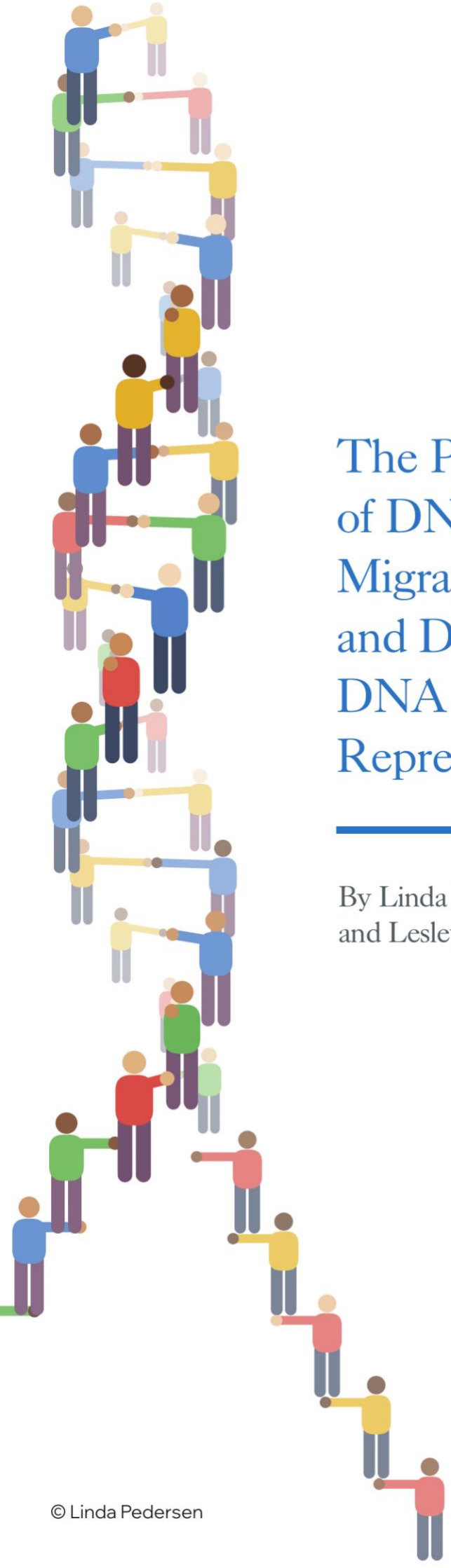

KING'S College LONDON

The Production and Interpretation of DNA Evidence in UK Family Migration Expertise, Communication and Decision-Making across Families, DNA Service Providers, Legal Representatives and the Home Office

By Linda Pedersen, Professor Denise Syndercombe Court and Lesley Nott

DNA @King's

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About This Report

Version 1.0

28 September 2026 by DNA Analysis at King's (DNA@King's), King's College London

Ethics approval

Ethical approval was granted by King's College London under reference MRA-24/25-49621 ('Refugee Family Reunion: DNA-analysis'), covering the Information Sheet dated 16 September 2025 and the Participant Consent Form dated 12 September 2025. Full details are set out in Section 4.3.

Anonymity and data availability

Applicant participants recruited through the DNA Analysis at King's (DNA@King's) clinic are fully anonymous in this and all research outputs. External professional interviewees are anonymised to role and organisation. Survey responses from individual legal practitioners are not attributed; responses from DNA testing organisations are not attributed without agreement. The case-by-case family register, the market-mapping workbook, the FOI compilation, and the underlying survey files are retained as restricted internal working documents and are not reproduced here; the report draws on them in aggregate and through anonymised illustrative quotations.

Please cite the published version of this report. The underlying interview, survey and case materials are restricted to protect participants and should not be cited independently.

Status

This is the final report of this phase of the research, covering data collected between May 2025 and June 2026. The market and policy landscape it describes continues to change; figures relating to the Ministry of Justice list of accredited DNA testing Companies and to the content of official guidance should be re-verified before being relied upon in any future publication or policy submission.

Authors and acknowledgements

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We acknowledge the valuable contributions of experts in immigration law, DNA laboratories and service providers who responded to our surveys, and most importantly, the families who generously gave their time to share their lived experience and expertise through their application process.

Any errors or omissions remain the responsibility of the authors.

Contents may be subject to change with further editing and reviewing.

Responses to the Report

"The paper provides valuable data and incisive analysis of systemic issues in the use and interpretation of DNA evidence in UK family migration decisions, particularly in family reunion cases involving displaced families. It explores the sometimes arbitrary nature of Home Office decision-making and the particular difficulties that arise when officials are required to interpret complex familial relationships and genetic results. Importantly, it also shines a light on the need for greater transparency in respect of DNA testing providers, both in relation to their technical capabilities and clarity about who conducts tests. In the context of an onerous and restrictive immigration legal framework, DNA evidence can assume critical importance for families seeking to establish relationships where other evidence may be unavailable or considered insufficient. The research therefore offers a valuable framework and practical recommendations for reform, supporting more consistent and accurate interpretation of DNA evidence that may be decisive for vulnerable and at-risk families."

Shaila Pal

Director of King's Legal Clinic and Reader in Clinical Legal Education

King's College London

"This report addresses a real and long-overlooked gap in how DNA results are used in UK immigration decisions. Current guidance treats DNA testing as optional supporting evidence in RFR/ Family Reunion applications, however in practice it is often treated as decisive. I find this concerning because kinship is not always genetic. In fact, many of the people affected, including children displaced by war and crime, live in legitimate functional and social family relationships that DNA testing cannot capture. The report also exposes a striking absence of quality regulation and independent oversight of DNA testing providers, in sharp contrast to the framework already in place for DNA use in criminal investigations, such as the roles of the Forensic Science Regulator, FIND Strategy Board, and the Science and Technology Ethics Advisory Committee. I believe its recommendations, if adopted, would go a long way toward making DNA evidence in immigration cases fairer and more accountable."

