which the force said it seeks to 'either mitigate or report on'.[697] Professor Marion Oswald, Professor of Law, University of Northumbria and chair of West Midlands Police and Crime Commissioner and West Midlands Police Ethics Committee, acknowledged that:

> there's certainly a risk [of discrimination]. And that's because the data is based on historic crimes, historical policing activities. So the data that's available to the police is inevitably quite limited. So there is certainly that risk. And the data also represents changes in different policing activities, so potential prioritisation of certain crimes (...) and then that might be for policing reasons, or it might be political pressure to focus on particular crimes.[698]

As this report has evidenced, the use of geographic-focused crime prediction and hotspot mapping systems leads to the same areas and communities being racially profiled and repeatedly targeted by police interventions and enforcement. Often these areas are more deprived and have high populations of Black and racialised people. The result is that people in these areas and communities are frequently monitored and subject to policing enforcement such as stop and account, stop and search, and even use of force. There is also an increased likelihood of engagement with the police and potential escalation into violence, and sometimes serious harm at the hands of the police.

Similarly, individual-focused prediction, profiling and risk prediction systems lead to people from the same backgrounds being racially profiled and repeatedly targeted by police. Again, these are often Black and racialised people and people from lower socio-economic backgrounds. The result is that they are monitored, subject to policing enforcement like stop and account, stop and search, use of force and an increased likelihood of engagement with the police. These systems also influence other decisions within the criminal legal system, such as licence conditions.

Both types of system cast a wide net, resulting in people being brought into the criminal justice system, often producing a cycle of criminalisation. Dr Adam Elliott-Cooper set out who would be affected by this:

> the communities that are already most at risk will have that risk exacerbated. So those will be Black communities, Muslim communities, migrant communities, trans communities, working class people, particularly people who are unhoused, Gypsy, Roma and Traveller communities, people with mental health problems.[699]

Predictive policing systems are racially profiling individuals, groups and communities. In doing so, they are creating and reinforcing narratives that certain communities are more likely than others to commit crimes.

Geographic crime prediction and hotspot mapping systems

Police geographic crime prediction or hotspot mapping systems lead to the same areas being racially profiled and repeatedly targeted and policed.

Demographic analysis of such systems shows a consistent profiling of areas with high populations of Black and racialised people – and especially areas with populations of deprived Black and racialised people – as supposedly risky, criminal, or where crime is likely to occur. Data on police stop and search and use of force in those areas, during the use of these systems, evidences how these systems have contributed to racial profiling and discriminatory policing in those areas.

Participants in all three research discussion groups Amnesty International conducted, in Essex, Lambeth and Hackney, recognised how systems set up to predict crime in areas would exacerbate racist and discriminatory policing.

Participants in all groups identified how police predominantly targeted areas with higher levels of deprivation and working-class populations such as council estates, and areas with high populations of Black and racialised people.

A participant in Lambeth said predictive policing discriminates:

> because of the data sets they have which have already targeted predominantly Black and brown communities and communities from a low socio-economic background, they use this data to create an algorithm which kind of creates a feedback loop, because they can see that they have a high crime rate there, because they've already sent so much police here, and as a result, it just creates this thing where, 'Oh, we just sent more police there', more and more, which creates this never ending cycle of higher crime rates, higher policing, which then lead to higher crime rates, higher policing.[700]

A Hackney participant said that police were 'just assuming these things […] they assume it first, then they predict, and then they start going there, like a cycle.'[701] A participant in the Essex discussion group recognised the structural discrimination behind the targeting of certain crimes as opposed to others, noting that 'white collar crimes, they're not getting targeted'.[702] Another participant in Hackney said that 'The way that they spread the police and resources is at its core classist and not representative of […] really trying to stop crime'.[703]

Individual predictive, profiling and risk assessment systems

Individual prediction profiling and risk assessment systems have been shown to be discriminatory and amount to racial profiling.

The use of police data in individual-focused predictive systems – especially data known to be discriminatory such as stop and search, police intelligence reports, or data on suspects – is going to result in discriminatory outputs. And this produces feedback loops of racial profiling and criminalisation.

Some of the systems discussed in this research were known to be discriminatory by the forces that were using them. For example, West Midlands Police has acknowledged that its Integrated Offender Management System uses biased data and creates discriminatory and inaccurate results, including a known racist bias against Black people.[704] Yet the force still uses the system, profiling hundreds of thousands of people in the West Midlands area.

Other systems also evidence racial profiling. Of the people that the Metropolitan Police Service's Violence Harm Assessment has profiled, young black adults and children, and Black and racialised people generally, are significantly over-represented.[705] The same was true of its predecessor, the Gangs Matrix.[706] Elsewhere, Greater Manchester Police's XCalibre database focused almost exclusively on people from 'Black and Minority Ethnic' (BME) backgrounds.[707] Others did not provide data on the demographics of the people profiled – for example, Essex Police in its use of the Knife Crime and Violence model. However, the lack of comprehensive data on the demographics of individuals profiled by these systems does not prevent an analysis of their impact on the right to non-discrimination. Statistics can provide clarity and evidence, but they are not essential in proving a violation.[708]

5.1.1 Criminalisation and punishment

The use of predictive, profiling and risk prediction systems in policing disproportionately target Black and racialised people, groups, and communities, is resulting in Black and racialised people being criminalised.

Essex Police targeted the areas identified by the risk terrain model with intense police patrols, and stop and account. It stated that it targeted non-criminal offences, such as young people congregating, and what it described as 'social malaise'.[709]

The Metropolitan Police Service noted, in relation to its use of risk terrain modelling, that 'heightened policing activity in a particular location, and greater possibility therefore of being interfered with by the state might be an unwarranted intrusion.'[710]

West Midlands Police's knife crime prediction tool led to increased policing, including stops and searches, police logging 'intelligence reports' in targeted areas, and even arrests.

Essex Police's Knife Crime and Violence Model's use of data on criminal associates criminalises people by association, without any evidence of criminality.[711] The use of data on people's mental health and drug use is another way in which health issues are taken to be markers of criminality. In other words, people are being criminalised for health issues.

Black and racialised people are over-represented on police databases. This means they will be at much higher risk and likelihood of criminalisation, leading to further discrimination against them. Essex Police has recently started to include more data, specifically on 'suspects' who have not been convicted of crimes, which further expands this discriminatory net. The predictions and profiles from this tool are shared with the Crown Prosecution Service, where it may influence charging and sentencing; and with the Department for Work and Pensions, potentially affecting people's access to welfare and employment opportunities.

Data-sharing between police and other authorities and essential service providers

Sharing of police predictions, profiles, risk assessments and related data with other authorities and agencies which provide essential services, such as welfare, local authorities, and unspecified third-party organisations, has a tangible impact on people's ability and willingness to access essential services.

> Dr Eliott-Cooper discussed this:[T]here are attempts by the police to have this kind of data sharing across healthcare provision, educational institutions, housing providers and other public services. This [...] can affect people's ability to access these key services [and] if people are less able to access these kinds of services, they're more likely to end up coming into contact with the criminal justice system. [...] So we are likely to see people who are suspected of these categories of crime, disproportionately racialised minorities, being both more likely to be excluded from these crucial forms of public sector provision, but also consequently more likely [...] to come into contact with the police and prison system.[712]

The 4Front Project's Hope Chilokoa-Mullen also noted the widespread impact of these predictions and profiles outside traditional policing:[713]

> [W]e talk about the police but it's also important to recognise how policing is done through different local authorities which also have databases [...] Schools have databases, and I think we definitely see working with young people how these systems are really intertwined. [...] From a young person's perspective, we already know that lots of these services are hard to trust. But it makes it impossible to trust anyone who's interacting with you. [...] lots of the things that we hear about, particularly surveillance, from lots of young people, especially those of school age, is how lots of them have interactions with social services, lots of them will have social workers, they will have other institutions, that are also involved in their lives, and the police run through all of that [...] it is only getting worse and also that makes it a lot harder to even know who's sharing information on you.[714]

These accounts of the way that data-sharing between essential public service providers and the police, and the loss of trust in those services that this creates reflects Amnesty International's findings in relation to the Prevent duty, where individuals lose trust in state institutions either through the chilling effect of Prevent or through personal interaction with Prevent.

5.1.2 Equality Act 2010 and the Public Sector Equality Duty

Section 149 of the Equality Act 2010 sets out the Public Sector Equality Duty (PSED). This is a requirement on public bodies to eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act, and advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it.

It requires all public bodies (including law enforcement agencies) in the UK to eliminate unlawful discrimination against people with protected characteristics, such as age, race, or sex. It applies to the use of technology, including predictive and profiling systems, by public bodies. It requires those bodies to carry out Equality Impact Assessments and take steps to prevent and mitigate unlawful discrimination.

In many cases, police forces using predictive, profiling and risk assessment systems have openly admitted to not carrying out Equality Impact Assessments, potentially in breach of the Public Sector Equality Duty. This includes Essex Police, Merseyside Police, Thames Valley Police, British Transport Police, City of London Police, Devon and Cornwall Police and Humberside Police.

Those forces that have carried out Equality Impact Assessments have either completely ignored or brushed over issues of discrimination.

5.2 Presumption of innocence

Every person charged with a criminal offence has the right to be presumed innocent until and unless proven guilty according to law after a fair trial.

Predictive policing systems produce predictions, profiles and risk assessments. These amount to suspicion of criminality or actual labels of criminality, about a person or group in a particular area. That suspicion or label is based on data which does not amount to evidence of a criminal conviction, or amount to formal suspicion in the form of a charge but merely reflects an opinion of potential guilt. These predictions can lead

to policing interventions and consequences. This approach clearly risks violating the presumption of innocence and the right to a fair trial. This research has shown how geographic-focused predictive policing systems lead to the over-policing and repeated targeting of certain areas, and the criminalisation of people in those areas.

People in those areas are not afforded the presumption of innocence, but instead, a presumption of guilt. Police are pre-disposed to seeing their behaviour as criminal, risky or dangerous, and are more likely to criminalise them as a result. Police using these systems have highlighted how predictions have led to targeted patrols of areas, stop and account, stop and search, and arrests.

Even more directly, individuals profiled by individual-focused predictive policing systems are not afforded the presumption of innocence.

The Metropolitan Police Service's Violence Harm Assessment profiles people based on intelligence reports and about people who are 'suspects', and an individual can be profiled without ever having offended or committed a crime. Greater Manchester Police's gang profiling is based on suspicion or even 'perception', without objective evidence of offending, or even any evidence of offending. West Midlands police profiles people as 'suspects' even though they have not been charged or convicted of offences. People who have not been convicted of offences are profiled and labelled as criminal, using information about unproven involvement in offences. Multiple forces use police 'intelligence' in their profiling systems – subjective information which does not amount to evidence but a stigma of criminality.

These profiles lead to monitoring and interventions by police, including stop and search and home visits. They keep individuals within the police's sphere and continue the cycle of criminalisation. The profiles are shared with the Crown Prosecution Service, probation, and prison authorities, potentially influencing criminal legal outcomes including licence conditions, sentencing and prisoner categorisation. Profiles have also been shared with other agencies and service providers including the Department for Work and Pensions, where they may affect people's access to essential services such as welfare and employment; and with local authorities where they may affect access to other essential services. Several forces have mentioned sharing profiles and related data with unspecified third-party organisations or agencies.

On this basis, using pre-emptive systems to target people even though they haven't offended risks infringing the presumption of innocence.

5.3 Privacy

This research has evidenced the extent to which predictive, profiling and risk assessment systems use data, including sensitive personal data, about large numbers of individuals.

It has evidenced that these predictions, profiles, and risk assessments can lead to interventions by the state, including questioning, searches, and even arrest; and to these predictions and profiles being shared with other state authorities and agencies, with potential for further negative consequences.

For example, the Metropolitan Police Service admitted, in relation to its use of risk terrain modelling, that 'heightened policing activity in a particular location, and greater

possibility therefore of being interfered with by the state might be an unwarranted intrusion.'[715] The same is true for all geographic or location-focused predictive systems.

The type of data collection that underpins individual profiling and risk prediction systems, such as the Metropolitan Police's Violence Harm Assessment, also focuses law enforcement efforts disproportionately on young people from Black and racialised backgrounds, particularly young Black men.

The use of these predictive, profiling and risk assessment systems affects people's right to privacy. It targets them in their local area and because of where they live, and because they associate with people there. This was often the case with the precursor to the Violence Harm Assessment system, the Gangs Matrix, which targeted people for how they express themselves through music and social media.[716] The fact that these individual profiles are shared with other state agencies, including the Crown Prosecution Service and probation services, the Department for Work and Pensions, local authorities and unspecified third-party agencies and organisations, increases the concerns about the proportionality of the interference with people's rights. This is before any potential further rights interferences, discrimination or other harm is considered.

Further, the stigma of suspicion or guilt can follow individuals through their interaction with local services including employment, housing and education. These services may not have enough – or any – context on which to judge the original police intelligence, or the degree of a young person's alleged 'gang' association or predicted levels of violence. Instead, inclusion on a system such as the Violence Harm Assessment or Essex Police's Knife Crime and Violence Model may be read as evidence of violence or gang membership. In this way the fine line between information about a person's associations and evidence about their actions is easily erased. The data sharing can also lead to negative outcomes in other areas of people's lives, such as access to welfare.

As the human rights risks are so serious, Amnesty International would expect to see the police holding and sharing such data in the most limited manner possible. Given the lack of clarity and safeguards and the competing priorities of the various agencies using the data, this is not currently the case.

The people profiled and risk assessed do not have any practical way of challenging the accuracy of the inference being made. The majority of individuals profiled or risk assessed won't know that they are on a database or that their information is being shared, given the opacity of the systems and obfuscation by police. For example, the Metropolitan Police Service's official policy is not to notify individuals, and Avon and Somerset Police refused to provide information, confirming only limited details after legal correspondence.

By luck, assumption or a Subject Access Request and significant legal correspondence, an individual might confirm they have been profiled. Even so, there are not enough accessible routes for people profiled (and their families or dependants) to seek redress. Thus, people are not able to exercise their rights to access to information, to rectification or removal of inaccurate information, or otherwise challenge profiling and risk assessment and their inclusion on related lists.

Police use of predictive, profiling and risk assessment systems necessitates the widespread monitoring, collection, storage, and analysis or other use of personal data, including sensitive personal data, without individualised reasonable suspicion of criminal wrongdoing (as distinct from data on previous offending history). Amnesty

International considers that there is evidence that police use of these systems in the UK disproportionately targets Black and racialised people and people from more deprived backgrounds, at scale. These practices amount to indiscriminate mass surveillance.

Mass surveillance can never be proportionate interference with the rights to privacy, freedom of expression, freedom of association and of peaceful assembly. Amnesty International considers that all indiscriminate mass surveillance fails to meet the test of necessity and proportionality and therefore violates international human rights law.[717]

The use of predictive, profiling and risk assessment systems that necessitate such widespread monitoring, collection storage and analysis or other use of such data is a violation of the right to privacy. It must be stopped immediately.

5.4 Freedom of assembly and association and the 'chilling effect'

The use of predictive and profiling systems to target geographic areas, and individuals and communities, can lead to a 'chilling effect' on people's ability and willingness to exercise their right to freedom of association and assembly.

Essex Police noted the chilling effect of its use of risk terrain modelling. The Home Office has also acknowledged that its hotspot policing method 'may have the effect of displacing crime by time or place', or at best, result in 'modifying the crime in the surrounding area.'[718] Essex Police's Knife Crime and Violence Model's use of data on so-called 'criminal associates' also risks infringing people's freedom of association.

Participants in all three discussion groups that Amnesty conducted stated that they would try to avoid areas with high concentrations of police or where police were known to target.

Hope Chilokoa-Mullen of The 4Front Project described the tension between wanting the young people she works with to be able to live freely, and feeling she should warn them away from areas targeted by police 'if we know that there's going to be an increase in police footfall in our area in a certain time':[719]

> We were recently told, because of an incident nearby, there was going to be increased patrolling in the area for the next 48 hours. We feel that we have a responsibility to let our members know that because we know they're not safe when the police are around. But we also know that that means that we're essentially limiting where they can go or how safe they can feel out on the street. And it's a hard thing to balance because on one hand, you don't want to do that. You don't want to contribute to that chilling effect.[720]

Police use of predictive, profiling and risk assessment systems, whether focusing on places or individuals, risks infringing the right to freedom of association and assembly.

6. Is the use of predictive policing systems lawful under international human rights law?

Amnesty International recognises states' and state authorities' duty to respond to serious violence and protect citizens from harm. But in doing so, they must respect international human rights and stay within the limits of international law.

This research has demonstrated that police use of predictive, profiling and risk prediction systems interferes with the rights to equality and non-discrimination, a fair trial and the presumption of innocence, privacy, and freedom of assembly and association.

For these interferences to be lawful they must meet all elements of a stringent three-part test: they must be **provided by law**; be demonstrably **necessary and proportionate** (the least restrictive measure to achieve the specified purpose); and **pursue a legitimate aim**.

Regarding discrimination, differential treatment based on a prohibited ground – such as race or social origin – is only legally permissible where there is an objective and reasonable justification. This requires that the difference in treatment pursues a legitimate aim and that there is reasonable proportionality between the means employed and the aim (in other words, that the means are appropriate, necessary, and proportionate).

6.1 Are predictive policing systems 'provided by law'?

Any interference with the rights to equality and non-discrimination, a fair trial and the presumption of innocence, privacy, and freedom of assembly and association must be provided by law.

In other words, it must be set out in law clearly and predictably enough to allow people to regulate their actions to avoid the interference.

This report has made clear that so-called predictive policing is premised on predicting events or behaviour deemed criminal before it happens, and intervening before it happens.

As demonstrated in this research, these systems are used to generate predictions, profiles, labels and suspicions against individuals, communities, and areas, resulting in policing intervention or enforcement. The police have huge discretion over what intervention or enforcement action to take. This makes it difficult, if not impossible, for people to adjust their behaviour to avoid this state intervention.

There is little to no transparency around these systems, their predictions or profiles, and the way these are used and implemented. People do not know they are being used, how they are being used, what data is used – including their own personal data – or how the decisions are affecting them. As a result, people cannot challenge the use of these systems or their data, or the impacts these systems have on them and their rights. In any case, the legal routes and remedies available to them are unclear, convoluted, and offer little meaningful redress.

This analysis raises serious concerns about the extent to which the use of these systems complies with the principle of legality and is adequately provided by law.

6.1.2 Transparency

The use of predictive, profiling and risk prediction systems in policing in the UK is extremely opaque. Police forces do not talk publicly about the systems they use. When asked under Freedom of Information laws, they are resistant to providing information about it. The Metropolitan Police Service's response to Amnesty International admitted 'We recognise your description of forces giving patchy responses to your queries'.[721]

In response to the findings of this report[722] and in a letter to the Safety Not Surveillance coalition, the Minister of State for Policing, Fire and Crime Prevention recently said that all chief constables had signed up to an 'AI Covenant for policing' which states that 'police use of AI should be lawful, transparent, explainable, responsible and accountable'.[723]

Amnesty International has been conducting the research published here for two years. During that time, police forces often did not reply to requests for information, or replied only when chased or prompted by further requests, and sometimes did not respond at all. Forces cited blanket exemption. They provided contradictory information on multiple occasions, such as stating they did not use 'predictive' systems when other official sources or information in the public domain stated that they did. And they failed to send documents they had agreed to disclose. As Dr Daragh Murray said, 'we shouldn't have to be digging around to see how these things are being used'.[724]

The current data access regime allows wide exemptions for police forces to refuse to provide data to individuals about their use of predictive, profiling or risk prediction systems, even if that individual has been profiled by the system.