Dr Aaron Amankwaa

Assistant Professor of Forensic Biology & Forensic Science Policy

Northumbria University

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List of Abbreviations

Abbreviation	Meaning
APA	American Psychological Association (referencing style used in this report)
CMA	Competition and Markets Authority
CRP	Child relative (sponsors with protection): Appendix Child Relative (Sponsors with Protection) of the UK Immigration Rules, formerly Appendix Child staying with or joining a Non-Parent Relative (Protection) and abbreviated CNP
DDC	DNA Diagnostics Centre
DNA	Deoxyribonucleic acid
DNA@King's	DNA Analysis at King's College London (the accredited laboratory and clinic described in Section 1.2)
FM	Appendix FM (Family Migration route of the UK Immigration Rules)
FOI	Freedom of Information
GDPR	General Data Protection Regulation
HM	His/Her Majesty's
HMPO	HM Passport Office
HO	Home Office
HTA	Human Tissue Authority
ICIBI	Independent Chief Inspector of Borders and Immigration
ICO	Information Commissioner's Office
ID	Identification
ISO	International Organization for Standardization
LR	Likelihood ratio (the strength of a claimed familial relationship compared to a stated alternative)
MoJ	Ministry of Justice
MOOC	Massive Open Online Course

MRA	Ethics approval reference prefix issued by King's College London (as in MRA-24/25-49621)
NGO	Non-Governmental Organisation
NGOV	Name of the HMPO passport DNA sampling contract that preceded VCAS (FOI 2026/06006); full form not specified in source documents
OKI	One King's Impact (the King's College London fund that financed this project)
RAMFEL	Refugee and Migrant Justice (previously Refugee and Migrant Forum of Essex and London)
RFR	Refugee family reunion (the broad subject of this report; specific legal routes are named where relevant)
SNP	Single nucleotide polymorphism (a type of genetic marker)
STR	Short tandem repeat (the marker type used in most relationship DNA testing)
TLScontact	Visa-service contractor referenced in relation to the pre-2023 HMPO passport DNA route
UKAS	United Kingdom Accreditation Service
UKBA	UK Border Agency
UKVI	UK Visas and Immigration
UNHCR	United Nations High Commissioner for Refugees
VCAS	Name of the current VFS Global passport DNA sampling contract with HMPO (FOI 2026/06006); full form not specified in source documents
VFS	VFS Global (visa outsourcing company)

Executive Summary

Analytical focus: The remark "It is not something you do every day" (Fieldnote 40), made by someone who had undertaken a DNA test, captures the asymmetry at the heart of the process. Families are asked to navigate an unfamiliar, high-stakes and intimate technology within an already complex immigration process. Because DNA testing is not part of their everyday experience, they depend on providers and expert knowledge to identify the appropriate test, explain it and report its results, and on Home Office decision-makers to interpret those results accurately and consistently. This report therefore examines not only the difficulties families face but also what happens when the expertise they depend on is uneven, inaccessible, poorly communicated or inconsistently applied.

This report presents findings from the Refugee Family Reunion (RFR) project, funded through King's College London's One King's Impact (OKI) Fund. It examines how DNA evidence is produced, used, interpreted and governed in RFR applications, with particular attention to children joining or remaining with non-parent relatives under Appendix Child Relative (Sponsors with Protection) of the UK Immigration Rules (formerly Appendix Child staying with or joining a Non-Parent Relative (Protection), or Appendix CNP). These cases face high evidential thresholds and require extensive proof of both relatedness and family life. As fieldwork progressed, the project expanded to include other immigration contexts in which DNA testing is used to verify family relationships, including requests for DNA testing in connection with a child's first passport application.

The research was conducted during a period of significant change. New applications to the main refugee family reunion route were suspended in September 2025 while new rules are designed. The route for children joining non-parent relatives, which is the focus of this report, remains open, and the findings are directly relevant to the design of future evidential requirements across both routes.

The overarching aim of the project is to assess the efficacy and fairness of Home Office policy and practice on evidential requirements in RFR cases. It also aims to support refugees and migrants in navigating the immigration system by identifying barriers within current evidential practices, clarifying how DNA testing operates in practice, and generating knowledge that can inform fairer, safer and more transparent decision-making.

The research is grounded in a specific site: DNA Analysis at King's College London (DNA@King's), a UKAS-accredited and Ministry of Justice (MoJ)-approved laboratory and qualified sampler. It is one of the 12 entries on the MoJ section 20 list and the setting in which much of the fieldwork was conducted. Because DNA@King's is both a research site and a provider in the market this report examines, the report sets out this dual position and the disclosures it requires (Section 1.2).

The findings (Section 5) map directly onto the five research objectives developed at the pilot workshop with the Home Office, HM Passport Office (HMPO) and legal organisations supporting RFR applications. These objectives cover the interpretation, reporting, transparency and governance of DNA evidence across the application process. The report also integrates evidence from a companion market-mapping study of the UK immigration DNA testing industry. This study traces accredited laboratories, their geographical locations and ownership, and the commercial and administrative processes through which DNA evidence is produced. It speaks directly to Objectives 2, 3 and 5.

The research explores how DNA evidence is understood and operationalised across legal, scientific, commercial and administrative domains. It draws on a consolidated corpus of handwritten clinic fieldnotes and family and provider transcripts covering approximately 21 family cases; interviews and correspondence with legal practitioners, forensic experts and DNA sample collectors; participant observation in clinic settings; document and policy analysis; workshops; Freedom of Information (FOI) requests; and a market-mapping exercise covering all 12 MoJ-accredited laboratories.

Key Findings

- **Objective 1:** DNA evidence is increasingly relied upon in RFR cases, yet decision-makers, legal practitioners and civil society actors widely misunderstand its probabilistic nature. Inconclusive DNA results are frequently treated as negative evidence, even though they often reflect the limitations of the test selected rather than evidence against the claimed relationship.
- **Objective 2:** Accredited DNA laboratories differ substantially in testing capabilities, reporting formats and transparency, particularly for complex relationship testing beyond parent and child. Of the 12 entries on the MoJ section 20 list, six sit within just three corporate consolidation clusters, and ownership does not always align with where testing physically takes place.

- **Objective 3:** The public-facing market is larger and less transparent than the official list suggests. In June 2026, 23 consumer-facing brands and brokers advertised UK immigration DNA testing, several without stating which of the 12 accredited companies performs the analysis. This leaves applicants unable to judge whether the test they are sold can answer the relationship question their case requires.
- **Objective 4:** Home Office guidance states that the Home Office "cannot require" DNA evidence and that it is one of a range of options for proving a relationship. Yet stakeholders consistently report uncertainty about how this guidance is interpreted and applied. The research also found limited transparency about how DNA evidence is weighed against other forms of evidence, inconsistent record-keeping, and variation across tribunal decisions.
- **Objective 5:** Although the Home Office cannot require DNA testing, in practice responsibility for suggesting and facilitating it has shifted informally onto legal representatives and third-sector organisations, raising ethical and accountability concerns. In the passport route, a similar shift occurs through private visa-service contractors working for the state.
- Many private DNA providers mainly offer standard parent-child tests, which compare the claimed relationship with an unrelated alternative. These tests may fail to account for plausible but unrecognised close-relative alternatives and can lead to misleading or avoidably inconclusive outcomes.
- The cost of DNA testing and limited global access to authorised samplers create significant barriers for families. They can also expose children and other relatives to serious risks when they must travel through unsafe areas. Families and practitioners described applicants borrowing money from their communities to cover testing costs. This raises questions about community indebtedness and points to the need for legal aid that covers DNA testing fees.
- Refugee families hold critical experiential expertise about navigating evidential regimes, including the information gaps, uncertainties and opaque processes they encounter. Their knowledge should be recognised as central to policy and practice reform.
- Providers offering immigration DNA testing differ in testing scope. They range from 24 to around 50 short tandem repeat (STR) markers, and some also use sequenced STRs and single nucleotide polymorphisms (SNPs) in varying numbers. They also differ in accreditation scope, in how they handle mutations, in whether they account for marker linkage (which affects tests beyond parent and child), and in subcontracting arrangements. These differences are largely invisible to applicants and their advisers at the point of instruction.