The case of the Bristol individual profiled by Avon and Somerset Police (page 88) illustrates how the police refuse to provide this information and the exemptions they cite.

The Metropolitan Police Service told Amnesty International that it uses the 'independent oversight' of the London Policing Ethics Panel 'for any new or contentious use of data or technology', and that it wouldn't use any 'predictive data system... without being open and transparent about it'.[725] However, there are no publicly available assessments by the London Policing Ethics Panel of either the Metropolitan Police Service's use of risk terrain modelling or the Violence Harm Assessment.[726] There is no mention of the London Policing Ethics Panel in the Data Protection Impact Assessments or Equality Impact Assessments completed by the force in relation to either system.

Algorithmic Transparency Standard

Transparency requirements in the UK relating to algorithmic systems are minimal, as illustrated by the government's Algorithmic Transparency Standard. In 2023 the Central Digital and Data Office and Centre for Data Ethics and Innovation developed the Algorithmic Transparency Standard, as part of the government's National Data Strategy.[727] The standard is designed 'to help public sector organisations provide clear information about algorithmic tools they use' to support decisions, including those that have a 'significant influence on a decision-making process with direct or indirect public effect'.[728]

The standard states that 'Algorithmic transparency records should be published and made publicly available when the tool in question is being piloted and/or deployed.'[729] Records are published on the government website.[730]

The standard is not statutory or enforceable, and government bodies have no obligation to complete or publish an Algorithmic Transparency Record. Just two records of algorithmic systems used by UK police forces are currently published there.[731]

The UN Special Rapporteur on racism has said:

> In order to comply with their equality and non-discrimination obligations, States must ensure transparency and accountability for public sector use of emerging digital technologies, and enable independent analysis and oversight, including by only using systems that are auditable.[732]

The UN High Commissioner for Human Rights has recommended that: 'States should introduce registers containing key information about AI tools and their use'.[733] The UK is failing to meet these international standards and requirements.

6.2 Do predictive policing systems serve a 'legitimate aim'?

Police have described their use of geographic crime prediction systems as pursuing the aim of preventing and detecting crime.[734] They have said that their 'lawful policing purpose' for the use of individual profiling systems is 'to predict where and when violent crime is most likely to occur, so as to plan prevention activity',[735] and generally to 'reduce violence'.[736]

6.2.1 Legal basis for processing of data by police

Part 3 of the UK Data Protection Act 2018 governs the processing of personal data for 'law enforcement purposes' by police and criminal justice agencies, so-called 'competent authorities', as well as national and transnational data sharing.[737] Law enforcement purposes are defined as 'the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, including the safeguarding against and the prevention of threats to public security'.[738] All processing of personal data by the police and criminal justice agencies for any of the 'law enforcement purposes'[739] must meet certain 'law enforcement data protection principles'.[740]

An extensive analysis of predictive policing systems' compliance (or lack of it) with data protection laws is outside of the scope of this research. Detailed analysis has been done elsewhere.[741]

However, as an example, Essex Police has published what it believes to be the legal justification for its use of the Knife Crime and Violence Model:[742]

> Essex Police and the Probation Service (and other Competent Authorities) derive their legal basis to disclose, receive and process personal data where the processing meets the definition of law enforcement purposes:
>
> > 'The prevention, investigation, detection or prosecution of criminal offences and the execution of criminal penalties, including the safeguarding against and the prevention of threats to public security.'

> The project does not intend to process 'sensitive data' – however, should it become strictly necessary to achieve the specified purpose the processing must meet a condition from Schedule 8 (DPA 2018), or explicit consent from the data subject must be obtained.
>
> Please note that strictly necessary in this context means that the processing has to relate to a pressing social need, and you cannot reasonably achieve it through less intrusive means.
>
> Any partners involved in this project are likely to find their lawful basis within Article 6 (Lawfulness of Processing) of GDPR basis:
>
> > '1(e) processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller. With the condition for processing criminal offence personal data within Schedule 1 of the DPA 2018 specially, Para. 10 Preventing or detecting unlawful acts.'[743]

6.3 Is the use of predictive policing systems 'necessary and proportionate'?

The European Court of Human Rights has judged that 'necessity' implies two things: (1) that an interference corresponds to a pressing social need; (2) that it is proportionate to the legitimate interest pursued.

Police have described their use of predictive policing systems as pursuing the aim of preventing and detecting crime.[744] They have claimed that the use of predictive policing systems corresponds to the pressing social need to protect the rights and freedoms of the public and wider society.[745] Professor Lawrence Sherman, former Chief Scientific Officer of the Metropolitan Police, told Amnesty International: 'What I would never support is disproportionate use of proactive policing in which the results obtained are trivial compared to the intrusions on personal liberties that were used'.[746] He said there was a need to focus on 'the purpose of the proactive policing is trying to achieve', and that use of these systems required 'evidence that it achieves that purpose, and if it does achieve that purpose, does it create less harm than actually leaving it alone?'[747]

UK police use of predictive policing systems is currently disproportionate: the interferences with human rights and the harms they exacerbate and reinforce outweigh any alleged effectiveness in achieving its stated policing aims of preventing and detecting crime.

Substantial numbers of people are targeted by the use of these systems. For example, West Midlands Police profiled more than 350,000 people,[748] Avon and Somerset Police around 170,000 people,[749] Essex Police more than 5,000,[750] and Thames Valley Police's in-development system used data on more than 26,000.[751] Moreover, the police's geographic crime prediction and profiling tools, for example under the Grip programme and risk terrain modelling, label entire areas and neighbourhoods as risky or criminal. It cannot be proportionate to indiscriminately profile hundreds of thousands of people to assess their potential future risk of criminality, or label entire areas or neighbourhoods as risky or criminal.

The police create these predictive and profiling tools using an extremely broad definition of crime, criminality or offending, and a similarly broad swathe of data. The West Midlands Police Integrated Offender Management system uses data on suspects of crime as well as stop-and-search data to profile people for alleged criminality,[752] neither of which are objective evidence of criminality. Avon and Somerset Police's definition of offenders includes people who have been arrested but not convicted, people who have received a fixed penalty, have been referred to a drugs education programme, have a community resolution or restorative justice outcome, have been given a youth or adult warning or caution, or have been arrested, even if there is insufficient evidence to proceed against them.[753] The Metropolitan Police Service similarly profiles people via the Violence Harm Assessment based only on appearance in multiple police reports and being considered a suspect.

Further, the use of these systems cannot be considered proportionate when their use disproportionately impacts and affects Black and racialised people and people from more deprived backgrounds. Police use of these systems leads to people in targeted areas and individuals profiled being subject to increased policing and criminalisation. The data detailed in this report – including some provided by police themselves – shows that these systems disproportionately impact individuals from Black and racialised backgrounds. Amnesty International's demographic analysis shows that the geographic or hotspot mapping systems significantly profile and target areas with high populations of Black and racialised people.

7. Remedies

The right to an effective remedy is a key element of human rights protection. It is enshrined in all major human rights treaties, and serves as a procedural means to ensure that individuals can enforce their rights and obtain redress when their rights are interfered with or violated.[754]

International law requires remedies to be available in law, and accessible and effective in practice. It includes the right to equal and effective access to justice and fair, meaningful, and impartial procedures for fairly adjudicating a person's claim. If the claim is substantiated, international law requires an effective remedy to be granted. All states therefore have an obligation to ensure remedies that are 'accessible, affordable, timely and effective'.[755]

Article 6 of the International Convention on the Elimination of All Forms of Racial Discrimination creates a duty on states to provide protection against racial discrimination and to ensure access to remedies for all acts of racial discrimination:

> States Parties shall assure to everyone within their jurisdiction effective protection and remedies, through the competent national tribunals and other State institutions, against any acts of racial discrimination which violate his human rights and fundamental freedoms contrary to this Convention, as well as the right to seek from such tribunals just and adequate reparation or satisfaction for any damage suffered as a result of such discrimination.[756]

The Committee on the Elimination of All Forms of Racial Discrimination has said that:

> States parties are obliged to guarantee the right of every person within their jurisdiction to an effective remedy against the perpetrators of acts of racial discrimination, without discrimination of any kind, whether such acts are committed by private individuals or State officials, as well as the right to seek just and adequate reparation for the damage suffered.[757]

The Committee has also said that states are encouraged to establish mechanisms for the collective enforcement of rights in relation to racial profiling.[758]

The UN Special Rapporteur on racism has said that:

> In the context of effective remedies for racial discrimination in the design and use of emerging digital technologies, States must ensure the full spectrum of effective remedies, including access to justice, protection against possible violations, and guarantees of cessation and non-recurrence of violations, while also combating impunity.[759]

The rapporteur has further detailed how states must realise this:

> Where appropriate, satisfaction may encompass measures to stop violations, disclose truth, restore dignity, accept responsibility, memorialize harms, and ensure sanctions against responsible parties. [...] States must ensure restitution, compensation, rehabilitation, satisfaction and guarantees of non-repetition to victims of racial discrimination in the design and use of emerging digital technologies.'[760]

In the UK there are not clear or sufficient mechanisms for the collective enforcement of rights in relation to the racial profiling conducted by predictive policing systems. This omission contravenes international standards.

For individuals subject to or targeted by police predictive, profiling and risk prediction systems, it must be possible to access an effective remedy.

However, as discussed above, a major block on people's ability to access an effective remedy is that they have no way of knowing that they have been targeted, profiled or risk assessed. This is because of the lack of a meaningful transparency regime and the obfuscation of police forces.

7.1 Data protection

The data protection regime in the UK is complicated and offers little protection against the predictions and profiles, and the action they lead to, which has been set out in this research.

Part 3 of the Data Protection Act 2018 governs the processing of personal data for 'law enforcement purposes' by police and criminal justice agencies, so-called 'competent authorities', as well as national and transnational data sharing.[761] All processing of personal data by the police and criminal justice agencies for any of the 'law enforcement purposes'[762] must meet certain 'law enforcement data protection principles'.

Where the police and criminal justice agencies process personal data for purposes other than the law enforcement purposes, the UK GDPR and Part 1 of the Data Protection Act 2018 apply.

Automated processing

Section 49 of the Data Protection Act 2018 regulates the use of automated processing by competent authorities, such as police. It states that:

> (1) A controller may not take a significant decision based solely on automated processing unless that decision is required or authorised by law.
>
> (2) A decision is a 'significant decision' for the purpose of this section if, in relation to a data subject, it—
>
> (a) produces an adverse legal effect concerning the data subject, or
> (b) significantly affects the data subject.

Section 50 of the Data Protection Act 2018 sets out certain safeguards in relation to the use of automated processing by competent authorities, such as the police.

If a decision is taken about an individual based solely on automated processing, the competent authority must, as soon as reasonably practicable, notify the individual in writing of that fact. The individual then has one month to ask the authority to reconsider its decision or make a new decision that is not solely based on automated processing. The authority must consider and comply with such a request within a month. And the authority must tell the individual of the steps taken to comply with the request and the outcome of its reconsidered decision.

The problem with the legal regime is that it provides no protection against any of the automated decisions, predictions, profiles, and risk predictions evidenced in this report, because those decisions are not based solely on automated processing.

The UN High Commissioner for Human Rights has recommended that 'Particular attention should be given to enabling individuals to better understand and control the profiles compiled about them.'[763] The High Commissioner officially recommended that states: 'Require adequate explainability of all AI-supported decisions that can significantly affect human rights, particularly in the public sector'.[764]

7.2 Complaints

Under UK law and procedures, individuals can complain to a designated public body about a violation of their human rights before they take legal action.

7.2.1 Complaints about the police

When it comes to complaints about the police forces, police authorities or policing agencies, individuals can contact the Independent Office for Police Conduct (England and Wales). Complaints should be filed within 12 months of the alleged action/inaction taking place.[765]

7.2.2 Data protection complaints

The Information Commissioner's Office (ICO) can be contacted for any complaints about the use of personal data, including by public bodies.[766] The rights of individuals in relation to enforcement are:

(i) The right to lodge a complaint with the ICO.
(ii) The right to an effective judicial remedy against the ICO.
(iii) The right to an effective judicial remedy against a controller or processor.
(iv) The right to representation by a not-for-profit body, organisation, or association (if certain criteria are met).
(v) The right to compensation for material or non-material damage from a controller or processor for the damage suffered.

7.2.3 Complaints about being treated unfairly under the Equality Act 2010

The Equality and Human Rights Commission refers individuals to the Equality Advisory and Support Service to lodge any such complaints.[767]

8. Recommendations

8.1 Prohibition

Predictive policing systems used by police in the UK are leading to violations of people's rights to equality and non-discrimination, a fair trial and the presumption of innocence, privacy, and freedom of assembly and association.

Amnesty International has called for a ban on the use of predictive policing, in relation to both individual-focused and geographic-focused systems.[768] In 2023 Amnesty International called for the European Union's AI Act to prohibit predictive policing systems. With 114 other human rights and civil society organisations in Europe, Amnesty International was also a signatory to a joint statement which said the European Union must:

> Include legal limits prohibiting AI for uses that pose an unacceptable risk for fundamental rights. This includes a legal prohibition on different forms of biometric surveillance, predictive policing, and harmful uses of AI in the migration context [...] A prohibition of all forms of predictive and profiling systems in law enforcement and criminal justice (including systems which focus on and target individuals, groups and locations or areas).[769]

The EU AI Act considers the potential harm and human rights infringement of predictive policing systems to be so great that they are prohibited:

> Therefore, risk assessments carried out with regard to natural persons in order to assess the likelihood of their offending or to predict the occurrence of an actual or potential criminal offence based solely on profiling them or on assessing their personality traits and characteristics should be prohibited.[770]

The UN Special Rapporteur on racism has made clear that the International Convention on the Elimination of All Forms of Racial Discrimination:

> establishes a legal commitment for all States parties to engage in no act or practice of racial discrimination against persons, groups of persons or institutions and to ensure that all public authorities and public institutions, national and local, shall act in conformity with this obligation. Instead, States parties must pursue by all appropriate means and without delay a policy of eliminating racial discrimination in all its forms.[771]

The rapporteur said that, as a result, states:

> must address not only explicit racism and intolerance in the use and design of emerging digital technologies, but also, and just as seriously, indirect and structural forms of racial discrimination that result from the design and use of such technologies.[772]

The rapporteur has said that in practice this means states 'must take effective measures to detect and combat racially discriminatory design and use of such technologies in

access to civil, political, economic, social and cultural rights' and 'to prevent and mitigate the risk of the racially discriminatory use and design of emerging digital technologies'.[773]

This report has shown that police and law enforcement authorities' use of predictive, profiling and risk assessment systems in the UK may infringe human rights, including the right to non-discrimination, the right to a fair trial and the presumption of innocence, and the principle of legal certainty. The report has shown that these systems' use in the UK also can infringe the right to privacy and the right to freedom of peaceful association and assembly.

Amnesty International believes that the use of data-based predictive, profiling and risk assessment systems by police, law enforcement and criminal justice authorities in the UK to predict, profile or assess the risk or likelihood of offending, re-offending or other criminalised behaviour, or the occurrence or re-occurrence of an actual or potential criminal offence(s), of individuals, groups or locations, should be prohibited.

8.2 Transparency

In addition to a ban on predictive policing systems, there must be clear transparency requirements on all data-based predictive, profiling and risk assessment systems used by police and criminal legal system authorities. This is necessary to ensure that people can exercise their rights, and to ensure that the above prohibition can be monitored and enforced.

There must be a clear legal obligation that requires police and other law enforcement authorities to publish details of the predictive, profiling and risk prediction systems they develop and use.

The Commission on Race and Ethnic Disparities has recommended:

1. Placing a mandatory transparency obligation on all public sector organisations applying algorithms that have an impact on significant decisions affecting individuals; and
2. Ask[ing] the Equality and Human Rights Commission to issue guidance clarifying how to apply the Equality Act to algorithmic decision-making, which should include guidance on the collection of data to measure bias, and the lawfulness of bias mitigation techniques.[774]

At a minimum, there should be a statutory obligation on UK police forces and other law enforcement authorities across England and Wales, Scotland and Northern Ireland, including criminal legal system authorities (such as the Ministry of Justice and prison and probation services), to register and publish details of all predictive, profiling and risk prediction systems they are developing or using on a publicly available and accessible register.

This publicly accessible register must include:

- **What the intended purpose of the system is;**
- **How the system is operated in practice, including a standard operating procedure;**
- **All data types that the system uses, including the sources of that data;**
- **What decisions or outcomes the system influences;**
- **Any internal reviews or evaluations.**

8.3 Accountability: effective redress and remedy

People and groups who have been subject to data-based predictions, profiles or risk assessments by police or other law enforcement authorities should have clear and meaningful routes to challenge those decisions.

As this report has demonstrated, lack of transparency, and obfuscation and opacity in police forces' use of these systems, make it challenging to evidence and establish when automated systems have indirectly affected an individual, group or area.

When it comes to law enforcement use of data and automated processing and decision-making, safeguards under data protection law are limited to the processing of personal data[775] and solely automated processing that produces legal or significant consequences.[776]

The Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy, and the Rule of Law states:

> Each Party shall adopt or maintain measures to ensure accountability and responsibility for adverse impacts on human rights, democracy and the rule of law resulting from activities within the lifecycle of artificial intelligence systems.[777]

And:

> Each Party shall, to the extent remedies are required by its international obligations and consistent with its domestic legal system, adopt or maintain measures to ensure the availability of accessible and effective remedies for violations of human rights resulting from the activities within the lifecycle of artificial intelligence systems.[778]

There must be a statutory obligation on UK police forces and other law enforcement authorities across England and Wales, Scotland and Northern Ireland, including criminal legal system authorities (such as the Ministry of Justice and prison and probation services) using data-based predictive, profiling and risk assessment systems to provide accountability to people affected by those systems or the decisions they influence.

People should have a right and a clear forum to challenge a decision not only when it has been solely automated and produces significant and / or legal effects or consequences, but also when a data-based predictive, profiling or risk assessment system has influenced significant consequences or legal effects.

In particular, this mechanism must:

- **Ensure the right to an effective remedy against UK authorities and against a deployer for the infringement of rights;**
- **Ensure the right to information and an explanation of predictive, profiling or risk assessment-supported decision-making for people affected, including about the use and functioning of the system;**
- **Ensure people have access to judicial and non-judicial pathways to seek remedy for violation of their rights by predictive, profiling or risk assessment systems;**
- **Ensure public interest organisations have the right to support people seeking remedy, and to lodge cases on their own initiative.**

Endnotes

1 Interview with Dr Adam Elliott-Cooper, Senior Lecturer in Public and Social Policy, Queen Mary, University of London, 8 May 2024.