- Practitioner interviews identify chain of custody, meaning what happens to a sample before it reaches the laboratory, as a central vulnerability. Practitioners also describe a shift towards a more privatised testing market in which customers, rather than the Home Office, may receive reports first. This creates scope for selective disclosure or retesting with another provider.
- The report shows that DNA evidence is best understood as the product of a distributed, transnational infrastructure rather than a single laboratory test. Families describe sampling routed through third countries at a cost of thousands of pounds, collection kits taking up to three months to reach an overseas sampler, and DNA entering a case only after documentary evidence has been treated as insufficient. The result is an evidential escalation in which DNA testing is formally voluntary but may, in practice, be very difficult for families to decline.

The findings point to an urgent need for improved guidance, training, standardisation, ownership transparency and publicly accessible information on DNA testing in migration decision-making. They also highlight the importance of recognising refugee families as experts by experience. Their knowledge of navigating these often opaque systems can show where procedures are unclear, inconsistent or unnecessarily burdensome, and how evidential requirements operate in practice. The report provides a robust evidence base for the project's next phase of impact and engagement work. Planned activities include a practical toolkit developed with the NGO Right to Remain; a blog post and podcast for the Free Movement website; further stakeholder engagement; a knowledge-exchange workshop for the Home Office and other decision-makers; and exploration of a possible MOOC (massive open online course) of short lectures and teaching materials on DNA testing and DNA reports.

How to Read This Report

The report is built around five research objectives identified during the preliminary workshop in 2024/25 and set out in Section 1.4. Section 5, the Findings, is organised so that each subsection answers one objective directly. The Discussion, Recommendations and Conclusion use the same objective labels. A reader interested in a single question can therefore follow it from objective to finding to recommendation without reading the entire report.

- For the argument in short: read the Executive Summary and Key Messages, then Sections 6 and 9.
- For the research site and its accreditation context: Section 1.2 describes the DNA@King's clinic and the immigration testing service it offers, and Section 2.3 sets out the MoJ section 20 framework that governs it.
- For the evidence base and its limits: Sections 4.2 to 4.5, including the anonymisation policy, the researcher positionality statement, and an account of what this study could not obtain.
- For practitioners and policymakers: Section 8 sets out recommendations grouped by audience: the Home Office, accredited laboratories and brokers, and legal practitioners and NGOs.
- For the documentary record: Appendices A to E reproduce the FOI responses, the survey instruments, and the sample-collection interview note in full.

Where the report quotes families, quotations are labelled by source type (for example, Fieldnote 9 or Interview 6) rather than by any identifier.

1. Introduction

1.1 Background and Context

Origins of the research: a 2016 starting point

The questions investigated in this report first took shape nearly a decade earlier, on 27 May 2016, in an interview at DNA Analysis at King's College London between Linda Lund Pedersen (then a doctoral research student in Human Rights and Sociology at the London School of Economics and Political Science), Lesley Nott (Business Development and Case Manager), and Dr Denise Syndercombe Court (then Reader in Forensic Genetics). As part of Pedersen's dissertation, the study compared UK and Danish practice in migration-related DNA testing, including how relatedness was tested, reported and explained to non-specialist decision-makers, and how each system handled relationships beyond the simple parent-child pairing. That exchange first revealed the gap between forensic science practice and administrative decision-making that this project later set out to investigate systematically. The present study therefore returns to questions articulated in 2016, which directly anticipate Objectives 1, 2 and 4 of this report.

> ***Analytical focus:*** *In the 2016 interview, before the Singh review (published 2018/19), Nott described efforts to standardise DNA practice across the Home Office and HM Passport Office to make the process easier for families and laboratories. Pedersen characterised the Danish cases she had studied as primarily involving parents and children; Nott described UK cases involving siblings, half-siblings and grandparents, including where parents had died or gone missing. Their exchange foreshadowed the report's analysis of consistency in administrative practice and the interpretation of complex kinship evidence.*

The formally funded by One King's Impact and the project commenced in May 2025, coinciding with the publication of the UK Home Office's immigration policy White Paper, *Restoring Control over the Immigration System* (Home Office, 2025). This White Paper sets out the government's plans to reform the UK immigration system, with an emphasis on control, enforcement, and evidential robustness. Its publication provided an important policy backdrop for the research, namely the suspension of refugee family reunions, situating the project within a period of heated debate and reform concerning immigration control, evidential standards, and decision-making practices.

Refugee family reunion (RFR) is a critical legal pathway enabling individuals granted protection in the United Kingdom to reunite with close family members. While the UK Immigration Rules provide relatively clear routes for partners and minor children under Appendix Family Reunion (Sponsors with Protection), applications involving extended or non-parent relatives, particularly children joining grandparents, siblings, aunts or uncles, are assessed under the considerably narrower Appendix Child

Relative (Sponsors with Protection) and face significantly higher evidential thresholds (Ancite-Jepifánova & Pal, 2026).

In these cases, applicants are required to demonstrate both family relatedness and the existence of family life through detailed documentary, testimonial, and, increasingly, biometric evidence. DNA testing has emerged as a form of supporting evidence in such applications, despite ongoing legal, ethical, and scientific debates about its appropriate role in immigration decision-making.

1.2 The Research Site: DNA@King's and its Immigration Testing Service

The clinic in which much of the fieldwork for this report was conducted is also one of the twelve entities legally able to produce the evidence the report examines. That dual position is set out here, at the outset, because it shapes both the access this research had and the disclosures it must make.