2 Interview with Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University, 9 July 2024.

3 Interview with Zara Manoehoetoe, Kids of Colour and Northern Police Monitoring Project, 12 September 2024.

4 Essex Police, Knife Crime and Violence Model – Fearless Futures – Specific Privacy Notice, Version 1.4, June 2021 https://www.essex.police.uk/police-forces/essex-police/areas/essex-police/au/about-us/privacy-notices/knife-crime-and-violence-model--fearless-futures/; Avon and Somerset Police, Data Science, undated https://www.avonandsomerset.police.uk/about/policies-and-procedures/data-science/; Metropolitan Police Service, *Violence Harm Assessment (VHA) Data Protection Impact Assessment*, 31 January 2024 https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-data-protection-impact-assessment.pdf

5 UN High Commissioner for Human Rights, '*The right to privacy in the digital age*', 2021. A/HRC/48/31, page 7 https://documents.un.org/doc/undoc/gen/g21/249/21/pdf/g2124921.pdf

6 Amnesty International, *Recommendations to the Parliamentary Assembly and Committee of Ministers of the Council of Europe on the Draft Framework Convention on Artificial Intelligence, Human Rights, Democracy and the Rule of Law*, Annex I – Amnesty International Recommendations on AI Regulation, 11 April 2024, Index: TIGO IOR 10/2024.5404, https://www.amnesty.eu/wp-content/uploads/2024/04/Amnesty-International-Recs-draft-CoECAI-11042024.pdf

7 Amnesty International, 'EU policymakers: regulate police technology!', 2023 https://www.amnesty.eu/wp-content/uploads/2023/09/Regulate-police-technology-EU-AI-Act-Statement-19-September.pdf

8 Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence: https://eur-lex.europa.eu/eli/reg/2024/1689/oj

9 Data Protection Act 2018, Part 3.

10 Data Protection Act 2018, Part 3, Section 49.

11 Devon and Cornwall Police, Leicestershire Police, Lincolnshire Police, Northumbria Police.

12 Cambridgeshire Constabulary, City of London Police, Derbyshire Constabulary, Dyfed-Powys Police, Essex Police, Greater Manchester Police, Gwent Constabulary, Hertfordshire Constabulary, Kent Police, Lancashire Constabulary, Norfolk Constabulary, Metropolitan Police Service, Police Service of Northern Ireland, Police Scotland, South Yorkshire Police, Suffolk Constabulary, West Mercia Constabulary, West Yorkshire Police, Wiltshire Constabulary.

13 Dr Adam Elliott-Cooper, Senior Lecturer in Public and Social Policy, Queen Mary, University of London; Dr Marion Oswald, Professor of Law, University of Northumbria and chair of West Midlands Police Ethics Committee; Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University; Dr Daragh Murray, Senior Lecturer at Queen Mary, University of London and Fellow of the Institute of Humanities and Social Sciences, and Professor Lawrence Sherman, Wolfson Professor of Criminology Emeritus at the University of Cambridge, Chief Executive Officer of Benchmark Cambridge, and former Chief Scientific Officer of the Metropolitan Police Service. Amnesty International also sent an interview request to Geoffrey C. Barnes, Affiliated Lecturer in Evidence-Based Policing at the Institute of Criminology at the University of Cambridge, on 1 May 2024. We received confirmation from the Institute of Criminology that the request had been received and passed on, but no response was received.

14 On 11 September 2024, Amnesty International sent requests to interview to the Metropolitan Police Service, Essex Police and West Midlands Police. West Midlands Police confirmed that the request had been received on 11 September 2024. A follow-up was sent, and confirmation received of receipt, on 1 October 2024. No further response was received from West Midlands Police

On 12 September, Essex Police responded, and suggested that the National Police Chiefs Council would be 'better positioned to provide a comment or interview'. Amnesty International responded on 16 September asking for an interview specifically with Essex Police in relation to the force's use of predictive policing systems. Receipt of that request was confirmed on 16 September. Amnesty International asked again on 1 October. A further response received from Essex Police on 1 October suggested to speak to the National Police Chiefs Council and said that a key individual behind the force's use of predictive systems was no longer with the force. Amnesty International responded on 1 October stating that a Chief Superintendent who had published a paper on Essex Police's use of predictive policing was still with the force, and asked to interview him, or any other representative of the force about its use of these systems. No response was received.

The Metropolitan Police Service's Chief Scientific Officer, Lawrence Sherman, responded to our request for an interview on 1 October 2024, stating that he was leaving his employment, and offering to speak to us in his capacity as a Cambridge University professor. Amnesty International asked the Metropolitan Police for details of his successor on 4 October 2024 and to interview them about the Metropolitan Police Service's use of predictive policing systems. On 28 October the Metropolitan Police Service rejected our request for an interview.

15 Institute of Race Relations, 'Fighting Sus! Then and now', 4 April 2019 https://irr.org.uk/article/fighting-sus-then-and-now

16 National Police Chiefs Council, Police Race Action Plan Progress Report, 1 August 2024 https://www.npcc.police.uk/SysSiteAssets/media/downloads/our-work/race-action-plan/police-race-action-plan-progress-report.pdf

17 *The Guardian*,'Head of Britain's Police Chiefs says force is "institutionally racist"', 5 Jan 2024 https://www.theguardian.com/uk-news/2024/jan/05/head-of-britains-police-chiefs-says-force-is-institutionally-racist-gavin-stephens

18 HM Government, Ethnicity Facts and Figures, Stop and Search, 3 July 2024 https://www.ethnicity-facts-figures.service.gov.uk/crime-justice-and-the-law/policing/stop-and-search/latest/

19 StopWatch, *The Colour of Injustice*, 14 October 2018, https://www.stop-watch.org/what-we-do/research/the-colour-of-injustice-race-drugs-and-law-enforcement-in-england-and-wales

20 Lara Vomfell and Neil Stewart, 'Officer bias, over-patrolling, and ethnic disparities in stop and search', in *Nature Human Behaviour*, 2021 doi.org/10.1038/s41562-020-01029-w

21 Home Office, Police powers and procedures: Stop and search, arrests and mental health detention, England and Wales, year ending March 31 2024, published 26 September 2024 https://www.gov.uk/government/statistics/stop-and-search-arrests-and-mental-health-detentions-march-2024/police-powers-and-procedures-stop-and-search-arrests-and-mental-health-detentions-england-and-wales-year-ending-31-march-2024

22 Amnesty International interview with Professor Lawrence Sherman, Wolfson Professor Emeritus at the Institute of Criminology, University of Cambridge, Chief Executive Officer of Benchmark Cambridge, and former Chief Scientific Officer at the Metropolitan Police Service, 31 October 2024.

23 Children's Commissioner, *Strip Searching of Children in England and Wales: First complete dataset for 2018–2023, including new data July 2022-June 2023*, 19 August 2024, https://assets.childrenscommissioner.gov.uk/wpuploads/2024/08/Strip-searching-of-children-in-England-and-Wales-2024.pdf

24 Ibid, page 7.

25 Metropolitan Police, Casey Review, March 2023, page 17, https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/baroness-casey-review/update-march-2023/baroness-casey-review-march-2023a.pdf

26 Ibid, page 289.

27 Ministry of Justice, Statistics on ethnicity and the criminal justice system, 19 March 2024 https://www.gov.uk/government/statistics/ethnicity-and-the-criminal-justice-system-2022/statistics-on-ethnicity-and-the-criminal-justice-system-2022-html#defendants

28 William Isaac and Kristian Lum, 'To predict and serve?', *Significance*, Volume 13, Issue 5, Royal Statistical Society, October 2016, doi.org/10.1111/j.1740-9713.2016.00960.x; Lyria Bennett Moses and Janet Chan, 'Algorithmic prediction in policing: assumptions, evaluation, and accountability', *Policing and Society* 28:7, 2016, doi.org/10.1080/10439463.2016.1253695; Rashida Richardson, Jason Schultz and Kate Crawford, Dirty Data, Bad Predictions: How Civil Rights Violations Impact Police Data, Predictive Policing Systems, and Justice, February 2019. *94 NYU Law Review Online*, 192, 2019, https://ssrn.com/abstract=3333423; Patrick Williams and Eric Kind, *Data-driven Policing: The hardwiring of discriminatory policing practices across Europe*, European Network Against Racism (ENAR), 2021, https://www.statewatch.org/media/documents/news/2019/nov/data-driven-profiling-web-final.pdf

29 Amnesty International, *Recommendations to the Parliamentary Assembly and Committee of Ministers of the Council of Europe on the Draft Framework Convention on Artificial Intelligence, Human Rights, Democracy and the Rule of Law*, Annex I – Amnesty International Recommendations on AI Regulation, 11 April 2024, Index: TIGO IOR 10/2024.5404, https://www.amnesty.eu/wp-content/uploads/2024/04/Amnesty-International-Recs-draft-CoECAI-11042024.pdf

30 Home Office, *Evaluation report on Grip and bespoke funded hot-spot policing*,15 Feb 2024 https://www.gov.uk/government/publications/hot-spot-policing-in-england-and-wales-year-ending-march-2022/evaluation-report-on-grip-and-bespoke-funded-hot-spot-policing; Fair Trials, *Automating Injustice: the use of artificial intelligence & automated decision-making systems in criminal justice in Europe*, 2021. https://www.fairtrials.org/app/uploads/2021/11/Automating_Injustice.pdf; Brennan Center, 'Predictive Policing Explained', 1 April 2020 https://www.brennancenter.org/our-work/research-reports/predictive-policing-explained; Joel Hunt, 'From Crime Mapping to Crime Forecasting: The evolution of place-based policing', *NIJ Journal* 281, November 2019, https://nij.ojp.gov/topics/articles/crime-mapping-crime-forecasting-evolution-place-based-policing

31 College of Policing, Hot spots policing, 19 October 2022, https://www.college.police.uk/guidance/hot-spots-policing; Home Office, Hot spot policing in England and Wales, year ending March 2022, published 15 Feb 2024, https://www.gov.uk/government/publications/hot-spot-policing-in-england-and-wales-year-ending-march-2022

32 Liberty, *Policing by Machine*, January 2019, https://www.libertyhumanrights.org.uk/wp-content/uploads/2020/02/LIB-11-Predictive-Policing-Report-WEB.pdf

33 London Assembly Budget and Performance Committee, *Smart Policing: How the Metropolitan Police Service can make better use of technology*, August 2019, https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/Police%20technology%20report%20-%20Final%20version.pdf

34 Amnesty International, *We Sense Trouble: automated discrimination and mass surveillance in predictive policing in the Netherlands*, 2020, Index: EUR 35/2971/2020, https://www.amnesty.org/en/wp-content/uploads/2021/05/EUR3529712020ENGLISH.pdf

35 The Law Society, 'Algorithms in the Criminal Justice System', 4 June 2019, https://www.lawsociety.org.uk/topics/research/mapping-algorithms-in-the-justice-system

36 Liberty, 'Predictive Policing', 4 February 2019, https://www.libertyhumanrights.org.uk/fundamental/predictive-policing/

37 Liberty and Privacy International, 'Neighbourhood Watched: How policing surveillance technology impacts yoru rights', February 2019, https://privacyinternational.org/sites/default/files/2019-02/Explainers-PredPol.pdf

38 Lorna Christie, 'AI in policing and security', 29 April 2021, https://post.parliament.uk/ai-in-policing-and-security/

39 Amnesty International interview with Dr Marion Oswald, Professor of Law, University of Northumbria and chair of West Midlands Police Ethics Committee, 16 July 2024.

40 Ibid.

41 Amnesty International interview with Dr Daragh Murray, Senior Lecturer at Queen Mary, University of London and Fellow of the Institute of Humanities and Social Sciences, 29 May 2024.

42 Ibid.

43 Amnesty International interview with Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University, 9 July 2024.

44 Ibid.

45 Amnesty International interview with Dr Daragh Murray, Senior Lecturer at Queen Mary, University of London, and Fellow of the Institute of Humanities and Social Sciences, 29 May 2024.

46 Amnesty International interview with Professor Lawrence Sherman, Wolfson Professor Emeritus at the Institute of Criminology, University of Cambridge, Chief Executive Officer of Benchmark Cambridge, and former Chief Scientific Officer at the Metropolitan Police Service, 31 October 2024.

47 Amnesty International interview with Dr Adam Elliott-Cooper, Senior Lecturer in Public and Social Policy, Queen Mary, University of London, 8 May 2024.

48 Walter L. Perry, Brian McInnis, Carter C. Price, Susan Smith, and John S. Hollywood, *Predictive Policing: The Role of Crime Forecasting in Law Enforcement Operations*, 2013, Santa Monica, CA: RAND Corporation, page 4, https://www.rand.org/pubs/research_reports/RR233.html

49 US Department of Justice, 'Transcript: Perspectives in law enforcement – the concept of predictive policing: An interview with William Bratton', 18-20 November 2009, https://bja.ojp.gov/sites/g/files/xyckuh186/files/publications/podcasts/multimedia/transcript/Transcripts_Predictive_508.pdf

50 Ibid, page 1.

51 Seeta Peña Gangadharan, and Jędrzej Niklas, *Between antidiscrimination and data: understanding human rights discourse on automated discrimination in Europe*, Department of Media and Communications, LSE, London, 2018, http://eprints.lse.ac.uk/id/eprint/88053

52 Ibid, page 8.

53 Brian Jefferson, *Digitize and Punish: Racial Criminalization in the Digital Age*, University of Minnesota Press, 2020.

54 Amnesty International interview with Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University, 9 July 2024.

55 La Quadrature du Net, *La police prédictive en France: contre l'opacité et les discriminations, la nécessité d'une interdiction* (Predictive Policing in France: The Need for a Ban? Against Opacity and Discrimination), 18 January 2024, pages 10-11, https://www.laquadrature.net/wp-content/uploads/sites/8/2024/01/20240118_LQDN_policepredictive.pdf

56 Ibid, page 11.

57 L. W. Sherman, and D. Weisburd, 'General deterrent effects of police patrol in crime "hot spots": A randomized, controlled trial', *Justice Quarterly, 12*(4), 625–648, 1995, https://doi.org/10.1080/07418829500096221

58 Amnesty International interview with Professor Lawrence Sherman, Wolfson Professor Emeritus at the Institute of Criminology, University of Cambridge, Chief Executive Officer of Benchmark Cambridge, and former Chief Scientific Officer at the Metropolitan Police Service, 31 October 2024.

59 K. J. Bowers, S. D. Johnson and K. Pease, 'Prospective Hotspotting: The Future of Crime Mapping?' *The British Journal of Criminology*, 44, 641-658, 2004, https://dx.doi.org/10.1093/bjc/azh036

60 Matthew Fielding and Vincent Jones, '"Disrupting the Optimal Forager"': Predictive Risk Mapping and Domestic Burglary Reduction in Trafford, Greater Manchester', *International Journal of Police Science & Management*, 14(1), 30-41, 2012, doi.org/10.1350/ijps.2012.14.1.260

61 Ibid, page 30.

62 London Assembly, Predictive crime mapping, Questions to the Mayor, 21 November 2012, https://www.london.gov.uk/who-we-are/what-london-assembly-does/questions-mayor/find-an-answer/predictive-crime-mapping

63 London Assembly, Predictive crime mapping, Questions to the Mayor, 3 May 2013, https://www.london.gov.uk/who-we-are/what-london-assembly-does/questions-mayor/find-an-answer/predictive-crime-mapping-0

64 Ibid.

65 London Assembly, Predictive policing, Questions to the Mayor, 15 September 2013, https://www.london.gov.uk/who-we-are/what-london-assembly-does/questions-mayor/find-an-answer/predictive-policing

66 *Financial Times*, 'First UK police force to try predictive policing ends contract', 26 November 2018 https://www.ft.com/content/b34b0b08-ef19-11e8-89c8-d36339d835c0

67 Kent Police, PredPol Operational Review (Restricted and heavily redacted), Corporate Services Analysis Department, 2014, https://www.statewatch.org/media/documents/docbin/uk-2014-kent-police-predpol-op-review.pdf

68 Ibid, page 5.

69 Ibid, page 3.

70 BBC News, 'Kent police stop using crime prediction software', 26 November 2018, https://www.bbc.co.uk/news/uk-england-kent-46345717

71 London Assembly, Crime prediction software, Questions to the Mayor, 22 February 2019, https://www.london.gov.uk/who-we-are/what-london-assembly-does/questions-mayor/find-an-answer/crime-prediction-software

72 London Assembly, Predictive mapping programs used by the Met (3), Questions to the Mayor,19 December 2019, https://www.london.gov.uk/who-we-are/what-london-assembly-does/questions-mayor/find-an-answer/predictive-mapping-programs-used-met-3

73 Liberty, *Policing by Machine*, January 2019 https://www.libertyhumanrights.org.uk/wp-content/uploads/2020/02/LIB-11-Predictive-Policing-Report-WEB.pdf

74 Seeta Peña Gangadharan, and Jędrzej Niklas, *Between antidiscrimination and data: understanding human rights discourse on automated discrimination in Europe*, Department of Media and Communications, LSE, London, 2018, http://eprints.lse.ac.uk/id/eprint/88053

75 Her Majesty's Inspectorate of Probation, Assessment, 19 December 2020, https://www.justiceinspectorates.gov.uk/hmiprobation/research/the-evidence-base-probation/supervision-of-service-users/assessment/

76 Ibid.

77 Marion Oswald, Jamie Grace, Sheena Urwin and Geoffrey Barnes, 'Algorithmic risk assessment policing models: Lessons from the Durham Constabulary HART model', *Information and Communications Technology Law*, 27 (2), 223-250, 2018, https://doi.org/10.1080/13600834.2018.1458455.

78 Ibid, page 225.

79 Ibid, page 228.

80 Ibid, page 230.

81 Fair Trials, 'FOI reveals over 12,000 people profiled by flawed Durham police predictive AI tool', 15 August 2022, https://www.fairtrials.org/articles/news/foi-reveals-over-12000-people-profiled-by-flawed-durham-police-predictive-ai-tool/

82 Big Brother Watch, 'A closer look at Experian big data and artificial intelligence in Durham police',6 April 2018, https://bigbrotherwatch.org.uk/blog/a-closer-look-at-experian-big-data-and-artificial-intelligence-in-durham-police/

83 Fair Trials, 'FOI reveals over 12,000 people profiled by flawed Durham police predictive AI tool', 15 August 2022, https://www.fairtrials.org/articles/news/foi-reveals-over-12000-people-profiled-by-flawed-durham-police-predictive-ai-tool/

84 Ibid.

85 Liberty, *Policing by Machine*, January 2019, https://www.libertyhumanrights.org.uk/wp-content/uploads/2020/02/LIB-11-Predictive-Policing-Report-WEB.pdf

86 Fair Trials, *Automating Injustice: the use of artificial intelligence & automated decision-making systems in criminal justice in Europe*, 2021, https://www.fairtrials.org/app/uploads/2021/11/Automating_Injustice.pdf

87 William Isaac and Kristian Lum, 'To predict and serve?', *Significance*, Volume 13, Issue 5, Royal Statistical Society, October 2016, doi.org/10.1111/j.1740-9713.2016.00960.x

88 Stop LAPD Spying Coalition, *Automating banishment*, November 2021, https://automatingbanishment.org/assets/AUTOMATING-BANISHMENT.pdf

89 Pro Publica, 'Machine Bias', 23 May 2016 https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing

90 Jeffrey Brantingham, Jeremy Carter, George Mohler, Rajeev Raje and Matthew Valasik, 'A penalized likelihood method for balancing accuracy and fairness in predictive policing', Institute of Electrical and Electronics Engineers, *2018 IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, Miyazaki, Japan, 2018, 2454-2459, doi.org/10.1109/SMC.2018.00421

91 Ibid.

92 Gizmodo, 'Crime prediction software promised to be free of biases, new data shows it perpetuates them', 2 December 2021, https://gizmodo.com/crime-prediction-software-promised-to-be-free-of-biases-1848138977

93 UN Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance, *Racial discrimination and emerging digital technologies: a human rights analysis*, UN doc A/HRC/44/57, 18 June 2020, https://undocs.org/en/A/HRC/44/57

94 Los Angeles Police Commission Meeting, 9 April 2019.

95 Office of the Chief of Police, Notice, 15 April 2020, https://lapdonlinestrgeacc.blob.core.usgovcloudapi.net/lapdonlinemedia/2021/09/DISCONTINUED-USE-OF-PREDPOL-INITIATIVE.pdf

96 Los Angeles Police Commission, Office of the Inspector General', Review of Selected Los Angeles Police Department Data-Driven Policing Strategies, 12 March 2019, https://www.lapdpolicecom.lacity.org/031219/BPC_19-0072.pdf

97 National Association of Criminal Defence Lawyers, *Garbage In, Gospel Out: How Data-Driven Policing Technologies Entrench Historic Racism and 'Tech-wash' Bias in the Criminal Legal System* September 2010, page 72, https://www.nacdl.org/getattachment/eb6a04b2-4887-4a46-a708-dbdaade82125/garbage-in-gospel-out-how-data-driven-policing-technologies-entrench-historic-racism-and-tech-wash-bias-in-the-criminal-legal-system-11162021.pdf

98 Ibid.

99 La Quadrature du Net, 'Predictive Policing in France: Against opacity and discrimination, the need for a ban', 18 January 2024, https://www.laquadrature.net/en/2024/01/18/predictive-policing-in-france-against-opacity-and-discrimination-the-need-for-a-ban/

100 La Quadrature du Net, *La police prédictive en France: contre l'opacité et les discriminations, la nécessité d'une interdiction* (Predictive Policing in France: The Need for a Ban? Against Opacity and Discrimination), 18 January 2024, page 20, https://www.laquadrature.net/wp-content/uploads/sites/8/2024/01/20240118_LQDN_policepredictive.pdf

101 La Quadrature du Net, 'Predictive Policing in France: Against opacity and discrimination, the need for a ban', 18 January 2024, https://www.laquadrature.net/en/2024/01/18/predictive-policing-in-france-against-opacity-and-discrimination-the-need-for-a-ban/

102 Public Interest Litigation Project & Data Justice Lab, *Top 400: A top-down crime prevention strategy in Amsterdam*, 1 November 2022, page 6, https://racismandtechnology.center/wp-content/uploads/20221101-data-justice-lab-top400-report.pdf

103 Ibid, page 6.

104 Fair Trials, *Automating Injustice: the use of artificial intelligence & automated decision-making systems in criminal justice in Europe*, 2021 https://www.fairtrials.org/app/uploads/2021/11/Automating_Injustice.pdf, page 11.