What DNA@King's is

DNA Analysis at King's College London (DNA@King's) sits within King's Forensics in the Institute of Pharmaceutical Science at King's College London. It is a UKAS-accredited testing laboratory (No. 7850) operating to ISO/IEC 17025:2017 and is approved by the MoJ under the section 20 framework described in Section 2.3. Led by Professor Denise Syndercombe Court, Professor of Forensic Genetics, an expert witness and a member of this project's team, the service draws on around fifty years of work in human identification and relationship testing, since 2012 at King's College London (King's College London, 2026a). Alongside relationship testing, it provides complex kinship analysis, specialist low-level forensic casework, forensic phenotyping, geographic ancestry and human age estimation, together with Y-chromosome and mitochondrial DNA analysis. It is also among a small international group of laboratories working with massively parallel sequencing (https://www.kcl.ac.uk/forensics/accredited-services/dna-analysis-kings).

One capability is of direct analytical relevance to this report. The Forensic Genetics group at King's is described as the main provider of population frequency data for forensic purposes in the UK, and of sequence population frequencies worldwide (King's College London, 2026a). Population frequency data are essential to calculating an LR: how common the observed genetic variants are in the relevant population affects how strongly the DNA results support one proposed relationship over another. The findings in Section 5.2, and the illustrative case study at the start of Section 5, in which a reported figure was substantially inflated by the use of generic pan-African frequencies for a family from a region with high population substructure, turn on exactly this point. A UK academic group has made an important contribution to the population reference data available for kinship testing, but laboratories may draw on population data from a range of sources. The fact that reports rarely identify which reference population or dataset has been used is therefore a significant feature of the evidential process rather than an incidental detail.

The published service offer

Table 1 summarises what DNA@King's publishes about its service. It is reproduced here not as promotional material but as a documentary source in its own right: it is one of the few points at which an accredited provider states publicly, and in plain language, what an applicant should expect from the process.

Table 1. Published elements of the DNA@King's service offer (King's College London, 2026a, 2026b).

Published element of the service	What the provider states
Confidentiality	Complete confidentiality and secure storage of samples and results.
Explanation of the process	Staff take time to explain the process, with full discussion of the implications of testing before the applicant commits.
Where the sample is given	Either at the service's own clinic, or via a sampling kit sent directly to a registered medical practitioner or nurse of the applicant's choosing. Kits are provided free of charge.
Overseas sampling	Sampling can be arranged through worldwide clinics and overseas embassies.
Staff qualifications	Senior scientists educated to doctorate or master's degree level.
Testing practice	Duplicate testing to confirm exclusions.
Accreditation	UKAS accredited testing laboratory No. 7850 (ISO/IEC 17025:2017); MoJ approved provider of DNA testing.
Named test categories	Parentage (including birth certificate changes); immigration cases; complex relationships; Y-chromosome; mitochondrial DNA.

The migration-specific offer

‘Immigration’ is one of the service's named test categories, listed alongside parentage, complex relationships, Y-chromosome and mitochondrial testing. The published description covers cases "where DNA tests are used to support a claimed relationship", states that the tests meet the requirements of "the Home Office UK Border Agency", and notes that sampling can be arranged through worldwide clinics and overseas embassies. All tests are stated to meet ISO 17025 and legal standards, and to be accredited by the MoJ for court-directed section 20 tests (King's College London, 2026b).

Two points from this service description recur in the findings. First, immigration cases and complex relationships are named separately, making clear that an immigration case may require more than a standard parent–child analysis. Second, the description gives applicants information about sampling and accreditation that can be difficult to locate in the wider market. Sections 5.2 and 5.3 examine how providers explain which relationship tests they can perform and whether those tests fall within their accredited scope.

Sampling model, consent, and the welfare threshold

The service operates two sampling routes: attending its own clinic, co-located with the laboratory, or using a free sampling kit sent to a registered medical practitioner or sampler. It does not support do-it-yourself (often referred to as ‘peace of mind’) testing in which an applicant takes their own sample at home, on the stated basis that, since September 2007, taking a sample for the purpose of DNA testing without proper informed consent has been a criminal offence. For a child under sixteen, a sample may only be taken with the consent of a person with parental responsibility at the time of sampling, and where that person is not themselves being tested they must be able to demonstrate their legal right to consent; adolescent children may additionally be asked to give their own consent (King's College London, 2026c). In many other countries the age of consent to provide a sample is eighteen.

Alongside this, the provider states a welfare threshold: that testing should only be carried out where it is "in the best interests of the child", and that everyone taking part in a relationship test, particularly one involving a child, should think carefully about the implications for themselves and their family before proceeding. This is a stronger formulation than anything in the Home Office guidance examined in Section 2.1, which addresses voluntariness and evidential weight but does not set a best-interests threshold for whether a test should be undertaken at all. It also sits in visible tension with the finding in Section 5.5 that families experience DNA testing as formally voluntary but practically very difficult to decline once they believe reunification depends on it. A provider-level best-interests test can only do meaningful work if the family arriving at the clinic still has a real choice by the time they get there.

> ***Analytical focus:*** *The clinic's own published terms make explicit what Sections 5.4 and 5.5 find missing at the level of policy: a stated welfare threshold, a refusal to accept unwitnessed home sampling, an explicit consent architecture for children, and a documented route for overseas sampling. That an accredited provider articulates these commitments more precisely than the guidance governing the decisions its reports feed into, is itself a finding about where responsibility for the ethics of immigration DNA testing currently sits.*

Why this site, and what it means for the research

DNA@King's is the only academic-sector entry on the MoJ section 20 list (Section 5.3). It takes fee-paying court-directed and immigration work on the same evidential terms as commercial laboratories,

but does not market through a consumer brand network, and its referrals come predominantly from legal professionals. It also holds a Human Tissue Authority licence, which permits longer archiving of samples and data than the six-to-eighteen-month norm elsewhere in the market (Section 2.3), a difference that matters for families who sponsor further relatives over time or lose their original reports.

This combination made the clinic an unusually productive research site: it is simultaneously a place where families arrive with live cases, a laboratory producing the reports that decision-makers read, and an institutional actor consulted on the Home Office's own DNA policy guidance (Section 2.1). It is also the reason this report carries an explicit disclosure. Two members of the research team are members of the clinic's staff and are named throughout with their consent; applicant participants recruited through the clinic remain fully anonymous; and the clinic's position as one of the twelve accredited entries is stated openly wherever the accredited market is analysed (Sections 4.3 and 5.3). The findings that follow should be read with that position in view.

1.3 DNA Evidence in Immigration Decision-Making

DNA analysis occupies a distinctive position in immigration systems. While it is often perceived as objective and conclusive, DNA evidence is inherently probabilistic and context dependent. Its growing use in family reunion cases reflects broader trends toward biometric governance and technocratic forms of verification. However, the evidential weight afforded to DNA results remains unclear, and concerns persist regarding decision-makers' capacity to interpret forensic reports accurately.

1.4 Research Aim and Objectives

The overarching aim of this study is to assess the efficacy and fairness of Home Office policy and practice in respect of evidential requirements in RFR cases.