105 Public Interest Litigation Project & Data Justice Lab, *Top 400: A top-down crime prevention strategy in Amsterdam*, 1 November 2022, page 12, https://racismandtechnology.center/wp-content/uploads/20221101-data-justice-lab-top400-report.pdf

106 Article 2(1) and 26, ICCPR; Article 1(1), 2(1), 5, ICERD; Article 14, ECHR; Equality Act 2010.

107 Committee on the Elimination of Racial Discrimination, General Recommendation No. 32, para 6.

108 The European Court of Human Rights recognised that racial discrimination can 'constitute a special form of affront to human dignity' and 'could, in certain circumstances, of itself amount to degrading treatment within the meaning of Article 3 of the Convention'. *East African Asians v the United Kingdom* (4403/70), ECtHR, 1973, para 196.

109 Committee on the Elimination of All Forms of Racial Discrimination, general recommendation No. 32, 2009, paras 6-7.

110 Committee on the Elimination of All Forms of Racial Discrimination, General Recommendation No. 34. on racial discrimination against people of African descent, 2011, paras 5-7.

111 Committee on Economic, Social and Cultural Rights, General Comment No.20 UN doc. E/C.12/GC/20, 2009, para 12.

112 Promotion and protection of the human rights and fundamental freedoms of Africans and of people of African descent against excessive use of force and other human rights violations by law enforcement officials, report of the United Nations High Commissioner for Human Rights, UN doc A/HRC/47/53, 2021, para 9.

113 Article 2(2), ICERD.

114 Equality Act 2010, Part 2, Chapter 2, Section 19.

115 UN High Commissioner for Human Rights, '*The right to privacy in the digital age*', UN doc A/HRC/48/31, 2021, page 7, https://documents.un.org/doc/undoc/gen/g21/249/21/pdf/g2124921.pdf

116 UN Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance UN doc A/HRC/44/57, Page 11 https://undocs.org/en/A/HRC/44/57

117 Ibid.

118 Euractiv, 'Vestager warns against predictive policing in artificial intelligence', 30 June 2020 https://www.euractiv.com/section/digital/news/vestager-warns-against-predictive-policing-in-artificial-intelligence

119 Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence, https://eur-lex.europa.eu/eli/reg/2024/1689/oj

120 EU Committee on Civil Liberties, Justice and Home Affairs, *Report on artificial intelligence in criminal law and its use by the police and judicial authorities in criminal matters*, 13 July 2021, https://www.europarl.europa.eu/doceo/document/A-9-2021-0232_EN.html

121 UN High Commissioner for Human Rights, *The right to privacy in the digital age*, UN doc A/HRC/48/31, 2021, https://documents.un.org/doc/undoc/gen/g21/249/21/pdf/g2124921.pdf

122 UN Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance, *Racial discrimination and emerging digital technologies: a human rights analysis*, UN doc A/HRC/44/57,18 June 2020, https://undocs.org/en/A/HRC/44/57

123 ICCPR, Art 9(3) and 14(1).

124 Amnesty International, *Right to a Fair Trial*, 2002, Index: POL 30/001/2002, page 4, https://www.amnesty.org/en/wp-content/uploads/2021/06/pol300012002en.pdf

125 Ibid, page 2.

126 *Allenet de Ribemont v France*, application no. 15175/89, ECtHR 10 February 1995.

127 *S. and Marper v United Kingdom*, applications nos. 30562/04 and 30566/04, ECtHR 4 December 2008, para 122.

128 *De Tommaso v Italy*, application no. 43395/09, ECtHR GC, 23 February 2017.

129 *Minelli v Switzerland*, application no. 8660/79, ECtHR 25 March 1983, para 37.

130 *Minelli v Switzerland*, application no. 8660/79, ECtHR 25 March 1983, para 37.

131 Amnesty International UK, *Trapped in the Matrix: Secrecy, stigma, and bias in the Met's Gangs Database*, May 2018, https://www.amnesty.org.uk/files/reports/Trapped%20in%20the%20Matrix%20Amnesty%20report.pdf; Patrick Williams, *Being Matrixed: the (over)policing of gang suspects in London*, UNSPECIFIED, Stopwatch: Research and Actions for Fair and Inclusive Policing, 2018, https://www.stop-watch.org/what-we-do/research/being-matrixed-the-overpolicing-of-gang-suspects-in-london/

132 A. Galetta, 'The changing nature of the presumption of innocence in today's surveillance societies: rewrite human rights or regulate the use of surveillance technologies?', *European Journal of Law and Technology*, Vol. 4, No. 2, 2013; D. Murauskas, 'Predictive analytics in crime prevention and the European Convention on Human Rights: tackling risks in privacy and fair trial frameworks', *Acta Universitatis Lodziensis. Folia Iuridica*, 97, 225–250, 2021; Kelly Blount, 'Applying the presumption of innocence to policing with AI, *International Review of Penal Law*, 92 (1), 33-48, 2021; Fair Trials, *Automating Injustice: the use of artificial intelligence & automated decision-making systems in criminal justice in Europe*, 2021, https://www.fairtrials.org/app/uploads/2021/11/Automating_Injustice.pdf

133 Fair Trials, 'Civil Society Groups calls on EU to prohibit predictive and profiling AI systems in law enforcement and criminal justice', 1 March 2022 https://www.fairtrials.org/app/uploads/2022/03/Prohibit-predictive-and-profiling-AI-systems-in-law-enforcement-and-criminal-justice-January-20239828ca9d610e35808e4baf8ff26014fb406cb1bfdffa979b037f53a387896e87.pdf

134 Margarethe Vestager, Speech at the Institute for Advanced Study (Brussels), 9 April 2024 https://ec.europa.eu/commission/presscorner/detail/en/speech_24_1927

135 X, Dragos Tudorache, 21 April 2022 https://x.com/IoanDragosT/status/1517160900989444096

136 Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence https://eur-lex.europa.eu/eli/reg/2024/1689/oj

137 Ibid.

138 Ibid.

139 Human Rights Council, Statement by Mr Joseph A. Cannataci, Special Rapporteur on the right to privacy, 9 March 2016 https://www.ohchr.org/en/statements/2017/02/statement-mr-joseph-cannataci-special-rapporteur-right-privacy-31st-session

140 UK General Data Protection Regulation.

141 *Rotaru v Romania*, application no. 28341/95, ECtHR, 4 May 2000, paras 43-46; *B.B. v France*, application no. 5335/06, ECtHR, 17 March 2010, para 56; *M.M. v United Kingdom*, application no. 24029/07, ECtHR, 13 November 2012, para 188; *L.H. v Latvia*, application no. 52019/07, ECtHR, 29 April 2014, para 56; *Y.Y. v Russia*, application no. 40378/06, ECtHR, 23 February 2016, paras 38 and 57; *Surikov v Ukraine*, application no. 42788/06, ECtHR, 26 January 2017, para 75; *Avilkina v Russia*, application no. 1585/09, ECtHR, 6 June 2013; *Radu v Republic of Moldova*, application no. 50073/07, ECtHR, 15 April 2014; *L.H. v Latvia*, application no. 52019/07, ECtHR, 29 April 2014.

142 Amnesty International, *Out of Control: Failing EU Laws for Digital Surveillance Export*, 21 September 2020, Index: EUR 01/2556/2020, https://www.amnesty.org/en/documents/eur01/2556/2020/en/

143 UN High Commissioner for Human Rights, *'The right to privacy in the digital age'*, UN doc A/HRC/48/31, 2021, https://documents.un.org/doc/undoc/gen/g21/249/21/pdf/g2124921.pdf

144 Amnesty International UK, *Trapped in the Matrix: Secrecy, stigma, and bias in the Met's Gangs Database*, 2018, https://www.amnesty.org.uk/files/reports/Trapped%20in%20the%20Matrix%20Amnesty%20report.pdf

145 UN Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance, *Racial discrimination and emerging digital technologies: a human rights analysis*, UN doc A/HRC/44/57, 18 June 2020, https://undocs.org/en/A/HRC/44/57

146 'Law enforcement purposes' are defined as the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, including the safeguarding against and the prevention of threats to public security.

147 Data Protection Act, Part 3.

148 Ibid.

149 Ibid, Section 35(5). This document must explain the authorities' procedures for ensuring compliance with the law enforcement data protection principles and their policies on the retention and erasure of this data. Information Commissioner's Office, Guide to Law Enforcement Processing, Conditions for Sensitive Processing https://ico.org.uk/for-organisations/law-enforcement/guide-to-le-processing/

150 Ibid, Section 35(8).

151 Ibid.

152 Ibid.

153 Amnesty International UK, *Trapped in the Matrix: Secrecy, stigma, and bias in the Met's Gangs Database*, 2018, https://www.amnesty.org.uk/files/reports/Trapped%20in%20the%20Matrix%20Amnesty%20report.pdf

154 Human Rights Committee, General Comment No. 22 on Article 18 ICCPR, UN Doc CCPR/C/GC/22, para 8.

155 Amnesty International, *This is the thought police, Prevent and its chilling effect on human rights*, 2023, Index: EUR 45/7368/2023, page 60 https://www.amnesty.org.uk/files/2023-11/Amnesty%20UK%20Prevent%20report%20%281%29.pdf?VersionId=.hjIwRZuHiGd1_lECXroFwg25jyBtwur

156 *Yaşar Kaplan v Turkey*, para 35; *Aslı Güneş v Turkey*; *Christian Democratic People's Party v Moldova*, para 77.

157 Amnesty International, *This is the thought police, Prevent and its chilling effect on human rights*, 2023, Index: EUR 45/7368/2023, page 36, https://www.amnesty.org.uk/files/2023-11/Amnesty%20UK%20Prevent%20report%20%281%29.pdf

158 Amnesty International, *Automating Apartheid: how facial recognition fragments, segregates and controls Palestinians in the OPT*, 2023. Index: MDE 15/6701/2023, https://www.amnesty.org/en/documents/mde15/6701/2023/en/; Amnesty International, Ban the Scan, 2022 https://banthescan.amnesty.org/index.html

159 Liberty, *Policing by Machine*, January 2019, https://www.libertyhumanrights.org.uk/wp-content/uploads/2020/02/LIB-11-Predictive-Policing-Report-WEB.pdf

160 UN Special Rapporteur on the rights to freedom of peaceful assembly and of association, *Preserving the gains and pushing back against the global attack on civic space and growing authoritarianism*, UN doc A/HRC/56/50, 21 June 2024, para 65, https://www.ohchr.org/en/documents/thematic-reports/ahrc5650-preserving-gains-and-pushing-back-against-global-attack-civic

161 Human Rights Committee, General Comment No. 34 on Article 19 ICCPR, UN Doc CCPR/C/GC/34, 21 July 2011.

162 Human Rights Committee, General Comment No. 34 on Article 19 ICCPR, UN Doc CCPR/C/GC/34, 21 July 2011.

163 UN Special Rapporteur on the rights to freedom of peaceful assembly and of association, *Preserving the gains and pushing back against the global attack on civic space and growing authoritarianism*, A/HRC/56/50, 21 June 2024, para 62, https://www.ohchr.org/en/documents/thematic-reports/ahrc5650-preserving-gains-and-pushing-back-against-global-attack-civic

164 EU Committee on Civil Liberties, Justice and Home Affairs, *Report on artificial intelligence in criminal law and its use by the police and judicial authorities in criminal matters*, 13 July 2021, https://www.europarl.europa.eu/doceo/document/A-9-2021-0232_EN.html

165 ICCPR, Article 9(1).

166 ICCPR, Article 9(1).

167 CERD General Recommendation XXXI, §§III(A)(20) and (23) https://www2.ohchr.org/english/bodies/cerd/docs/GC31Rev_En.pdf

168 *Wloch v Poland*, application no. 27785/95, ECtHR, 19 October 2000, paras 108-109.

169 *Jėčius v Lithuania*, application no. 34578/97, ECtHR, 31 July 2000, paras 47-52.

170 Fair Trials, *Automating Injustice: the use of artificial intelligence and automated decision-making systems in criminal justice in Europe*, September 2021, https://www.fairtrials.org/articles/publications/automating-injustice/

171 Participant in the Amnesty International discussion group in east London, 5 September 2024.

172 Participant in the Amnesty International discussion group with the Advocacy Academy in Lambeth, south London, 24 August 2024.

173 Ibid.

174 Avon and Somerset Police, Bedfordshire Police, British Transport Police, Cambridgeshire Constabulary, Cheshire Constabulary, City of London Police, Derbyshire Constabulary, Devon and Cornwall Police, Dyfed Powys Police, Essex Police, Gwent Constabulary, Hampshire Constabulary, Hertfordshire Constabulary, Humberside Police, Kent Police, Lancashire Constabulary, Lincolnshire Police, Merseyside Police, Metropolitan Police Service, Norfolk Constabulary, North Wales Police, Northumbria Police, Police Service of Northern Ireland, Police Scotland, South Wales Police, South Yorkshire Police, Staffordshire Police, Suffolk Constabulary, Thames Valley Police, West Mercia Constabulary, West Midlands Police, West Yorkshire Police, Wiltshire Constabulary.

175 Home Office, *Evaluation report on Grip and bespoke funded hot-spot policing*, 15 Feb 2024, https://www.gov.uk/government/publications/hot-spot-policing-in-england-and-wales-year-ending-march-2022

176 HM Government, *Beating Crime Plan*, July 2021, page 20, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015382/Crime-plan-v10.pdf

177 Home Office, *Evaluation report on Grip and bespoke funded hot-spot policing*,15 Feb 2024, https://www.gov.uk/government/publications/hot-spot-policing-in-england-and-wales-year-ending-march-2022/evaluation-report-on-grip-and-bespoke-funded-hot-spot-policing

178 Metropolitan Police Service, British Transport Police, West Midlands, Greater Manchester, Merseyside, West Yorkshire, South Yorkshire, Northumbria, Thames Valley, Lancashire, Essex, Avon and Somerset, Kent, Nottinghamshire, Leicestershire, Bedfordshire, Sussex, Hampshire, and South Wales. Humberside and Cleveland police forces also subsequently received '£780,000 of one-off funding' as part of the programme. See Home Office, 'Forces given funding boost to increase roll out of Hotspot Policing', 17 September 2021, https://www.gov.uk/government/news/forces-given-funding-boost-to-increase-roll-out-of-hotspot-policing

179 Ibid.

180 Ibid.

181 Home Office, *Evaluation report on Grip and bespoke funded hot-spot policing*, 15 Feb 2024 https://www.gov.uk/government/publications/hot-spot-policing-in-england-and-wales-year-ending-march-2022/evaluation-report-on-grip-and-bespoke-funded-hot-spot-policing

182 Ibid.

183 Ibid.

184 Home Office, 'Forces given funding boost to increase rollout of Hotspot policing', 17 September 2021, https://www.gov.uk/government/news/forces-given-funding-boost-to-increase-roll-out-of-hotspot-policing

185 Basford et al, 'Effects of One-a-Day Foot Patrols on Hot Spots of Serious Violence and Crime Harm: a Randomised Crossover Trial', *Cambridge Journal of Evidence-Based Policing*, 6 September 2021, page 119, https://link.springer.com/article/10.1007/s41887-021-00067-2

186 Ibid.

187 Ibid.

188 Ibid.

189 Ibid.

190 Ibid.

191 Ibid, page 122.

192 Ibid, page 124.

193 Ibid, pages 125-126.

194 Ibid, Page 131.

195 Ibid, Page 119.

196 Ibid, Page 125.

197 A proportion of Black African residents, Black Caribbean residents, Asian Bangladeshi residents, Asian Pakistani residents – 0.15 (Index of Multiple Deprivation decile ranking).

198 Participants in the Amnesty International discussion group with FLEX Youth and Community Group, 13 September 2024.

199 Ibid.

200 Ibid.

201 Ibid.

202 Essex Police, 'Op. GRIP: Assessment Initial Statistical Findings', April 2022. Provided by Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

The review looked at three elements: (i) assessing officers' compliance with the 'tasking' of patrolling identified areas, (ii) changes in community violence offences recorded on the days visited and in comparison, to offences recorded in non-treatment areas and (iii) the change in emergency calls received on the days visited.

203 Ibid.

204 Essex Police, 'Grip 2022-23 Hotspot Selection and Tracking Methods', Date redacted. Provided by Freedom of Information Act request response from Essex Police, ref no. 18073, 5 April 2023.

205 Ibid.

206 His Majesty's Inspectorate of Constabulary and Fire and Rescue Service, Glossary: System for tasking and operational resource management (STORM), 11 April 2023, https://hmicfrs.justiceinspectorates.gov.uk/glossary/system-tasking-operational-resource/

207 Home Office, *Evaluation report on Grip and bespoke-funded hot spot policing*, 15 February 2024, https://www.gov.uk/government/publications/hot-spot-policing-in-england-and-wales-year-ending-march-2022/evaluation-report-on-grip-and-bespoke-funded-hot-spot-policing

208 Essex Police, 'Grip 2022-23 Hotspot Selection and Tracking Methods', date redacted. Provided by Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

209 Essex Police, 'Grip 2022-23 Hotspot Selection and Tracking Methods', date redacted. Freedom of Information Act request response from Essex Police, ref no. 18073, 5 April 2023, page 9.

210 Essex Police, '[Redacted] – Results Analysis 2022/23', Performance Analysis Unit, 15 January 2023. Provided by Freedom of Information Act request response from Essex Police, ref no. 20735, 5 November 2024.

211 Police, Fire and Crime Commissioner for Essex, PFCC Decision Report, report reference: 094-24, 15 May 2024, page 1.

212 Ibid, page 2.

213 Ibid, page 3

214 Home Office, *Evaluation report on Grip and bespoke funded hot-spot policing*,15 Feb 2024, https://www.gov.uk/government/publications/hot-spot-policing-in-england-and-wales-year-ending-march-2022/evaluation-report-on-grip-and-bespoke-funded-hot-spot-policing

215 William Isaac and Kristian Lum, 'To predict and serve?', *Significance*, Volume 13, Issue 5, Royal Statistical Society, October 2016, doi.org/10.1111/j.1740-9713.2016.00960.x; Danielle Ensign et al, 'Runaway Feedback Loops in Predictive Policing', 2017, Cornell University Library, arXiv:1706.09847v3 [cs.CY], https://doi.org/10.48550/arXiv.1706.09847; Lyria Bennett Moses and Janet Chan, 'Algorithmic prediction in policing: assumptions, evaluation, and accountability', *Policing and Society* 28:7, 2016, doi.org/10.1080/10439463.2016.1253695.

216 Amnesty International interview with Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University, 9 July 2024.

217 Ibid.

218 The Office of the Police, Fire and Crime Commissioner for Essex, *Use of Force/Stop and Search – Q1 2024/25*, July 2024.

219 Chelmsford/Malden, Brentwood/Epping and Tendring. Ibid, page 17.

220 Ibid, page 2.

221 68.7 per cent. Ibid, page 19.

222 Ibid, page 18.

223 Ibid, page 18.

224 Ibid, page 10.

225 Ibid, page 10.

226 Participant in the Amnesty International discussion group with FLEX Youth and Community Group, 13 September 2024.

227 Ibid.

228 West Midlands Police, Data Analytics Lab, 'Evaluation of the predictive tools for short term forecasting of Knife Crime (used causing injury) and Serious Violence', February 2023, page 4.

229 Freedom of Information Act response from West Midlands Police, Ref 736A/22, 23 June 2022, https://foi.west-midlands.police.uk/wp-content/uploads/2022/06/ATTACHMENT_-4.pdf

230 West Midlands Police, 'Project Guardian – Randomised Control Trial of Hot Spot Policing for Serious Violence', briefing paper, Ethics Committee, 6 July 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2022/09/2022-07-06-EC-Agenda-Item-4.1-Project-Guardian.pdf?x62558

231 Freedom of Information Act response from West Midlands Police, ref 736A/22, 23 June 2022, https://foi.west-midlands.police.uk/wp-content/uploads/2022/06/ATTACHMENT_-4.pdf

232 Ibid.

233 West Midlands Police and Crime Commissioner, Ethics Committee, https://www.westmidlands-pcc.gov.uk/governance/ethics-committee/

234 Freedom of Information Act response from West Midlands Police, ref 736A/22, 23 June 2022, https://foi.west-midlands.police.uk/wp-content/uploads/2022/06/ATTACHMENT_-4.pdf

235 West Midlands Police Data Analytics Lab, *Evaluation of the predictive tools for short term forecasting of Knife Crime (used causing injury) and Serious Violence*, February 2023, page 5, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/06/2023_02_08-DAL-evaluation-of-4-week-predictive-tools-v1.0-1.pdf?x53331

236 West Midlands Police Data Analytics Lab, *Evaluation of the predictive tools for short term forecasting of Knife Crime (used causing injury) and Serious Violence*, February 2023, page 3, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/06/2023_02_08-DAL-evaluation-of-4-week-predictive-tools-v1.0-1.pdf?x53331

237 West Midlands Police, 'Project Guardian – Randomised Control Trial of Hot Spot Policing for Serious Violence', briefing paper, Ethics Committee, 6 July 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2022/09/2022-07-06-EC-Agenda-Item-4.1-Project-Guardian.pdf?x62558 pages 1, 5, 8.

238 West Midlands Police Data Analytics Lab, *Evaluation of the predictive tools for short term forecasting of Knife Crime (used causing injury) and Serious Violence*, February 2023, page 4, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/06/2023_02_08-DAL-evaluation-of-4-week-predictive-tools-v1.0-1.pdf?x53331

239 Ibid.

240 Freedom of Information Act response from West Midlands Police, ref 736A/22, 23 June 2022, https://foi.west-midlands.police.uk/wp-content/uploads/2022/06/ATTACHMENT_-4.pdf

241 West Midlands Police, 'Project Guardian – Randomised Control Trial of Hot Spot Policing for Serious Violence', briefing paper, Ethics Committee, 6 July 2022, page 5, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2022/09/2022-07-06-EC-Agenda-Item-4.1-Project-Guardian.pdf?x62558

242 West Midlands Police Data Analytics Lab, *Evaluation of the predictive tools for short term forecasting of Knife Crime (used causing injury) and Serious Violence*, February 2023, page 7, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/06/2023_02_08-DAL-evaluation-of-4-week-predictive-tools-v1.0-1.pdf?x53331

243 Ibid.

244 Ibid.

245 West Midlands Police, 'Project Guardian – Randomised Control Trial of Hot Spot Policing for Serious Violence', briefing paper, Ethics Committee, 6 July 2022, page 3 https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2022/09/2022-07-06-EC-Agenda-Item-4.1-Project-Guardian.pdf?x62558

246 Ibid.

247 West Midlands Police Data Analytics Lab, *Evaluation of the predictive tools for short term forecasting of Knife Crime (used causing injury) and Serious Violence*, February 2023 https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/06/2023_02_08-DAL-evaluation-of-4-week-predictive-tools-v1.0-1.pdf?x53331

248 Ibid.

249 Ibid.

250 Ibid.

251 Ibid.

252 Birmingham City Council, 'Soho and Jewellery Quarter Factsheet', 2022 https://www.birmingham.gov.uk/download/downloads/id/15500/soho_and_jewellery_quarter_factsheet.pdf; Birmingham City Council, 'Lozells Road Factsheet', 2022 https://www.birmingham.gov.uk/download/downloads/id/15480/lozells_factsheet.pdf

253 West Midlands Police, Data Analytics Lab, 'Evaluation of the predictive tools for short term forecasting of knife crime (used causing injury) and serious violence', February 2023, page 8.

254 West Midlands Police Data Analytics Lab, *Evaluation of the predictive tools for short term forecasting of Knife Crime (used causing injury) and Serious Violence*, February 2023 https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/06/2023_02_08-DAL-evaluation-of-4-week-predictive-tools-v1.0-1.pdf?x53331

255 Ibid.

256 Ibid.

257 Ibid, page 9.

258 National Police Chiefs Council, 'Police Race Action Plan: Progress report', July 2024, page 5, https://www.npcc.police.uk/SysSiteAssets/media/downloads/our-work/race-action-plan/police-race-action-plan-progress-report.pdf

259 West Midlands Police and Crime Commissioner, 'Stop and Search and Use of Force', 16 June 2020, page 4, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2020/06/16062020-SPCB-Agenda-item-5-Stop-and-Search-and-Use-of-Force.pdf

260 Ibid, page 5.

261 Ibid, pages 6-7.

262 Ibid, page 7.

263 Ibid, page 9.

264 Participant in the Amnesty International discussion group with The Advocacy Academy in Lambeth, south London, 24 August 2024.

265 Amnesty International interview with Dr Daragh Murray, Senior Lecturer at Queen Mary, University of London, and Fellow of the Institute of Humanities and Social Sciences, 29 May 2024.

266 Amnesty International UK, *Trapped in the Matrix: Secrecy, stigma, and bias in the Met's Gangs Database*, May 2018, https://www.amnesty.org.uk/files/reports/Inside%20the%20matrix.pdf

267 Police.uk, Stop and search in West Midlands Police, March 2024 and August 2024, https://www.police.uk/pu/your-area/west-midlands-police/performance/stop-and-search/

268 Ibid.

269 West Midlands Police and Crime Commissioner, 'Increased Confidence in WMP – Stop and Search and Use of Force', 27 June 2023, page 8, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/06/SPCB-27.06.23-Agenda-Item-6-Stop-and-Search-and-use-of-force.pdf

270 West Midlands Police, Data Analytics Lab, 'Evaluation of the predictive tools for short term forecasting of Knife Crime (used causing injury) and Serious Violence', February 2023), page 4 (cropped and enlarged version of map from dashboard).

271 A proportion of Black African residents, Black Caribbean residents, Asian Bangladeshi residents, Asian Pakistani residents – 0.15 (Index of Multiple Deprivation decile ranking).

272 Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023; Freedom of Information Act request response from Merseyside Police, ref no. 2024-FOI-0361, 11 April 2024; Freedom of Information Act response from Lincolnshire Police, ref no. 01/FOI/23/478, 20 April 2023; Freedom of Information Act response from Lincolnshire Police, ref no. IRW/23/12, 2 June 2023; Freedom of Information Act response from Metropolitan Police, ref no. 01.FOI.23.030036, https://www.met.police.uk/foi-ai/metropolitan-police/disclosure-2023/june-2023/mps-use-risk-terrain-modelling-application/; College of Policing, Can a risk terrain analytical approach have a practical proactive application in reducing rural crime in Lincolnshire (working title), September 2018; Hayley Y. Fox, *New approaches to understanding County Lines: A risk terrain analysis of cuckooing in Lincoln*, British Society of Criminology, 2022, https://www.britsoccrim.org/wp-content/uploads/2022/12/New-approaches-to-understanding-County-Lines.pdf

273 Rutgers Center for Public Security, 'Risk Terrain Modelling – Introduction' https://www.rutgerscps.org/rtm-intro.html

274 Simsi, 'About us', https://simsi.com/about-us/ – accessed in 2023.

275 Rutgers Center on Public Security, 'Risk-Based Policing – Playbook', 2016, https://www.rutgerscps.org/uploads/2/7/3/7/27370595/rcps_brochure_v2.5.pdf

276 Ibid.

277 Ibid.

278 J. M. Caplan, L. W. Kennedy, and E. L. Piza, *Risk Terrain Modeling Diagnostics (RTMDx) Utility User Manual*, Version 1.0, Rutgers Center on Public Security, Newark, New Jersey, 2013, page 6, http://www.rutgerscps.org/uploads/2/7/3/7/27370595/rtmdxusermanual_final_caplankennedypiza.pdf

279 Ibid.

280 Ibid, page 7.

281 Ibid, page 15.

282 Ibid, page 16.

283 Ibid, page 21.

284 Ibid, page 24.

285 Amnesty International interview with Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University, 9 July 2024.

286 Ibid.

287 Ibid.

288 Ibid.

289 Rutgers Center on Public Security, 'The Essex Risk-Based Policing Initiative', 2023 https://www.rutgerscps.org/uploads/2/7/3/7/27370595/essexuk_rbp2023_infographic.pdf

290 La Quadrature du Net, *La police prédictive en France: contre l'opacité et les discriminations, la nécessité d'une interdiction* (Predictive Policing in France: The Need for a Ban? Against Opacity and Discrimination), 18 January 2024, pages 10-11, https://www.laquadrature.net/wp-content/uploads/sites/8/2024/01/20240118_LQDN_policepredictive.pdf

291 Z. Marchment, P. Gill, and J. Morrison, 'Risk Factors for Violent Dissident Republican Incidents in Belfast: A comparison of bombings and bomb hoaxes', *Journal of Quantitative Criminology*, 36, 647–666, 2020, https://doi.org/10.1007/s10940-019-09413-0

292 G. Drawve, S. A. Thomas, J. T. Walker, 'Bringing the physical environment back into neighborhood research: the utility of RTM for developing an aggregate neighborhood risk of crime measure', Journal of Criminal Justice, 44:21–29, March 2016, http://dx.doi.org/10.1016/j.jcrimjus.2015.12.002

293 Amnesty International interview with Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University, 9 July 2024.

294 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', 2023, Justice Quarterly, 40(7), 1024-1044 https://doi.org/10.1080/07418825.2023.2209163

295 Ibid.

296 Essex Police, 'Op. GRIP: Assessment Initial Statistical Findings', April 2022. Provided by Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

297 Simsi website: https://simsi.com/

298 Essex Police, Fire and Crime Commissioner, Items for Expenditure – £500 Transactions August 2021.

299 Essex Police, Fire and Crime Commissioner, Items for Expenditure – £500 Transactions August 2022.

300 Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

301 J.M. Caplan, L.W. Kennedy, and E.L. Piza, *Risk Terrain Modeling Diagnostics (RTMDx) Utility User Manual*, Version 1.0, Rutgers Center on Public Security, Newark, New Jersey, 2013, http://www.rutgerscps.org/uploads/2/7/3/7/27370595/rtmdxusermanual_final_caplankennedypiza.pdf

302 Incident Reference, Incident Date/Time, Original Priority, Priority Description, Initial Call Type, Final Call Type, Final Disposal, Final Disposal Code, Resourced, Incident Location, Corporate, Location Name, House No, Apartment, Street Name, Postcode, Incident District, Easting, Northing, Weekday, Month, Year, 'Crime data to assess results', Crime Reference Number, Offence Sub Group, Committed Date (lower – No Time), Committed Time Hour Band (lower), Location Grid Ref Eastings, Location Grid Ref Northings. Source: Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

303 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', *Justice Quarterly*, 40(7), 1024-1044, 2023, page 11, https://doi.org/10.1080/07418825.2023.2209163

304 Ibid, page 6.

305 Amnesty International interview with Dr Adam Elliott-Cooper, Senior Lecturer in Public and Social Policy, Queen Mary, University of London, 8 May 2024.

306 Ibid.

307 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', *Justice Quarterly*, 40(7), 1024-1044, 2023, page 3, https://doi.org/10.1080/07418825.2023.2209163

308 Ibid, page 3.

309 Ibid, page 3.

310 Ibid, page 4.

311 Ibid, page 4.

312 In May 2023, three Essex Police employees, Iain Agar (a Geospatial Data Scientist), Chris Bradford (Chief Superintendent, Deputy Head of Learning and Development) and Mark Johnson (formerly Essex Police Head of Research and Analysis, now Deputy Director of Data for the Metropolitan Police Service) authored a study on Essex Police's use of risk terrain modelling as part of a 'Risk-Based Policing (RBP) Initiative'. The study was also co-authored by Joel M. Caplan and Les W. Kennedy, the Director and Deputy Director of the Rutgers School of Criminal Justice, respectively. The Rutgers Center on Public Security is based at the Rutgers School of Criminal Justice. Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', 2023, *Justice Quarterly*, 40(7), 1024-1044 https://doi.org/10.1080/07418825.2023.2209163 Essex Police also conducted its own evaluation in 2021, *Basildon RTM Evaluation*, which it provided to Amnesty via a Freedom of Information Act request, ref no. 18073, 5 April 2023. Essex Police said that the policing intervention utilising RTM occurred between 7 September 2020 and 7 March 2021, with analysis of the project conducted from September 2019 until March 2021.

313 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', 2023, *Justice Quarterly*, 40(7), 1024-1044 https://doi.org/10.1080/07418825.2023.2209163

314 Ibid, page 5.

315 Ibid, page 4.

316 Ibid, page 6.

317 Ibid, page 5.

318 Ibid, page 6.

319 Visualist: a spatial analysis plugin for crime analysts. See: Ecole des sciences criminelles, Lausanne https://plugins.qgis.org/plugins/visualist/

320 Ibid, page 5.

321 Essex Police Strategic Change Directorate, *Basildon RTM Evaluation*, 24 March 2021. Provided by Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

322 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedyand Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', *Justice Quarterly*, 40(7), 1024-1044, 2023, page 7, https://doi.org/10.1080/07418825.2023.2209163; Essex Police Strategic Change Directorate, *Basildon RTM Evaluation*, 24 March 2021. Provided by Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

323 Ibid.

324 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', *Justice Quarterly*, 40(7), 1024-1044, 2023, page 7, https://doi.org/10.1080/07418825.2023.2209163

325 Ibid.

326 M. Ashby, *Stop and Search in London: July to September 2020*, UCL Institute for Global City Policing: London, https://discovery.ucl.ac.uk/id/eprint/10115766/; Joel H. Suss, Thiago R. Oliveira, 'Economic Inequality and the Spatial Distribution of Stop and Search: Evidence from London', *The British Journal of Criminology*, Volume 63, Issue 4, July 2023, 828–847, https://doi.org/10.1093/bjc/azac069

327 Participant in the Amnesty International discussion group with the Advocacy Academy in Lambeth, south London, 24 August 2024.

328 Participant in the Amnesty International discussion group with FLEX Youth and Community Group, 13 September 2024.

329 Participant in the Amnesty International discussion group in Hackney, east London, 5 September 2024.

330 Amnesty International interview with Dr Adam Elliott-Cooper, Senior Lecturer in Public and Social Policy, Queen Mary, University of London, 8 May 2024.

331 Ibid.

332 Ibid, page 9.

333 Ibid, page 9.

334 Ibid.

335 Participant in the Amnesty International discussion group with the Advocacy Academy in Lambeth, south London, 24 August 2024.

336 Ibid.

337 Ibid.

338 Essex Police Strategic Change Directorate, *Basildon RTM Evaluation*, 24 March 2021. Provided by Freedom of Information Act request response from Essex Police, ref no. 18073, 5 April 2023.

339 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', *Justice Quarterly*, 40(7), 1024-1044, 2023, page 10, https://doi.org/10.1080/07418825.2023.2209163

340 Ibid, page 10.

341 Essex Police Strategic Change Directorate, *Basildon RTM Evaluation*, 24 March 2021. Provided by Freedom of Information Act request response from Essex Police, ref no. 18073, 5 April 2023.

342 Interview with Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University, 9 July 2024.

343 Ibid.

344 P. Williams, L. White, S. Harris, and R. Joseph-Salisbury. 'Omission, erasure and obfuscation in the police institutional killing of Black men', *Mortality*, 28(2), 250–268, 2023, https://doi.org/10.1080/13576275.2023.2190451

345 Ibid, page 259.

346 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom, *Justice Quarterly*, 40(7), 1024-1044, 2023, page 10, https://doi.org/10.1080/07418825.2023.2209163

347 Ibid.

348 Essex Police Strategic Change Directorate, *Basildon RTM Evaluation*, 24 March 2021. Provided by Freedom of Information Act request response from Essex Police, ref no. 18073, 5 April 2023.

349 Participant in the Amnesty International discussion group with FLEX Youth and Community Group, 13 September 2024.

350 Ibid.

351 Ibid.

352 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', Justice Quarterly, 40(7), 1024-1044, 2023, https://www.tandfonline.com/doi/full/10.1080/07418825.2023.2209163

353 Amnesty International interview with Katrina Ffrench, founder and Executive Director, UNJUST CIC, 7 August 2024.

354 Essex Police Strategic Change Directorate, *Basildon RTM Evaluation*, 24 March 2021. Provided by Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

355 Essex Police, Fire and Crime Commissioner, Use of Force/Stop & Search – Q3 2020/21, 26 January 2021, page 11.

356 Ibid, page 8.

357 Ibid, page 13.

358 Ibid.

359 The Office of the Police, Fire and Crime Commissioner for Essex, Use of Force/Stop and Search – Q1 2024/25, July 2024.

360 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', *Justice Quarterly*, 40(7), 1024-1044, 2023, page 9, https://doi.org/10.1080/07418825.2023.2209163

361 A proportion of Black African residents, Black Caribbean residents, Asian Bangladeshi residents, Asian Pakistani residents – 0.15 (Index of Multiple Deprivation decile ranking).

362 Amnesty International discussion group with FLEX Youth and Community Group, 13 September 2024.

363 Participant in the Amnesty International discussion group with FLEX Youth and Community Group, 13 September 2024.

364 Ibid.

365 Ibid.

366 Ibid.

367 Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

368 Human Rights Committee, General Comment 34 on Freedom of Opinion and Expression, para 10, and General Comment 37 on the Right of Peaceful Assembly, paras. 10, 61 and 94.

369 *Yaşar Kaplan v Turkey*, ECtHR, para 35; *Aslı Güneş v Turkey ECtHR*; *Christian Democratic People's Party v Moldova*, ECtHR, para 77.