To achieve this aim, the research was conducted with the Home Office, HM Passport Office (HMPO) and legal agencies supporting RFR applications, to explore:

1. Objective 1: to examine how decision-makers interpret DNA evidence in refugee family reunion and related immigration cases. Addressed through practitioner interviews, the legal practitioner survey, analysis of published guidance and tribunal decisions, and Freedom of Information requests on decision-maker training (Section 5.1).
2. Objective 2: to identify differences in the tests and reports provided by laboratories and agencies accredited by the MoJ. Addressed through the DNA provider survey, practitioner interviews, examination of report formats, and the market-mapping exercise covering all twelve accredited entries (Section 5.2).

3. Objective 3: to assess how transparent accredited laboratories and agencies are about the capabilities of the tests they offer. Addressed by tracing twenty-three consumer-facing brands and brokers to the accredited entities that perform their analysis, and by reviewing provider websites, terms and accreditation statements (Section 5.3).
4. Objective 4: to assess the transparency of official DNA guidance and how it is interpreted in practice. Addressed through policy and guidance analysis, the Freedom of Information programme, interviews, and the practitioner survey (Section 5.4).
5. Objective 5: to trace the process from identifying and instructing DNA services through to Home Office evaluation. Addressed through clinic fieldnotes and family accounts, interviews with samplers and providers, and the HM Passport Office Freedom of Information response and interview evidence on the state-contracted passport route (Section 5.5).

These five objectives structure the Findings section of this report (Section 5): each subsection is headed by the objective it addresses, so that the evidence base maps directly and visibly onto the research questions.

2. Policy and Regulatory Background

This section situates the research within the contemporary policy, legal, and regulatory landscape governing the use of DNA evidence in immigration and RFR cases. It provides an overview of relevant guidance, reviews, and regulatory arrangements, and highlights key areas of contestation and opacity that informed the focus of this project, in particular Objectives 3 and 4.

2.1 Home Office policy and guidance on DNA evidence

The Home Office has produced specific policy guidance on the use of DNA evidence in immigration and nationality applications, including RFR cases. This guidance sets out that DNA testing is a form of supporting evidence and should not be treated as mandatory. In principle, applicants should not be required to undertake DNA testing, and decisions should be based on a holistic assessment of all available evidence.

However, stakeholders consistently report uncertainty about how this guidance is interpreted and applied in practice. Concerns persist regarding the evidential weight afforded to DNA reports, the treatment of inconclusive results, and the extent to which decision-makers understand the probabilistic nature of forensic genetics. These concerns have been amplified by repeated revisions of guidance over time and limited public-facing explanation of how DNA evidence should be balanced against other forms of proof (Singh 2018, 2019).

The policy sequence relevant to this report is: ministerial acknowledgement and commitments in November 2018; the Singh independent review in February 2019; publication of Home Office DNA policy guidance version 4.0 in March 2020; and the ICIBI reinspection, published in 2023 and reporting the position as of October 2022. This sequence distinguishes changes to formal guidance from the separate question of how consistently the guidance has been implemented.

Notably, the Home Office's DNA policy guidance was informed by input from members of this project team: Syndercombe Court and Nott, on behalf of DNA@King's, were consulted during its development, particularly on secure chain of custody, consent, sample collection, and the explanations of mutations so that decision-makers can interpret DNA test reports appropriately (Nott, 2026). Despite this direct input, the published guidance was last substantively updated in March 2020, and Nott (2026) argues it would benefit from a Home Office-provided template report and greater transparency about which accredited laboratories and agents can provide which tests, a gap this report's Objectives 3 and 4 findings independently corroborate.

2.2 Independent reviews and scrutiny

In November 2018, then Immigration Minister Baroness Williams of Trafford commissioned Darra Singh to lead an independent task force reviewing the Home Office's approach to DNA testing in immigration cases, following revelations that testing had in some cases been improperly mandated. The resulting Independent Review of the Home Office's response to the mandating of DNA evidence for immigration purposes (Singh, 2019) found that, while the Home Office had worked hard to address the problem of DNA testing being treated as mandatory rather than voluntary, its response could have been more effective with greater professional curiosity, attention to detail, and follow-through on commitments (Singh, 2019; see also Nott, 2026). The then Immigration Minister, Caroline Nokes, accepted all the review's recommendations and stated that the department had already begun acting on them.

Despite these commitments, this project's findings suggest that DNA testing continues to function as a de facto requirement in some contexts, particularly where documentary evidence is unavailable or contested. The legacy of earlier practice continues to shape expectations among decision-makers, legal representatives and applicants. As part of the wider research reported here, Pedersen and Nott submitted Freedom of Information requests asking what training decision-makers had received since the Singh review, who provided it, whether trainers had a scientific understanding of DNA analysis and interpretation, and whether all relevant decision-makers had been trained (Nott, 2026). The resulting findings are analysed in Appendix E and directly inform Objective 4 of this report.

This training gap is corroborated by an independent government source: the Independent Chief Inspector of Borders and Immigration's reinspection of family reunion applications found that, as of October 2022, 'the Home Office's position on funding for DNA tests remained unchanged in that the Home Office does not fund them,' and that 'no data was being collected on their use' (Independent Chief Inspector of Borders and Immigration, 2023). The absence of any centrally collected data on DNA testing usage, three years after the Singh review, is itself evidence of the limited institutional oversight this report's objectives set out to examine.

Earlier British Red Cross research places these concerns within longer-standing difficulties in family reunion. Beswick (2015) documented missing identity and relationship documents and the specialist legal work required to assemble applications. The Long Road to Reunion subsequently showed how procedural requirements could expose applicants to costly and dangerous journeys (British Red Cross, 2020). These studies provide historical context for examining how documentary uncertainty, access to expertise and the practical demands of obtaining evidence intersect in DNA testing.

2.3 Regulation of DNA testing providers: the MoJ Section 20 framework

The MoJ section 20 list itself is not a requirement for immigration purposes; current GOV.UK guidance says that the laboratory should have ISO/IEC 17025 accreditation and follow the Home Office collection process, including independent witnessed sampling and identity checks. The section 20 framework does important work, however, there is an overlap and it provides an easy way for decision-makers to distinguish accredited testers from the wider direct-to-consumer DNA market. Yet the framework does not answer all the questions that matter to applicants: it regulates the laboratory list, but it does not require consumer-facing brokers to make clear at the point of sale which accredited company will perform the analysis. Nor does it reveal who owns the laboratory, whether the work is routed through a broker, or in which country samples may be analysed (see further, Section 5.3, Objective 3).