370 Essex Police Strategic Change Directorate, *Basildon RTM Evaluation*, 24 March 2021. Provided by Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

371 Ibid.

372 Participant in the Amnesty International discussion group with FLEX Youth and Community Group, 13 September 2024.

373 Ibid.

374 Interview with Zara Manoehoetoe, Kids of Colour and Northern Police Monitoring Project, 12 September 2024.

375 Amnesty International interview with Dr Adam Elliott-Cooper, Senior Lecturer in Public and Social Policy, Queen Mary, University of London, 8 May 2024.

376 Interview with Hope Chilokoa-Mullen, Lead Community Organiser, the 4Front Project, 30 July 2024.

377 Victim-based crime is described as including 'Burglary, Criminal Damage, Robbery, Sexual Offences, Vehicle Crime, Violence against the Person'. Essex Police Strategic Change Directorate, *Basildon RTM Evaluation*, 24 March 2021. Provided by Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

378 Essex Police Strategic Change Directorate, *Basildon RTM Evaluation*, 24 March 2021. Provided by Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

379 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', *Justice Quarterly*, 40(7), 1024-1044, 2023, page 9, https://doi.org/10.1080/07418825.2023.2209163

380 Essex Police Strategic Change Directorate, *Basildon RTM Evaluation*, 24 March 2021. Provided by Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

381 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom, *Justice Quarterly*, 40(7), 1024-1044, 2023, page 9, https://doi.org/10.1080/07418825.2023.2209163

382 Essex Police Strategic Change Directorate, *Basildon RTM Evaluation*, 24 March 2021. Provided by Freedom of Information Act response from Essex Police, ref no. 18073, 5 April 2023.

383 Freedom of Information Act response from Essex Police, ref no. 18829, 14 November 2023.

384 Metropolitan Police Service, *Quarter 3 2021-24 Business Plan progress report*, December 2021, page 21, https://www.met.police.uk/SysSiteAssets/media/downloads/force-content/met/about-us/met-business-plan-2021-22-quarter-3-progress-report.pdf

385 Metropolitan Police Service, *Quarter 4 2021-24 Business Plan progress report*, March 2022, https://www.met.police.uk/SysSiteAssets/media/downloads/force-content/met/about-us/met-business-plan-2021-22---quarter-4-progress-report.pdf

386 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 1, page 20.

387 Metropolitan Police Service, *Equality Impact Assessment for the implementation of Risk Terrain Modelling in the MPS*, 4 October 2021, page 2.

388 Freedom of Information Act response from the Metropolitan Police Service, ref no. 01.FOI.23.029800, June 2023, https://www.met.police.uk/foi-ai/metropolitan-police/disclosure-2023/june-2023/mpss-plan-for-greater-evidence-based-policing/

389 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 1, page 11.

390 Letter from the Metropolitan Police Service Director of Data and Co-Chair of the National Police Chiefs Council (NPCC) Data and Analytics Board to Amnesty International, 5 December 2024.

391 Ibid.

392 Ibid, page 24.

393 Freedom of Information Act response from Metropolitan Police, ref no. 01.FOI.23.030036, June 2023, https://www.met.police.uk/foi-ai/metropolitan-police/disclosure-2023/june-2023/mps-use-risk-terrain-modelling-application/

394 Freedom of Information Act response from the Metropolitan Police Service, Reference no: 01.FOI.23.029800, June 2023, https://www.met.police.uk/foi-ai/metropolitan-police/disclosure-2023/june-2023/mpss-plan-for-greater-evidence-based-policing/

395 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 1, page 12.

396 Freedom of Information Act response from the Metropolitan Police Service, ref no. 01.FOI.23.029800, June 2023, https://www.met.police.uk/foi-ai/metropolitan-police/disclosure-2023/june-2023/mpss-plan-for-greater-evidence-based-policing/

397 Amnesty International interview with Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University, 9 July 2024.

398 Amnesty International interview with Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University, 9 July 2024.

399 Amnesty International interview with Zara Manoehoetoe, Kids of Colour and Northern Police Monitoring Project, 12 September 2024.

400 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 1, page 11.

401 Freedom of Information Act response from the Metropolitan Police Service, ref no. 01.FOI.23.029800, June 2023, https://www.met.police.uk/foi-ai/metropolitan-police/disclosure-2023/june-2023/mpss-plan-for-greater-evidence-based-policing/

402 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 1, page 11.

403 Ibid, page 13.

404 Ibid, page 13.

405 Ibid, page 13.

406 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 2, page 6.

407 Freedom of Information Act response from Metropolitan Police, ref no. 01.FOI.23.030036, June 2023, https://www.met.police.uk/foi-ai/metropolitan-police/disclosure-2023/june-2023/mps-use-risk-terrain-modelling-application/

408 Ibid.

409 Ibid.

410 Freedom of Information Act response from the Metropolitan Police Service, ref no. 01.FOI.23.029800, June 2023, https://www.met.police.uk/foi-ai/metropolitan-police/disclosure-2023/june-2023/mpss-plan-for-greater-evidence-based-policing/

411 Lambeth Council, *Tackling violence against young people – Lambeth Made Safer*, Appendix 2 – Data and trends, Children's Services Scrutiny Sub-Committee, 16 March 2021, page 8, https://www.lambeth.gov.uk/sites/default/files/2022-03/Appendix%202.pdf

412 Ibid.

413 Ibid.

414 Ibid, page 10.

415 Home Office, Official Statistics – *Exploration of an alternative approach to calculating stop and search rates in the Metropolitan Police Force Area – Experimental Statistics*, 18 November 2021, https://www.gov.uk/government/statistics/exploration-of-an-alternative-approach-to-calculating-stop-and-search-rates-in-the-metropolitan-police-force-area-experimental-statistics/exploration-of-an-alternative-approach-to-calculating-stop-and-search-rates-in-the-metropolitan-police-force-area-experimental-statistics

416 Metropolitan Police Service Dashboard, Use of force in Southwark between September 2020 and September 2021 – Ethnicity https://www.met.police.uk/sd/stats-and-data/met/use-of-force-dashboard/

417 Metropolitan Police Service, Stop and searches conducted from January 2019 to July 2022, Freedom of information Act request ref no. 01.FOI.22.026600, November 2022, https://www.met.police.uk/foi-ai/metropolitan-police/d/november-2022/stop-searches-conducted-january2019-july2022/

418 Metropolitan Police Service, Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM), 30 September 2020, Part 1, page 18.

419 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 1, page 17.

420 Ibid.

421 A proportion of Black African residents, Black Caribbean residents, Asian Bangladeshi residents, Asian Pakistani residents – 0.15 (Index of Multiple Deprivation decile ranking).

422 Essex Police, Data Protection Impact Assessment – Stage 2 – Knife Crime and Violence Model (Fearless Futures), 2 April 2021. Provided via Freedom of Information Act request response from Essex Police, ref no. FOI 20226, 4 September2024.

423 Amnesty International discussion group with the Advocacy Academy in Lambeth, south London, 24 August 2024.

424 Ibid.

425 Ibid.

426 Ibid.

427 Ibid.

428 Ibid.

429 Ibid.

430 Interview with Hope Chilokoa-Mullen, Lead Community Organiser, the 4Front Project, 30 July 2024.

431 Ibid.

432 Metropolitan Police Service, Equality Impact Assessment for the implementation of Risk Terrain Modelling in the MPS, 4 October 2021, page 7.

433 Ibid, page 7.

434 Ibid, page 7.

435 Metropolitan Police Service, Equality Impact Assessment for the implementation of Risk Terrain Modelling in the MPS, 4 October 2021, page 7.

436 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 2, page 7.

437 Amnesty International discussion group with the Advocacy Academy in Lambeth, south London, 24 August 2024.

438 Ibid.

439 Amnesty International discussion group in Hackney, east London, 5 September 2024.

440 Ibid.

441 Ibid.

442 Amnesty International discussion group with the Advocacy Academy in Lambeth, south London, 24 August 2024.

443 Amnesty International discussion group in Hackney, east London, 5 September 2024.

444 Ibid.

445 Ibid.

446 Home Office, *Exploration of an alternative approach to calculating stop and search rates in the Metropolitan Police Force Area – Experimental Statistics*, 18 November 2021, https://www.gov.uk/government/statistics/exploration-of-an-alternative-approach-to-calculating-stop-and-search-rates-in-the-metropolitan-police-force-area-experimental-statistics/exploration-of-an-alternative-approach-to-calculating-stop-and-search-rates-in-the-metropolitan-police-force-area-experimental-statistics

447 Home Office, Police use of force statistics, England and Wales: April 2022 to March 2023, 30 November 2023 https://www.gov.uk/government/statistics/police-use-of-force-statistics-april-2022-to-march-2023/police-use-of-force-statistics-england-and-wales-april-2022-to-march-2023

448 Home Office, Stop and Search – Year ending March 2023, 3 July 2024 https://www.ethnicity-facts-figures.service.gov.uk/crime-justice-and-the-law/policing/stop-and-search/latest/

449 His Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICFRS), *PEEL 2023-2025, Police effectiveness, efficiency and legitimacy: An inspection of the Metropolitan Police Service*, 15 August 2024, https://s3-eu-west-2.amazonaws.com/assets-hmicfrs.justiceinspectorates.gov.uk/uploads/peel-assessment-2023-25-metropolitan.pdf

450 Police.uk, Stop and search in Metropolitan Police Service, March 2024 to August 2024 https://www.police.uk/pu/your-area/metropolitan-police-service/performance/stop-and-search/

451 Merseyside Police, 'Merseyside Police adopts geospatial technology to support crime prevention', 22 September 2023, https://www.merseyside.police.uk/news/merseyside/news/2023/september/merseyside-police-adopts-geospatial-technology-to-support-crime-prevention/

452 Ibid.

453 Ibid.

454 Freedom of Information Act response from Merseyside Police, ref no. 2023-0035, 3 March 2023.

455 Freedom of Information Act response from Merseyside Police, ref no. 2024-FOI-0564, 4 June 2024.

456 Merseyside Police Freedom of Information Act response, ref no. 2024-FOI-0361, 11 April 2024.

457 Merseyside Police Freedom of Information Act response, ref no. 2024-FOI-0564, 4 June 2024.

458 Freedom of Information Act response from Merseyside Police, ref no. 2024-FOI-0564, 4 June 2024.

459 Freedom of Information Act response from Merseyside Police, ref no. 2024-FOI-0564, 4 June 2024.

460 Merseyside Police Freedom of Information Act response, ref no. 2024-FOI-0564, 4 June 2024.

461 Freedom of Information Act response from Police Service of Northern Ireland, ref no. F-2023-02929, 13 October 2023.

462 Northern Ireland Policing Board, *Human Rights Review of Privacy and Policing*, 5 July 2023, page 4. https://www.nipolicingboard.org.uk/files/nipolicingboard/2023-07/Human%20Rights%20Review%20of%20Privacy%20and%20Policing%20-%20Tagged.pdf

463 Police Service of Northern Ireland, *Covert Powers in Relation to Journalists and Lawyers*, Chief Constable's Report to the Northern Ireland Policing Board, June 2024, https://www.psni.police.uk/sites/default/files/2024-06/Chief%20Constable%27s%20Report%20to%20the%20Northern%20Ireland%20Policing%20Board_Covert%20Powers%20in%20Relation%20to%20Journalists%20and%20Lawyers.pdf; Amnesty International, 'Northern Ireland: "Shocking" police surveillance report raises more questions than answers', 6 June 2024, https://www.amnesty.org.uk/press-releases/northern-ireland-shocking-police-surveillance-report-raises-more-questions-answers

464 Northern Ireland Policing Board, *Human Rights Review of Privacy and Policing*, 5 July 2023, page 6.

465 Freedom of Information Act response from Merseyside Police, ref no. DJ 2023- 0035, 3 March 2023.

466 Freedom of Information Act response from Merseyside Police, ref no. 2024-FOI-0564, 4 June 2024.

467 See NEC Software Solutions website: https://www.necsws.com/solutions/control-room-solutions/gis-mapping-software; NEC Software Solutions, 'Helping North Yorkshire Police to visualise operational data', https://www.necsws.com/case-studies/public-safety/helping-analysts-at-north-yorkshire-police-to-visualise-operational-data

468 NEC Software Solutions, 'Helping North Yorkshire Police to visualise operational data', https://www.necsws.com/case-studies/public-safety/helping-analysts-at-north-yorkshire-police-to-visualise-operational-data. Police forces known to use the software include Devon and Cornwall Police, Gwent Police, Kent Police, Lancashire Police, North Yorkshire Police, West Mercia Police. Sources: Freedom of Information Act response from Devon and Cornwall Police, ref no. 01/FOI/23/4712, 19 July 2023; Freedom of Information Act response from Gwent police, ref no. 2023/26042, 3 April 2023; Freedom of Information Act response from Kent Police, ref no. FOI/00402/23/HR, 5 April 2023; Freedom of Information Act response from Lancashire police, ref no: 2023/00654, 9 May 2023; Freedom of Information Act response from West Mercia Police, ref no. 234143, 5 July 2023. NEC Software Solutions, 'Helping North Yorkshire Police to visualise operational data', https://www.necsws.com/case-studies/public-safety/helping-analysts-at-north-yorkshire-police-to-visualise-operational-data

469 NEC Software Solutions, 'Advanced mapping software you can trust', 2023 https://www.necsws.com/wp-content/uploads/2023/12/GIS-and-Gazette-brochure.pdf

470 Precisely, MapInfo Pro https://www.precisely.com/product/precisely-mapinfo/mapinfo-pro471 Including the Metropolitan Police Service, West Midlands Police, British Transport Police, Norfolk police, Suffolk police, Hampshire police and Devon and Cornwall Police. Sources: Freedom of Information Act response from British Transport Police, ref no: 01/FOI/22/1251, 30 June 2022; Freedom of Information response from Norfolk and Suffolk Constabularies, ref no. 000966-23, 6 June 2023; Freedom of Information response from Hampshire Constabulary, ref no. FOI/000047/23, 5 June 2023; Precisely, 'UK police force leverages location intellingence from Precisely to keep world leaders safe at global summit', 20 October 2022, https://www.precisely.com/press-release/uk-police-force-leverages-location-intelligence-from-precisely-to-keep-world-leaders-safe-at-global-summit

472 Avon and Somerset Police, City of London Police, Hampshire Police, Humberside Police, Thames Valley Police, South Yorkshire Police, West Yorkshire Police, Sources: Freedom of Information Act response from South Yorkshire Police, ref no. 23.009252, 22 June 2023; Freedom of Information Act response from City of London Police, ref no. FOI2023/00947, 15 August 2023.

473 Amnesty International interview with Dr Daragh Murray, Senior Lecturer at Queen Mary, University of London, and Fellow of the Institute of Humanities and Social Sciences, 29 May 2024.

474 Interview with John Pegram, Bristol Copwatch, 27 August 2024.

475 Interview with Hope Chilokoa-Mullen, Lead Community Organiser, the 4Front Project, 30 July 2024.

476 Avon and Somerset Constabulary, Essex Police, Greater Manchester Police, Gwent Constabulary, Hampshire Constabulary, Lincolnshire Police, Merseyside Police, Metropolitan Police Service, Police Service of Northern Ireland, West Midlands Police, Wiltshire Constabulary.

477 The Violence Harm Assessment was formerly known as the Violence Harm Index. See Metropolitan Police, 'Information about the Violence Harm Index', January 2024, https://www.met.police.uk/cy-GB/foi-ai/metropolitan-police/disclosure-2024/january-2024/information-about-violence-harm-index/

478 Metropolitan Police Service, Violence Harm Assessment, date unknown. https://www.met.police.uk/police-forces/metropolitan-police/areas/about-us/about-the-met/violence-harm-assessment

479 Metropolitan Police Service, *Data Protection Impact Assessment – Violence Harm Assessment*, 31 January 2024. https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-data-protection-impact-assessment.pdf – last accessed 14 August 2024.

480 Metropolitan Police Service, *Violence Harm Assessment (VHA) Equality Impact Assessment*, 30 January 2024. https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-equality-impact-assessment.pdf

481 The harm score referred to is based on the Cambridge Crime Harm Index, a metric which ranks crimes based on sentencing guidelines and the starting point of the total days in prison a first-time offender convicted of that offence would receive.

482 Metropolitan Police Service, *Violence Harm Assessment (VHA) Data Protection Impact Assessment*, 31 January 2024. https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-data-protection-impact-assessment.pdf

483 Ibid.

484 Metropolitan Police, 'Precision policing', November 2023, https://www.met.police.uk/foi-ai/metropolitan-police/disclosure-2023/november-2023/precision-policing/

485 Metropolitan Police Service, *Violence Harm Assessment (VHA) Data Protection Impact Assessment*, 31 January 2024, https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-data-protection-impact-assessment.pdf

486 Interview with Hope Chilokoa-Mullen, Lead Community Organiser, the 4Front Project, 30 July 2024.

487 Interview with Hope Chilokoa-Mullen, Lead Community Organiser, the 4Front Project, 30 July 2024.

488 Metropolitan Police Service, *Violence Harm Assessment (VHA) Data Protection Impact Assessment*, 31 January 2024, https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-data-protection-impact-assessment.pdf

489 Amnesty International interview with Katrina Ffrench, founder and Executive Director, UNJUST CIC, 7 August 2024.

490 Metropolitan Police Service, *Violence Harm Assessment (VHA) Data Protection Impact Assessment*, 31 January 2024. https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-data-protection-impact-assessment.pdf

491 Amnesty International UK, *Trapped in the Matrix: Secrecy, stigma, and bias in the Met's Gangs Database*, 2018, https://www.amnesty.org.uk/files/reports/Trapped%20in%20the%20Matrix%20Amnesty%20report.pdf

492 Ibid.

493 Interview with Hope Chilokoa-Mullen, Lead Community Organiser, the 4Front Project, 30 July 2024.

494 Interview with Zara Manoehoetoe, Kids of Colour and Northern Police Monitoring Project, 12 September 2024.

495 Metropolitan Police Service, *Violence Harm Assessment (VHA) Equality Impact Assessment*, 30 January 2024. https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-equality-impact-assessment.pdf

496 Information Commissioner's Office, Enforcement Notice – Gangs Matrix, 13 November 2018, https://www.met.police.uk/SysSiteAssets/media/downloads/force-content/met/about-us/gangs-violence-matrix/ico-enforcement-notice.pdf

497 Liberty, 'Met to overhaul 'racist' Gangs Matrix after landmark legal challenge', 11 November 2022 https://www.libertyhumanrights.org.uk/issue/met-to-overhaul-racist-gangs-matrix-after-landmark-legal-challenge/

498 Metropolitan Police Service, Gangs violence matrix, undated https://www.met.police.uk/police-forces/metropolitan-police/areas/about-us/about-the-met/gangs-violence-matrix/

499 BBC, 'Met Police scraps controversial gang database', 13 February 2024, https://www.bbc.co.uk/news/uk-england-london-68283487

500 Metropolitan Police Service, Gangs violence matrix, undated https://www.met.police.uk/police-forces/metropolitan-police/areas/about-us/about-the-met/gangs-violence-matrix/

501 Metropolitan Police Service, Violence Harm Assessment, Date unknown. https://www.met.police.uk/police-forces/metropolitan-police/areas/about-us/about-the-met/violence-harm-assessment

502 Metropolitan Police Service, *Data Protection Impact Assessment – Violence Harm Assessment*, 31 January 2024 https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-data-protection-impact-assessment.pdf – last accessed 14 August 2024.

503 Metropolitan Police Service, *Violence Harm Assessment (VHA) Equality Impact Assessment*, 30 January 2024 https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-equality-impact-assessment.pdf

504 Metropolitan Police Service, *Data Protection Impact Assessment – Violence Harm Assessment*, 31 January 2024 https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-data-protection-impact-assessment.pdf – last accessed 14 August 2024.