While accreditation is intended to assure quality, the published lists provide limited information about the specific capabilities of each laboratory, including whether they offer only routine parent–child testing or have the analytical capability to undertake sufficiently informative testing of more complex kinship relationships. The absence of clear, publicly accessible information about testing scope, reporting formats, and sampling arrangements makes it difficult for applicants and advisers to make informed choices. In the research, stakeholders also expressed concern about an increasingly concentrated market, with a small number of providers dominating immigration-related DNA testing (see Section 5.2, Objective 2). This raises questions about competition, pricing, and the diversity of testing options available to families.

Nott (2026) sets out several of these problems from a practitioner's perspective. The GOV.UK page hosting the MoJ's section 20 list is headed 'If you're getting a test to use in court' and links through to the Child Maintenance Service, a legacy of the list's original purpose for court-directed paternity testing, even though the same list now ‘governs’ immigration DNA evidence. The list mixes laboratories that perform testing in-house with companies that route work to accredited laboratories, sometimes outside the UK, a distinction that is rarely obvious from a provider's marketing, pointing to a lack of transparency. While the UK-external tester may be ISO17025 accredited, knowledge of the scope of their testing ability (provided with UKAS accreditation) might not be so clear.

The MoJ's published list is also silent on the retention of biological samples, DNA extracts, profiles and reports. These are distinct materials governed by different legal and organisational rules. Providers examined for this study described variable retention practices, and public-facing information does not consistently tell applicants what will be retained, for how long, in which jurisdiction, or whether material or data may be shared within a subcontracting chain. This lack of clarity matters both for consent and for families who may later need to rely on an earlier test or report. The present study does not establish a uniform statutory retention period across providers. There is

also a general lack of clarity: the Human Tissue Authority will expect that samples are not held (other than for processing), although laboratories holding an HTA licence, such as DNA@King's, may retain samples for future use. The HTA does not, however, cover extracted DNA or data and generally the laboratories are expected to determine a policy that reflects the requirements of data protection and the wishes of the families themselves and this may form part of the consent process.

A separate Home Office page for 'giving DNA evidence to the Home Office' offers limited guidance that does not specifically address RFR or immigration cases, and does not list which laboratories can provide the complex relationship testing such cases often require.

2.4 Recent immigration reform and evidential tightening

The project commenced in May 2025, coinciding with the publication of the UK Home Office's immigration White Paper Restoring Control over the Immigration System (Home Office, 2025). The White Paper outlines proposals to strengthen immigration control, increase enforcement, and tighten evidential requirements across multiple routes and in particular refugees' access to family reunion in the UK. Although the White Paper does not focus specifically on DNA testing, its emphasis on control, verification, and evidential robustness forms an important setting to this research.

2.5 Key issues motivating the research

Across policy documents, reviews, and stakeholder discussions, several persistent issues can be identified:

- Lack of clarity regarding the evidential weight of DNA reports
- Limited transparency about laboratory capabilities and differences between tests
- Uncertainty about sampling processes and geographical access
- Ongoing uncertainty about when DNA testing is appropriate
- Risk of DNA evidence being treated as determinative rather than supplementary

These issues provided the immediate motivation for the research and informed the project's focus on fairness, consistency, and transparency in the use of DNA evidence in RFR cases, and map directly onto the five research objectives set out in Section 1.4.

3. Conceptual and Analytical Framework

3.1 Family, Evidence, and Fact-Finding

The research is situated within socio-legal scholarship on evidence, documentation, and decision-making in refugee and asylum systems. Evans Cameron's concept of a 'fact-finding crisis' in refugee law highlights the structural difficulties faced by adjudicators tasked with determining truth under conditions of uncertainty, limited documentation, and high stakes (Evans Cameron, 2018). In this context, DNA evidence is often treated as a stabilising form of proof, despite its interpretive complexity, echoing Fassin and d'Halluin's (2005) analysis of medical certificates as 'ultimate evidence' for asylum seekers, in which the search for objective, bodily proof of a claimed identity or relationship is itself a symptom of the fact-finding crisis it is called upon to resolve.

Anthropological and Science and Technology Studies (STS) literature further demonstrates that documents and scientific tests do not merely reflect reality but actively participate in producing it (Riles, 2006; Navaro-Yashin, 2007). DNA evidence, like other bureaucratic artefacts, gains meaning through institutional practices, legal standards, and administrative interpretation.

3.2 DNA as Social-Material Evidence

This study adopts a social-material approach to DNA evidence, understanding genetic analysis as simultaneously scientific, legal, and social (M'Charek, 2008; Aas, 2006). DNA does not 'speak for itself'; its significance depends on how LRs are calculated, reported, translated, and evaluated by non-specialists. Misunderstandings arise when probabilistic findings are treated as definitive proof or when uncertainty is interpreted as evidence of deception or non-familial relatedness.

This framework enables critical examination of how scientific authority, administrative discretion, and moral judgments intersect in RFR decision-making, building on Weiss's (2011) account of the ethical implications of DNA analysis for family reunification and Skinner's (2018) caution that forensic genetic evidence carries an authority that can exceed its actual evidential limits.

3.3 Epistemic Status of DNA Evidence in Migration Decision-Making

An additional analytical concept guiding this research is epistemic status, that is, how different forms of knowledge are ranked, trusted, and authorised within decision-making processes. In RFR cases, DNA evidence often acquires a privileged epistemic status, being treated as more objective, reliable, or decisive than other forms of evidence such as testimony, documents, or accounts of lived family life (see, for example, Fassin & d'Halluin, 2005; Heinemann, Naue & Tapaninen, 2013)

The research demonstrates that this elevated epistemic status is not inherent to DNA evidence itself, but is produced through institutional expectations, infractures, legal cultures, and administrative practices. Misunderstandings of probabilistic DNA results, combined with uncertainty about how to weigh DNA alongside other evidence, can lead decision-makers to over-rely on genetic data or to treat inconclusive results as evidential failure.

Examining DNA evidence through the lens of epistemic status allows the research to move beyond questions of technical accuracy and toward a broader analysis of how knowledge claims are constructed, stabilised, and contested within migration governance.

This concern is not unique to the UK. Comparative research on DNA testing for family reunification in Austria, Finland, and Germany documents similar patterns of over-reliance on genetic evidence and inconsistent decision-making across otherwise similar bureaucratic systems (Heinemann, Naue & Tapaninen, 2013; Heinemann, Helén, Lemke, Naue & Weiss, 2015), while Tapaninen and Helén (2019) show that DNA analysis within the Finnish family reunification system does not straightforwardly 'verify' relatedness so much as reconfigure what counts as a family for administrative purposes. Read alongside Amoore's (2006) account of biometric bordering, this literature situates the UK's DNA evidence practices within a wider European pattern of governing family migration through the body.