505 Metropolitan Police Service, Violence Harm Assessment (VHA) Standard Operating Procedure (SOP) document, 1 February 2024, https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-standard-operating-procedure.pdf

506 Ibid. See also College of Policing, 'Menu of tactics', 1 July 2016, https://www.college.police.uk/research/menu-of-tactics

507 Metropolitan Police Service, *Violence Harm Assessment (VHA) Data Protection Impact Assessment*, 31 January 2024, https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-data-protection-impact-assessment.pdf

508 Metropolitan Police Service, Violence Harm Assessment Figures – Headlines, 13 May 2024, https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/quarterly-reports/vha-data-may-2024.pdf

509 Ibid.

510 Metropolitan Police Service, Violence Harm Assessment figures – Headlines, 11 August 2024 https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/quarterly-reports/vha-data-august-2024.pdf

511 Metropolitan Police Service, *Violence Harm Assessment (VHA) Equality Impact Assessment*, 30 January 2024 https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-equality-impact-assessment.pdf

512 Metropolitan Police Service, Violence Harm Assessment – Standard Operating Procedure, 1 February 2024, https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-standard-operating-procedure.pdf

513 Metropolitan Police Service, *Violence Harm Assessment (VHA) Equality Impact Assessment*, 30 January 2024, https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-equality-impact-assessment.pdf

514 Ibid.

515 Ibid.

516 Participant in the Amnesty International discussion group with the Advocacy Academy in Lambeth, south London, 24 August 2024.

517 Interview with Hope Chilokoa-Mullen, Lead Community Organiser, the 4Front Project, 30 July 2024.

518 Amnesty International discussion group in Hackney, east London, 5 September 2024.

519 Ibid.

520 Ibid.

521 Ibid.

522 Essex Police, Knife Crime and Violence Model – Fearless Futures – Specific Privacy Notice, Version 1.4, June 2021, https://www.essex.police.uk/police-forces/essex-police/areas/essex-police/au/about-us/privacy-notices/knife-crime-and-violence-model--fearless-futures/

523 Essex Police, Data Protection Impact Assessment – Stage 1 – Knife Crime and Violence Model (Fearless Futures), 2 April 2021. Provided via Freedom of Information Act request response from Essex Police, Ref FOI 20226, 4 September 2024.

524 Science and Technology in Policing, 'Inside Essex Police's battle against knife violence', March 2023, https://science.police.uk/site/assets/files/3401/inside_essex_polices_battle_against_knife_violence.pdf

525 Essex Police, Data Protection Impact Assessment – Stage 1 – Knife Crime and Violence Model (Fearless Futures), 2 April 2021, page 6. Provided via Freedom of Information Act response from Essex Police, ref no. FOI 20226, 4 September 2024.

526 Essex Police, Previous FOI Requests - Predictive Policing, https://www.essex.police.uk/foi-ai/essex-police/other-information/previous-foi-requests/predictive-policing/

527 Ibid.

528 Essex Police, Knife Crime and Violence Model – Fearless Futures – Specific Privacy Notice, Version 1.4, June 2021, https://www.essex.police.uk/police-forces/essex-police/areas/essex-police/au/about-us/privacy-notices/knife-crime-and-violence-model--fearless-futures/

529 Science and Technology in Policing, 'Inside Essex Police's battle against knife violence', March 2023 https://science.police.uk/site/assets/files/3401/inside_essex_polices_battle_against_knife_violence.pdf

530 Ibid.

531 Essex Police, Data Protection Impact Assessment – Stage 1 – Knife Crime and Violence Model (Fearless Futures), 2 April 2021. Provided via Freedom of Information Act request response from Essex Police, ref no. FOI 20226, 4 September 2024.

532 Ibid.

533 Essex Police, Knife Crime and Violence Model – Fearless Futures – Specific Privacy Notice, Version 1.4, June 2021, https://www.essex.police.uk/police-forces/essex-police/areas/essex-police/au/about-us/privacy-notices/knife-crime-and-violence-model--fearless-futures/

534 Ibid.

535 Essex Police, Data Protection Impact Assessment – Stage 1 – Knife Crime and Violence Model (Fearless Futures), 2 April 2021, page 10. Provided via Freedom of Information Act response from Essex Police, ref no. FOI 20226, 4 September 2024.

536 Essex Police, 'Fearless Futures Data Dictionary', undated. Provided via Freedom of Information Act request response from Essex Police, Reference: FOI 20226, 4 September 2024.

537 Ibid.

538 Amnesty International, *This is the thought police, Prevent and its chilling effect on human rights*, 2023, Index: EUR 45/7368/2023, page 36 https://www.amnesty.org.uk/files/2023-11/Amnesty%20UK%20Prevent%20report%20%281%29.pdf

539 Essex Police, Knife Crime and Violence Model – Fearless Futures – Specific Privacy Notice, Version 1.4, June 2021, https://www.essex.police.uk/police-forces/essex-police/areas/essex-police/au/about-us/privacy-notices/knife-crime-and-violence-model--fearless-futures/

540 Ibid.

541 Ibid.

542 Ibid.

543 The Chief Constable of Essex Police and the Probation Service, Information Sharing Agreement – Knife Crime and Violence Model – Fearless Futures, Version 2.2, 21 May 2021. Provided via Freedom of Information Act response from Essex Police, ref no. FOI 20226, 4 September 2024.

544 Science and Technology in Policing, 'Inside Essex Police's battle against knife violence', March 2023, https://science.police.uk/site/assets/files/3401/inside_essex_polices_battle_against_knife_violence.pdf

545 Amnesty International interview with Dr Daragh Murray, Senior Lecturer at Queen Mary, University of London, and Fellow of the Institute of Humanities and Social Sciences, 29 May 2024.

546 Ibid.

547 Science and Technology in Policing, 'Inside Essex Police's battle against knife violence', March 2023, https://science.police.uk/site/assets/files/3401/inside_essex_polices_battle_against_knife_violence.pdf

548 Ibid.

549 The Chief Constable of Essex Police and the Probation Service, Information Sharing Agreement – Knife Crime and Violence Model – Fearless Futures, Version 2.2, 21 May 2021. Provided via Freedom of Information Act response from Essex Police, ref no. FOI 20226, 4 September 2024.

550 Essex Police, Data Protection Impact Assessment – Stage 1 – Knife Crime and Violence Model (Fearless Futures), 2 April 2021. Provided via Freedom of Information Act request response from Essex Police, ref no. FOI 20226, 4 September 2024.

551 Essex Police, Knife Crime and Violence Model – Fearless Futures – Specific Privacy Notice, Version 1.4, June 2021, https://www.essex.police.uk/police-forces/essex-police/areas/essex-police/au/about-us/privacy-notices/knife-crime-and-violence-model--fearless-futures/

552 The Chief Constable of Essex Police and the Probation Service, Information Sharing Agreement – Knife Crime and Violence Model – Fearless Futures, Version 2.2, 21 May 2021. Provided via Freedom of Information Act response from Essex Police, ref no. FOI 20226, 4 September 2024.

553 Ibid.

554 Ibid.

555 Essex Police, Data Protection Impact Assessment – Stage 1 – Knife Crime and Violence Model (Fearless Futures), 2 April 2021. Provided via Freedom of Information Act request response from Essex Police, ref no. FOI 20226, 4 September 2024.

556 Amnesty International interview with Hope Chilokoa-Mullen, Lead Community Organiser, the 4Front Project, 30 July 2024.

557 Freedom of Information Act response from Essex Police, ref no. FOI 20226, 17 June 2024.

558 Freedom of Information Act response from Essex Police, ref no. FOI 20226, 17 June 2024.

559 Science and Technology in Policing, 'Inside Essex Police's battle against knife violence', March 2023, https://science.police.uk/site/assets/files/3401/inside_essex_polices_battle_against_knife_violence.pdf

560 HMICFRS, *PEEL 2021/22 Police effectiveness, efficiency and legitimacy – An inspection of Avon and Somerset Constabulary*, 17 March 2023, https://s3-eu-west-2.amazonaws.com/assets-hmicfrs.justiceinspectorates.gov.uk/uploads/peel-assessment-2021-22-avon-and-somerset.pdf

561 Avon and Somerset Police, Offender Mangement App Question Responses, undated. Provided by Mwanzo Project.

562 Avon and Somerset police, Data Science, undated https://www.avonandsomerset.police.uk/about/policies-and-procedures/data-science/

563 Avon and Somerset Police, Written Evidence to the Parliamentary Inquiry into new technologies and the application of the law, 11 October 2021 https://committees.parliament.uk/writtenevidence/40328/pdf/

564 Ibid.

565 Avon and Somerset police, Data Science, undated https://www.avonandsomerset.police.uk/about/policies-and-procedures/data-science/

566 Ibid.

567 HMICFRS, *PEEL 2021/22 Police effectiveness, efficiency and legitimacy – An inspection of Avon and Somerset Constabulary*, 17 March 2023, https://s3-eu-west-2.amazonaws.com/assets-hmicfrs.justiceinspectorates.gov.uk/uploads/peel-assessment-2021-22-avon-and-somerset.pdf

568 Avon and Somerset police, Data Science, undated https://www.avonandsomerset.police.uk/about/policies-and-procedures/data-science/

569 Ibid.

570 Avon and Somerset Police, Offender Mangement App Question Responses, undated, page 3. Provided by Mwanzo Project.

571 Ibid, page 4.

572 Ibid, page 10.

573 Ibid, Page 7.

574 Ibid, page 6.

575 Somerset County Council, *Integrated Offender Management (IOM) Assurance Report*, SCC Avon and Somerset Police and Crime Panel, January 2023, https://democracy.somerset.gov.uk/Data/SCC%20Avon%20&%20Somerset%20Police%20and%20Crime%20Panel/202303291030/Agenda/Item%207%20IOM%20Assurance%20Report.pdf

576 Avon and Somerset Police, Offender Mangement App Question Responses, undated, page 10. Provided by Mwanzo Project.

577 Ibid, page 11.

578 Interview with John Pegram, Bristol Copwatch, 27 August 2024.

579 Interview with John Pegram, Bristol Copwatch, 27 August 2024.

580 HMICFRS, *PEEL 2021/22 Police effectiveness, efficiency and legitimacy – An inspection of Avon and Somerset Constabulary*, 17 March 2023 https://s3-eu-west-2.amazonaws.com/assets-hmicfrs.justiceinspectorates.gov.uk/uploads/peel-assessment-2021-22-avon-and-somerset.pdf

581 Ibid.

582 Avon and Somerset Police, Data Science, undated https://www.avonandsomerset.police.uk/about/policies-and-procedures/data-science/

583 Interview with John Pegram, Bristol Copwatch, 27 August 2024.

584 Interview with John Pegram, Bristol Copwatch, 27 August 2024.

585 Interview with David, October 2024.

586 Ibid.

587 Ibid.

588 Ibid.

589 Letter from Avon and Somerset Police Data Protection Team to the individual profiled.

590 Interview with David, October 2024.

591 Ibid.

592 Letter from Avon and Somerset Police Data Protection Team to the individual profiled.

593 Interview with David, October 2024.

594 Ibid.

595 Ibid.

596 Ibid.

597 Ibid.

598 Ibid.

599 Ibid.

600 GMP presentation, screenshot available at https://prezi.com/mydovizyhrs1/xcalibre-a-brief-overview-of-gangs-in-greater-manchester/

601 BBC, 'Decline in gang shootings in Greater Manchester', 11 October 2013, https://www.bbc.co.uk/news/uk-england-manchester-24467227

602 Home Affairs Committee, Oral evidence: Gangs and youth crime, HC 798, 25 November 2014. https://committees.parliament.uk/oralevidence/4336/pdf/

603 Greater Manchester Police, Supplementary written evidence submitted by DCI Debbie Dooley, Xcalibre Task Force and Integrated Gang Management Unit, Manchester Police, 9 December 2014. https://committees.parliament.uk/writtenevidence/55082/html/

604 Ibid.

605 Ibid.

606 Ibid.

607 Home Affairs Committee, Oral evidence: Gangs and youth crime, HC 798, Tuesday 25 November 2014. https://committees.parliament.uk/oralevidence/4336/pdf/

608 *Manchester Evening News*, 'Top GMP detective admits she was wrong after telling Parliament a THIRD of Manchester kids are in gangs', 18 December 2014, https://www.manchestereveningnews.co.uk/news/greater-manchester-news/top-gmp-detective-admits-boobed-8311911

609 Greater Manchester Police, Supplementary written evidence submitted by DCI Debbie Dooley, Xcalibre Task Force and Integrated Gang Management Unit, Manchester Police, 9 December 2014. https://committees.parliament.uk/writtenevidence/55082/html/

610 BBC News, 'Police monitor local gangs on YouTube music videos', 30 September 2024, https://www.bbc.co.uk/news/articles/c93yl0wggv3o

611 Greater Manchester Police, Supplementary written evidence submitted by DCI Debbie Dooley, Xcalibre Task Force and Integrated Gang Management Unit, Manchester Police, 9 December 2014. https://committees.parliament.uk/writtenevidence/55082/html/

612 Home Affairs Committee, Oral evidence: Gangs and youth crime, HC 798, 25 November 2014, https://committees.parliament.uk/oralevidence/4336/pdf/

613 P. Williams and B. Clarke, *Dangerous associations: Joint enterprise, gangs and racism*, Centre for Crime and Justice Studies, 25 January 2016, https://www.crimeandjustice.org.uk/sites/default/files/Dangerous%20assocations%20Joint%20Enterprise%20gangs%20and%20racism.pdf

614 Interview with Zara Manoehoetoe, Kids of Colour and Northern Police Monitoring Project, 12 September 2024.

615 Greater Manchester Police, Supplementary written evidence submitted by DCI Debbie Dooley, Xcalibre Task Force and Integrated Gang Management Unit, Manchester Police, 9 December 2014. https://committees.parliament.uk/writtenevidence/55082/html/

616 Ibid.

617 *Guardian*, 'Racism row as Manchester police ban people "linked to gangs" from carnival', 30 July 2022, https://www.theguardian.com/uk-news/2022/jul/30/manchester-police-under-fire-over-deeply-racist-tactics-ahead-of-caribbean-carnival

618 Northern Police Monitoring Project, 'On Manchester Caribbean Carnival entry refusals', 2022, http://npolicemonitor.co.uk/uncategorized/on-manchester-caribbean-carnival-entry-refusals/

619 Ibid.

620 Ibid.

621 Ibid.

622 Interview with Zara Manoehoetoe, Kids of Colour and Northern Police Monitoring Project, 12 September 2024.

623 Interview with Zara Manoehoetoe, Kids of Colour and Northern Police Monitoring Project, 12 September 2024.

624 Justice, Letter to GMP Manchester-City Council re discrimination at Manchester Carnival, July 2022 https://files.justice.org.uk/wp-content/uploads/2022/07/29145025/JUSTICE-Letter-to-GMP-Manchester-City-Council-IAG-re-discrimination-at-Manchester-Carnival-July-2022.pdf

625 Kids of Colour, *Statement – Carnival Banning Letters*, August 2023. https://docs.google.com/document/d/1b-wAsB7vkU5_vgZS7_oRjwGNNGVBRKP_KVexV_oDswY/edit?tab=t.0

626 L. Fatsis, 'Policing the beats: The criminalisation of UK drill and grime music by the London Metropolitan Police', *The Sociological Review*, 67(6), 1300-1316, 2019, https://doi.org/10.1177/0038026119842480

627 Kids of Colour, *Statement – Carnival Banning Letters*, August 2023.

628 Amnesty International interview with Dr Patrick Williams, Senior Lecturer, Manchester Metropolitan University, 9 July 2024.

629 Interview with Zara Manoehoetoe, Kids of Colour and Northern Police Monitoring Project, 12 September 2024.

630 This score is called IOM and is described as 'a statistical model providing a risk assessment which estimates the probability of a defendant becoming high harm, who has not yet reached that threshold'. West Midlands Police Data Analytics Lab, *Internal Evaluation of the RFSDi Harm Score and the Integrated Offender Management Model*, 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/01/3.1-Internal-RFSDi-IOM-Evaluation-v1.0-1-1.pdf?x59042

631 A. Babuta, *Independent Report on the West Midlands Police RFSDi Harm Score and Integrated Offender Management Model*, 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/01/3.0-RFSDi-IOM-Evaluation-Report-vFINAL-1.pdf?x59042; West Midlands Police Ethics Committee, Ethic Committee Briefing Note, 2019, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2019/05/Ethics-Committee-03042019-IOM-MODEL.pdf

632 A Babuta, *Independent Report on the West Midlands Police RFSDi Harm Score and Integrated Offender Management Model*, 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/01/3.0-RFSDi-IOM-Evaluation-Report-vFINAL-1.pdf?x59042

633 This score is known as RFSDi, or 'Risk, Frequency, Severity, Drugs and intelligence': The score uses recency, frequency, severity (based on the Cambridge Crime Harm Index), information about drugs misuse and their intelligence footprint. West Midlands Police Data Analytics Lab, *Internal Evaluation of the RFSDi Harm Score and the Integrated Offender Management Model*, 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/01/3.1-Internal-RFSDi-IOM-Evaluation-v1.0-1-1.pdf?x59042

634 West Midlands Police Data Analytics Lab, *Internal Evaluation of the RFSDi Harm Score and the Integrated Offender Management Model*, 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/01/3.1-Internal-RFSDi-IOM-Evaluation-v1.0-1-1.pdf?x59042

635 Ibid.

636 A. Babuta, *Independent Report on the West Midlands Police RFSDi Harm Score and Integrated Offender Management Model*, 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/01/3.0-RFSDi-IOM-Evaluation-Report-vFINAL-1.pdf?x59042

637 West Midlands Police, Ethic Committee Briefing Note, 3 April 2019, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2019/05/Ethics-Committee-03042019-IOM-MODEL.pdf

638 Ibid.

639 Ibid.

640 National Police Chiefs Council, *Police Race Action Plan – Progress report*, July 2024 https://www.npcc.police.uk/SysSiteAssets/media/downloads/our-work/race-action-plan/police-race-action-plan-progress-report.pdf

641 West Midlands Police and Crime Commissioner, 'Stop and Search and Use of Force', 16 June 2020, page 4, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2020/06/16062020-SPCB-Agenda-item-5-Stop-and-Search-and-Use-of-Force.pdf; West Midlands Police and Crime Commissioner, 'Increased Confidence in WMP – Stop and Search and Use of Force', 27 June 2023, page 8, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/06/SPCB-27.06.23-Agenda-Item-6-Stop-and-Search-and-use-of-force.pdf; Police.uk, 'Stop and search in West Midlands Police', March 2024 and August 2024, https://www.police.uk/pu/your-area/west-midlands-police/performance/stop-and-search/

642 West Midlands Police, *IOM Model Answers*, 2019, West Midlands Police Ethics Committee, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2019/08/20190724-EC-Item-3-IOM-Model-Answers.pdf)

643 West Midlands Police Data Analytics Lab, *Internal Evaluation of the RFSDi Harm Score and the Integrated Offender Management Model*, Ethics Committee, 9 November 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/01/3.1-Internal-RFSDi-IOM-Evaluation-v1.0-1-1.pdf?x59042

644 A. Babuta, *Independent Report on the West Midlands Police RFSDi Harm Score and Integrated Offender Management Model*, 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/01/3.0-RFSDi-IOM-Evaluation-Report-vFINAL-1.pdf?x59042

645 West Midlands Police, Data Ethics Committee Minutes and Advice, 8 February 2023, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/06/DATA-ETHICS-COMMITTEE-minutes-and-advice-08.02.23-1.docx

646 Ibid.

647 Freedom of Information Act response from West Midlands Police, ref. no. 1125A/23, 16 August 2023, https://foi.west-midlands.police.uk/wp-content/uploads/2023/08/1125A-23-Attachment.pdf

648 Ibid.

649 West Midlands Police Data Analytics Lab, *Internal Evaluation of the RFSDi Harm Score and the Integrated Offender Management Model*, Ethics Committee, 9 November 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/01/3.1-Internal-RFSDi-IOM-Evaluation-v1.0-1-1.pdf

650 Ibid.

651 West Midlands Police, Ethics Committee Briefing Note, 3 April 2019 https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2019/05/Ethics-Committee-03042019-IOM-MODEL.pdf

652 Ibid.

653 Ibid.

654 A. Babuta, *Independent Report on the West Midlands Police RFSDi Harm Score and Integrated Offender Management Model*, 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/01/3.0-RFSDi-IOM-Evaluation-Report-vFINAL-1.pdf?x59042

655 Ibid.

656 Ibid.

657 Ibid.

658 Ibid.

659 Ibid.

660 Freedom of Information Act response from West Midlands Police, ref no. 1125A/23, 16 August 2023, https://foi.west-midlands.police.uk/wp-content/uploads/2023/08/1125A-23-Attachment.pdf

661 HM Prison and Probation use a scoring system called OGRS or the Offender Group Reconviction Scale to predict re-offending. See Ministry of Justice, *Guide to Proven Reoffending Statistics*, April 2019, https://assets.publishing.service.gov.uk/media/5cc099c440f0b64033920e26/guide-to-proven-reoffending-statistics-Apr19.pdf

662 Ibid.

663 West Midlands Police Data Analytics Lab, *Internal Evaluation of the RFSDi Harm Score and the Integrated Offender Management Model*, Ethics Committee, 9 November, 2022, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/01/3.1-Internal-RFSDi-IOM-Evaluation-v1.0-1-1.pdf?x59042

664 West Midlands Police, Ethics Committee Briefing Note, 3 April 2019, https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2019/05/Ethics-Committee-03042019-IOM-MODEL.pdf

665 Thames Valley Police, 'Sharing Thames Valley Police research and practice', *Research Journal*, Volume 7, Summer 2022, https://www.thamesvalley.police.uk/SysSiteAssets/foi-media/thames-valley-police/other_information/tvp-journal-volume-7-summer-2022.pdf

666 Ibid.

667 Ibid.

668 Ibid.

669 Ibid.

670 Freedom of Information Act response from Thames Valley Police, ref no. 01/FOI/24/011298/J, 18 April 2024; Freedom of Information Act response from Hampshire and Isle of Wight Constabulary, ref no. HC/01/FOI/24/011295/G, 20 April 2024.

671 Central Digital and Data Office, Hampshire and Thames Valley Police: DARAT, 14 October 2022, https://www.gov.uk/government/publications/hampshire-and-thames-valley-police-darat/hampshire-and-thames-valley-police-darat

672 Ibid.

673 'Current algorithm is a random forest classifier with three levels of prediction/classification (i.e. High, Medium and Low/Standard).' See Central Digital and Data Office, Hampshire and Thames Valley Police: DARAT, 14 October 2022. https://www.gov.uk/government/publications/hampshire-and-thames-valley-police-darat/hampshire-and-thames-valley-police-darat

674 Ibid.

675 Ibid.

676 Ibid.

677 Ibid.

678 Ibid.

679 Ibid.

680 Ibid.

681 Ibid.

682 Ibid.

683 Ibid.

684 Freedom of Information Act response from Thames Valley Police, ref no. 01/FOI/24/011298/J, 18 April 2024; Freedom of Information Act response from Hampshire and Isle of Wight Constabulary, ref no. HC/01/FOI/24/011295/G, 20 April 2024.

685 Hampshire Constabulary and Thames Valley Police previously used a tool called DASH (Domestic Abuse, Stalking and Honour Based Violence Risk Identification, Assessment and Management Model) for the same purpose. However, the forces have stated that DASH 'was not designed as a predictive tool, does not have a well-defined outcome that it is trying to predict, and doubts remain as to its efficacy in the field.' The forces have said that DASH 'was less accurate at predicting risk, and was poor at determining the cases where the worst outcomes would go on to occur (note occurring is measured by crimes reported to the police).' They also admitted that DASH 'does not accurately identify risk in domestic occurrences', as it identified risk correctly in less than 50 per cent of cases. Central Digital and Data Office, Hampshire and Thames Valley Police: DARAT, 14 October 2022, https://www.gov.uk/government/publications/hampshire-and-thames-valley-police-darat/hampshire-and-thames-valley-police-darat

686 Freedom of Information Act response from Thames Valley Police, ref no. 01/FOI/24/011298/J, 18 April 2024; Freedom of Information Act response from Hampshire and Isle of Wight Constabulary, ref no. HC/01/FOI/24/011295/G, 20 April 2024.

687 Ibid.

688 Ibid.

689 Freedom of Information Act response from Thames Valley Police, ref no. HQ/PA/004735/22, 10 November 2022.

690 Ibid.

691 Freedom of Information Act response from Thames Valley Police, ref no. 01/FOI/24/011298/J, 18 April 2024; Freedom of Information Act response from Hampshire and Isle of Wight Constabulary, ref no. HC/01/FOI/24/011295/G, 20 April 2024.

692 Ibid.

693 Ibid.

694 *Lithgow and others v the United Kingdom* (9006/800) ECtHR, 1996, para 177; *Fredin v Sweden* (12033/86) ECtHR, 1991, para 60.

695 Amnesty International and OSF, *Europe: A Human Rights Guide for researching racial and religious discrimination in counter-terrorism*, 2021, Index: EUR 01/3606/2021 paras 2.2.1.2 and 2.2.3, www.amnesty.org/en/documents/eur01/3606/2021/en/

696 UN Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance, *Racial discrimination and emerging digital technologies: a human rights analysis*, UN doc A/HRC/44/57, 18 June 2020, https://undocs.org/en/A/HRC/44/57

697 Letter from the Metropolitan Police Service Director of Data and Co-Chair of the National Police Chiefs Council Data and Analytics Board to Amnesty International, 5 December 2024.

698 Amnesty International interview with Professor Marion Oswald, Professor of Law, University of Northumbria and chair of West Midlands Police and Crime Commissioner and West Midlands PoliceData Ethics Committee, 16 July 2024.

699 Amnesty International interview with Dr Adam Elliott-Cooper, Senior Lecturer in Public and Social Policy, Queen Mary, University of London, 8 May 2024.

700 Amnesty International discussion group with the Advocacy Academy in Lambeth, south London, 24 August 2024.

701 Amnesty International discussion group in Hackney, east London, 5 September 2024.

702 Amnesty International discussion group with FLEX Youth and Community Group, 13 September 2024.

703 Amnesty International discussion group in Hackney, east London, 5 September 2024.

704 Ibid.

705 Metropolitan Police Service, Violence Harm Assessment figures – Headlines, 11 August 2024, https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/quarterly-reports/vha-data-august-2024.pdf

706 Amnesty International UK, *Trapped in the Matrix: Secrecy, stigma, and bias in the Met's Gangs Database*, 2018, https://www.amnesty.org.uk/files/reports/Trapped%20in%20the%20Matrix%20Amnesty%20report.pdf

707 P. Williams and B. Clarke, *Dangerous associations: Joint enterprise, gangs and racism*, Centre for Crime and Justice Studies, 25 January 2016, https://www.crimeandjustice.org.uk/sites/default/files/Dangerous%20assocations%20Joint%20Enterprise%20gangs%20and%20racism.pdf

708 Amnesty International and OSF, *Europe: A Human Rights Guide for researching racial and religious discrimination in counter-terrorism*, 2021, Index: EUR 01/3606/2021, page 78, www.amnesty.org/en/documents/eur01/3606/2021/en/

709 Iain Agar, Chris Bradford, Joel M. Caplan, Les W. Kennedy and Mark Johnson, 'The Essex Risk-Based Policing Initiative: Evidence-Based Practices in Problem Analysis and Crime Prevention in the United Kingdom', 2023, *Justice Quarterly*, 40(7), 1024-1044, page 10, https://doi.org/10.1080/07418825.2023.2209163

710 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 2, page 7.

711 Essex Police, 'Fearless Futures Data Dictionary', undated. Provided via Freedom of Information Act response from Essex Police, ref no. FOI 20226, 4 September 2024.

712 Amnesty International interview with Dr Adam Elliott-Cooper, Senior Lecturer in Public and Social Policy, Queen Mary, University of London 8 May 2024.

713 Interview with Hope Chilokoa-Mullen, Lead Community Organiser, the 4Front Project, 30 July 2024.

714 Ibid.

715 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 2, page 7.

716 Amnesty International UK, *Trapped in the Matrix: Secrecy, stigma, and bias in the Met's Gangs Database*, 2018, https://www.amnesty.org.uk/files/reports/Trapped%20in%20the%20Matrix%20Amnesty%20report.pdf

717 Amnesty International, *Out of Control: Failing EU Laws for Digital Surveillance Export*, 21 September 2020, Index: EUR 01/2556/2020, https://www.amnesty.org/en/documents/eur01/2556/2020/en

718 Home Office, *Evaluation report on Grip and bespoke-funded hot spot policing*, 15 February 2024, https://www.gov.uk/government/publications/hot-spot-policing-in-england-and-wales-year-ending-march-2022/evaluation-report-on-grip-and-bespoke-funded-hot-spot-policing

719 Interview with Hope Chilokoa-Mullen, Lead Community Organiser, the 4Front Project, 30 July 2024.

720 Ibid.

721 Letter from the Metropolitan Police Service Director of Data and Co-Chair of the National Police Chiefs Council (NPCC) Data and Analytics Board to Amnesty International, 5 December 2024.

722 Letter from the Minister of State for Policing, Fire and Crime Prevention to Amnesty International, DECS reference: MIN/1237330/24, 23 December 2024.

723 Letter from the Minister of State for Policing, Fire and Crime Prevention to Open Rights Group and the Safety Not Surveillance coalition, DECS ref MIN/1184209/24, 30 September 2024.

724 Amnesty International interview with Dr Daragh Murray, Senior Lecturer at Queen Mary, University of London and Fellow of the Institute of Humanities and Social Sciences, 29 May 2024.

725 Letter from the Metropolitan Police Service Director of Data and Co-Chair of the National Police Chiefs Council (NPCC) Data and Analytics Board to Amnesty International, 5 December 2024.

726 London Policing Ethics Panel, Reports and discussion notes, http://www.policingethicspanel.london/reports.html

727 Central Digital and Data Office, Department for Science, Innovation and Technology, Algorithmic Transparency Recording Standard – Guidance for Public Sector Bodies, 5 January 2023, https://www.gov.uk/government/publications/guidance-for-organisations-using-the-algorithmic-transparency-recording-standard/algorithmic-transparency-recording-standard-guidance-for-public-sector-bodies

728 Ibid.

729 Ibid.

730 HM Government, Find out how algorithmic tools are used in public organisations, https://www.gov.uk/algorithmic-transparency-records

731 Ibid.

732 UN Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance, *Racial discrimination and emerging digital technologies: a human rights analysis*, UN doc A/HRC/44/57, 18 June 2020, https://undocs.org/en/A/HRC/44/57

733 UN High Commissioner for Human Rights, *The right to privacy in the digital age*, 2021, https://documents.un.org/doc/undoc/gen/g21/249/21/pdf/g2124921.pdf

734 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 1, page 11.

735 West Midlands Police, Ethics Committee Briefing Note, *WMP DAL Predicting Violent Crime*, July 2020 https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2020/07/01072020-EC-Agenda-Item-5-Predicting-Violence-Briefing.pdf?x32340

736 Metropolitan Police Service, Violence Harm Assessment – Standard Operating Procedure, 1 February 2024, https://www.met.police.uk/SysSiteAssets/media/downloads/met/about-us/violence-harm-index/violence-harm-assessment-standard-operating-procedure.pdf

737 The GDPR is a current EU regulation that forms part of retained EU law in the UK (UK GDPR), meaning that it was transposed into UK law after the UK left the EU. The UK GDPR is supplemented by the UK Data Protection Act 2018 which also brings the EU Law Enforcement Directive into UK law. The official name of the GDPR is: Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). The official name of the Law Enforcement Directive is: Directive (EU) 2016/680 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and on the free movement of such data, and repealing Council Framework Decision 2008/977/ JHA.

738 UK Data Protection Act, Part 3, section 31.

739 'Law enforcement purposes' are defined as the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, including the safeguarding against and the prevention of threats to public security.

740 UK Data Protection Act, Part 3.

741 Liberty, Response to the Department of Digital, Culture, Media and Sports Consultation *Data: A New Direction*, November 2021, https://www.libertyhumanrights.org.uk/wp-content/uploads/2021/11/Libertys-response-to-the-Department-of-Digital-Culture-Media-and-Sports-consultation-into-Data-A-new-direction.pdf; AWO, *Effective protection against AI harms*, July 2023 https://www.awo.agency/files/AWO%20Analysis%20-%20Effective%20Protection%20against%20AI%20Harms.pdf; Fair Trials, *Automating Injustice: the use of artificial intelligence and automated decision-making systems in criminal justice in Europe*, September 2021, https://www.fairtrials.org/app/uploads/2021/11/Automating_Injustice.pdf; Public Law Project, Evidence to the JCHR on the Data Protection Bill, submission on the Data Protection and Digital Information Bill (No. 2), May 2023 https://publiclawproject.org.uk/content/uploads/2023/06/JCHR-Evidence-Data-Protection-Bill-Public-Law-Project.pdf

742 Essex Police, Knife Crime and Violence Model – Fearless Futures – Specific Privacy Notice, Version 1.4, June 2021, https://www.essex.police.uk/police-forces/essex-police/areas/essex-police/au/about-us/privacy-notices/knife-crime-and-violence-model--fearless-futures/

743 Essex Police, Knife Crime and Violence Model – Fearless Futures – Specific Privacy Notice, Version 1.4, June 2021, https://www.essex.police.uk/police-forces/essex-police/areas/essex-police/au/about-us/privacy-notices/knife-crime-and-violence-model--fearless-futures/

744 Metropolitan Police Service, *Data Protection Impact Assessment relating to Risk Terrain Modelling (RTM)*, 30 September 2020, Part 1, page 11.

745 Ibid.

746 Amnesty International Interview with Professor Lawrence Sherman, Wolfson Professor Emeritus at the Institute of Criminology, University of Cambridge, Chief Executive Officer of Benchmark Cambridge, and former Chief Scientific Officer at the Metropolitan Police Service, 31 October 2024.

747 Ibid.

748 Freedom of Information Act response from West Midlands Police, ref no. 1125A/23, 16 August 2023, https://foi.west-midlands.police.uk/wp-content/uploads/2023/08/1125A-23-Attachment.pdf

749 Avon and Somerset Police, Offender Mangement App Question Responses, undated, page 10. Provided by Mwanzo Project.

750 Essex Police, Data Protection Impact Assessment – Stage 1 – Knife Crime and Violence Model (Fearless Futures), 2 April 2021. Provided via Freedom of Information Act response from Essex Police, ref no. FOI 20226, 4 September 2024.

751 Thames Valley Police , 'Sharing Thames Valley Police research and practice', *Research Journal*, Volume 7, Summer 2022, https://www.thamesvalley.police.uk/SysSiteAssets/foi-media/thames-valley-police/other_information/tvp-journal-volume-7-summer-2022.pdf

752 West Midlands Police, Data Ethics Committee Minutes and Advice, 8 February 2023 https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2023/06/DATA-ETHICS-COMMITTEE-minutes-and-advice-08.02.23-1.docx

753 Ibid, page 10.

754 Universal Declaration of Human Rights, Article 8.

755 UN Committee on Economic, Social and Cultural Rights (CESCR), General Comment No. 9: The domestic application of the Covenant, para 9.

756 Article 6, ICERD.

757 Committee on the Elimination of Racial Discrimination, General Recommendation No. 31, 2005, para. 6.

758 The Committee on the Elimination of Racial Discrimination General Recommendation No.36, 2020, UN doc CERD/C/GC/36, para 24, https://www.ohchr.org/en/documents/general-comments-and-recommendations/general-recommendation-no-36-2020-preventing-and

759 UN Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance, *Racial discrimination and emerging digital technologies: a human rights analysis*, UN doc A/HRC/44/57, 18 June 2020, https://undocs.org/en/A/HRC/44/57

760 Ibid.

761 See note 731 on GDPR.

762 'Law enforcement purposes' are defined as the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, including the safeguarding against and the prevention of threats to public security.

763 UN High Commissioner for Human Rights, *The right to privacy in the digital age*, 2021, UN doc A/HRC/48/31, https://documents.un.org/doc/undoc/gen/g21/249/21/pdf/g2124921.pdf

764 Ibid.

765 Independent Office for Police Conduct, Submit a complaint https://www.policeconduct.gov.uk/complaints/submit-a-complaint

766 Information Commissioner's Office, Make a complaint https://ico.org.uk/make-a-complaint/

767 Equality and Human Rights Commission, Equality Advisory and Support Service https://www.equalityhumanrights.com/about-us/contact-us/equality-advisory-and-support-service

768 Amnesty International, *Recommendations to the Parliamentary Assembly and Committee of Ministers of the Council of Europe on the Draft Framework Convention on Artificial Intelligence, Human Rights, Democracy and the Rule of Law*, Annex I – Amnesty International recommendations on AI regulation, 11 April 2024, Index: TIGO IOR 10/2024.5404, https://www.amnesty.eu/wp-content/uploads/2024/04/Amnesty-International-Recs-draft-CoECAI-11042024.pdf

769 Amnesty International and others, 'EU policymakers: regulate police technology!', 2023, https://www.amnesty.eu/wp-content/uploads/2023/09/Regulate-police-technology-EU-AI-Act-Statement-19-September.pdf

770 Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence, https://eur-lex.europa.eu/eli/reg/2024/1689/oj

771 UN Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance, *Racial discrimination and emerging digital technologies: a human rights analysis*, UN doc A/HRC/44/57,18 June 2020, https://undocs.org/en/A/HRC/44/57 https://undocs.org/en/A/HRC/44/57

772 Ibid.

773 Ibid.

774 Commission on Race and Ethnic Disparities, *Commission on Race and Ethnic Disparities: The Report*, March 2021 https://assets.publishing.service.gov.uk/media/6062ddb1d3bf7f5ce1060aa4/20210331_-_CRED_Report_-_FINAL_-_Web_Accessible.pdf

775 Data Protection Act 2018, Part 3.

776 Data Protection Act 2018, Part 3, Section 49.

777 Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law, Vilnius, 5.IX.2024. https://rm.coe.int/1680afae3c

778 Ibid.

AUTOMATED RACISM

How police data and algorithms code discrimination into policing

UK police are using data and algorithms to 'predict' who they believe will go on to commit crimes and where. The data they use is biased, particularly against Black and racialised communities in deprived areas. It is no surprise what this leads to.

Through primary research and freedom of information requests, analysis of public sources, first-hand accounts from people in affected areas, and interviews with academics, experts and community organisers, this report investigates the harmful impact of predictive policing.

The research finds that this increasingly widespread data-based policing is leading to the criminalisation, punishment and violent policing of Black and racialised people, and people from deprived areas, based on who they are, their backgrounds, where they live, who they associate with. This is the new face of racial profiling.

In the words of one interviewee: 'Rather than "predictive" policing, it's simply, "predictable" policing. It will always drive against those who are already marginalised.'

Amnesty International finds the use of these data-based systems to predict, profile and assess people's 'risk' of being involved in crime breaches the UK's human rights obligations and should be prohibited.

Amnesty International United Kingdom Section
The Human Rights Action Centre
17-25 New Inn Yard
London EC2A 3EA

www.amnesty.org.uk

AMNESTY INTERNATIONAL