3.4 Reproductive Justice: Family Reunion and the Right to Parent

This report also draws on the reproductive justice framework developed within Black feminist organising in the United States, most closely associated with the scholarship of Loretta Ross. Reproductive justice defines the right to bodily and family autonomy in three interlocking parts: the right to have children, the right not to have children, and the right to parent the children one already has in safe and healthy environments (Ross & Solinger, 2017). Crucially, the framework insists that these rights cannot be secured through individual choice alone; they depend on the social, economic, and political conditions, within which family life is lived. In the context of family migration, those conditions include immigration status, evidential requirements, state decision-making and access to the resources needed to navigate them. Read through this lens, RFR is not only an immigration process but a reproductive justice question. It concerns whether a parent, sibling, or carer can exercise the right to parent, and to be parented, within a safe environment, reunited with the people who constitute their family, rather than separated from them by conflict and displacement, and now also by evidential bureaucracy. DNA testing enters this picture as a technology adjudicate who counts as a family member; a form of biological verification imposed overwhelmingly on people who are already displaced. At the same time, DNA evidence can be beneficial in the way it can confirm familial relationship that may then overturn a refusal of family reunification where other evidence has been considered insufficient.

The research does not claim neutrality about whether families should be reunited. It proceeds from the position that they should be reunited safely and without unnecessary delay, and that the evidential and bureaucratic barriers documented here are a legitimate object of reproductive and social justice concern.

4. Methodology

4.1 Research Design

The project was initially designed as an emergent, ethnographic feminist science and technology studies (STS) study, in which the scope, sites and methods were refined as fieldwork progressed. Knowledge about a technology that is assembled across clinics, laboratories, brokers and administrative offices is necessarily situated and partial, and studying it means following it through the sites in which it is made and the infrastructures that combine it together (Haraway, 1988; Harding, 1991; Star, 1999; Mol, 2002; Clarke, 2005). It was initially designed to focus only on complex RFR cases involving children joining or remaining with non-parent relatives under Appendix CRP. However, during the course of data collection it became clear that a narrow focus on complex kinship cases alone would not adequately capture how DNA testing operates in practice within migration decision-making. The approach also involves what Star (1999) calls infrastructural inversion: turning analytical attention onto the arrangements that normally remain in the background of a DNA result, and that become visible mainly when something goes wrong, and in this study when the DNA reports has been rejected or needed further explanation by the Home Office.

As a result, the research scope was expanded to include parent–child cases encountered through the DNA@King's clinic and complemented by a dedicated market-mapping study of the UK immigration DNA testing industry (reported alongside this study and integrated into Section 5). This expansion was analytically driven and responsive to the field, reflecting the ways in which applicants, advisers, and institutions understand and engage with DNA testing across different family relationships and across the supply chain that produces DNA evidence, making up the infrastructure of DNA testing. Parent–child cases are analysed across the wider field of family migration; the relationship type alone does not establish which Immigration Rules route applied to an individual case.

The research design therefore evolved to examine DNA testing as an infrastructure of practices rather than a tool confined to exceptional or complex cases. Data collection took place between June 2025 and June 2026, with the market-mapping component carried out in May and June 2026, alongside ongoing stakeholder engagement. Analysis and writing were conducted in parallel, with final writing up completed toward the end of the data collection period.

4.2 Data Collection Methods

The study draws on multiple sources of qualitative and documentary data:

- Semi-structured interviews and clinic fieldnotes with individuals who attended the DNA@King's clinic. Interviews explored why participants pursued DNA testing, what led them to choose the King's clinic, who informed them about testing, and how they understood

its role in their immigration or family reunion case. Handwritten clinic fieldnotes and family interview transcripts from 21 family cases. The material was analysed using an NVivo thematic analysis. Covering themes such as: application pathways, provider selection, sampling infrastructure, evidence validity, laboratory and administrative interpretation, kinship form, family labour, trust and researcher reflexivity.

- Interviews and correspondence with legal practitioners, forensic scientists, people involved in DNA sample collection, and other stakeholders involved in RFR and DNA testing processes.
- Participant observation in the DNA@King's clinic, including observation of the administrative and evidential paperwork associated with DNA testing, the sample collection process (such as mouth swabs), and informal conversations with DNA samplers and clinic staff.
- Document analysis, including Home Office guidance, decision letters, tribunal judgments, accreditation lists, and policy reports.
- Workshops and knowledge exchange activities, including the RFR project workshop and meetings with international researchers examining DNA testing in migration contexts.
- Freedom of Information (FOI) requests were used to explore institutional processes and identify data gaps within the Home Office and HM Passport Office. Nine requests were submitted between October 2025 and July 2026, covering the state-contracted passport DNA route (reproduced in Appendix A), decision-maker training, Singh (2019) review implementation, refusal-letter reasoning, and data governance; a full chronological compilation and analysis is presented in Appendix E. Methodologically the project draws on recent migration scholarship that treats FOI not simply as a procedural means of obtaining information, but as an analytical site in which information may be selectively disclosed, delayed, or withheld. Van Isacker and Walters (2025) describe FOI as operating through selective flows of information in borders and migration research, highlighting the uneven and politically shaped nature of transparency. This approach is also supported by applied migration research that combines FOI data with administrative sources to identify gaps in published Home Office information (Pinter, 2024).
- A market-mapping exercise covering the twelve MoJ section 20 accredited DNA testing companies and twenty-three consumer-facing brands and brokers advertising immigration DNA testing, tracing brand-to-laboratory and laboratory-to-owner links through provider websites, terms and conditions, accreditation statements, Companies House filings, and corporate transaction records. The mapping is held in a twelve-sheet Excel workbook, which remains the source file behind the counts and figures used in Sections 5.2 and 5.3.

- Semi-structured/informal practitioner interviews were conducted in 2016 and between May 2025 and August 2026 with Dr Syndercombe Court (Reader/Professor in Forensic Genetics) and Nott (Business Development and Case Manager), both members of the RFR project team at DNA@King's; two practitioners from one DNA-testing provider, with 38 years' combined experience in DNA relationship testing; a practitioner from a second provider; and an independent sample collection provider. As named project team members who have consented to be identified in research outputs, Syndercombe Court and Nott are referred to by name throughout this report; other interviewees, who are external to the project team, are anonymised to role and organisation.
- A structured survey of legal practitioners working in UK immigration, asylum and nationality law (27 responses), covering familiarity with DNA testing, which accredited laboratories they use, experience of inconclusive results and retesting, and views on whether the Home Office has sufficient knowledge to interpret DNA reports.
- A structured survey of organisations offering DNA testing for UK Home Office immigration cases (7 responses, including King's and the referring legal charity), covering accreditation, subcontracting, marker systems, chain-of-custody procedures, consent, and experience of Home Office rejections.

Both surveys were exploratory rather than representative. The legal practitioner survey aimed to map how lawyers and advisers encounter DNA evidence in practice, including which accredited laboratories they use and how confident they are that decision-makers can interpret DNA reports. The provider survey aimed to document, from the providers' own accounts, differences in accreditation, subcontracting, testing capability and reporting routes across the market. The legal survey was distributed through the ILPA membership newsletter, LinkedIn, at solicitors' events and by email to relevant stakeholders. Given the small number of responses, the survey material is treated throughout as indicative rather than generalisable, and is read alongside the interviews, fieldnotes, documents and FOI material. The low response rate is itself treated as a finding and is discussed in Section 4.5.

> ***Analytical focus:*** *The practitioner interviews represent the perspectives of laboratory staff, clinic staff, casework/business managers, and sample collection professionals, including Syndercombe Court and Nott, who are members of the RFR project team as well as interviewees, and whose dual role is disclosed here for transparency. The interviews do not include direct accounts from Home Office or HMPO decision-makers, and only partially capture applicants' own testimony (via the King's clinic, and always on a fully anonymised basis under ethical approval MRA-24/25-49621, see Section 4.3). Findings on decision-maker interpretation (Objective 1) and applicant barriers (Objective 5) drawn from these interviews should therefore be read as practitioner accounts of those processes, not as direct evidence from decision-makers or applicants themselves. The two surveys*

> *provide self-reported data from legal practitioners and providers respectively, and are read alongside the interviews and the market-mapping exercise rather than in isolation.*

Anonymisation and data handling

The two surveys are handled differently depending on whether the respondent answered as an individual or as an organisation. The legal practitioner survey (27 responses) (on the low response rates to both surveys, and what they indicate about knowledge of DNA testing in this field, see Section 4.5) captures the views of individual solicitors, barristers, and immigration advisers; no respondent is named or numbered in this report, and quotations have been selected or generalised to avoid combinations of region, case detail, and practice history that could identify a specific practitioner, firm, or client. The DNA provider survey (7 responses) captures the position of organisations named in this report through the MoJ section 20 list and the market-mapping exercise (Section 5.2); provider survey responses are therefore anonymised. The name and contact details of the individual who completed each response are also withheld throughout. Contact details, names, and free-text responses not relevant to the research questions were removed from both datasets before analysis, and the underlying survey files are retained separately from this report with access restricted to the research team, consistent with the project's Data Management Plan (Section 4.3). The full lists of questions asked in each survey are reproduced, without any responses, in Appendices C and D.

Table 2 summarises how each data source contributes to the analysis.

Table 2. Data sources and their contribution to the analysis.

Source	Contribution to the analysis
Semi-structured interviews and fieldnotes (DNA@King's clinic; 21 family cases.	Applicant experiences of deciding to test, choosing a provider, understanding results, and navigating the wider evidential infrastructure; NVivo thematic coding.
Interviews with practitioners and sample collectors	Professional and operational perspectives, including sampling conditions and pressures.
Participant observation (DNA@King's clinic)	Practical, embodied and bureaucratic dimensions of testing often absent from formal accounts.
Document and policy analysis	Home Office guidance, tribunal judgments, accreditation lists, and policy reports.
Workshops and knowledge exchange	Triangulation with international researchers and stakeholders.

FOI requests (Home Office and HMPO)	Institutional processes and data gaps, including the state-contracted passport DNA route.
MoJ section 20 list	Identifies the twelve entries legally able to produce relationship DNA evidence for immigration purposes.
Consumer-facing web search	Identifies brands and brokers advertising immigration or court-admissible DNA testing to UK applicants.
Corporate and ownership records	Traces laboratories to owners and consolidation clusters.
Practitioner interviews (King's, two practitioners from other providers and a sample collector)	Practitioner accounts of laboratory capability, reporting, chain of custody, fraud risk, and Home Office/HMPO interaction.
Legal practitioner survey (n=27)	Lawyers' and advisers' experience of DNA evidence, laboratory choice, inconclusive results, and views on Home Office interpretation.
DNA provider survey (n=7)	Providers' self-reported accreditation, subcontracting, markers, chain of custody, and experience of Home Office rejections.

Together, these methods enabled triangulation between applicants' experiences, professional practices, commercial structures, and institutional frameworks, strengthening the analytical depth of the study.

4.3 Ethics and Data Management

Ethical approval for this project ('RFR: DNA-analysis') was obtained from King's College London under ethical clearance reference number MRA-24/25-49621, covering the Information Sheet dated 16 September 2025 and the Participant Consent Form (version 12 September 2025). All participants provided informed consent, and data were anonymised where appropriate. Applicant participants recruited through the DNA@King's clinic remain fully anonymous in this and all research outputs, as set out in the Information Sheet; they were free to withdraw their data up to 30 June 2026.

Research ethics and data protection statement

The handling of personal data throughout this project, interview recordings and transcripts, and the two surveys reported in Section 5 and Appendices C and D, follows King's College London's institutional statement on the use of personal data in research, which sets out the College's legal basis for processing research data (public task), the distinction between pseudonymised and anonymised data, participants' rights, and data retention and international transfer safeguards. The full statement is

available at: https://www.kcl.ac.uk/research/research-environment/rgei/research-ethics/use-of-personal-data-in-research

Consistent with that statement, direct identifiers (names, email addresses, and phone numbers) collected via the interview consent process and the two surveys have been removed from this report and from the analysis presented in it; what remains in the working dataset is pseudonymised rather than anonymised, since a link back to individual participants is retained separately by the research team for accountability and follow-up purposes, as permitted under the College's data protection framework. Where organisations are referred to by name, this is solely to identify them as organisations included within the scope of the research or identified through publicly available sources. Survey responses and other research contributions are not attributed to named organisations unless explicitly stated, and no individual respondent is identified. The Participant Consent Form additionally allows an individual participant to agree to be identified in research outputs; Syndercombe Court and Nott, as named members of the RFR project team, are identified by name on this basis throughout the report, while other individual interviewees and all applicant participants remain anonymised or fully anonymous respectively.

4.4 Methodological Approach: Families as Experts by Experience

The methodological approach adopted in the RFR project is grounded in the recognition of refugee families as experts by experience. Rather than treating families as passive respondents or sources of illustrative testimony, the study approached families as knowledgeable actors whose expertise is produced through lived engagement with migration governance, evidentiary regimes, and the practical realities of family separation.

This approach is informed by feminist standpoint epistemology and theories of situated knowledge, which argue that knowledge is socially located and that those positioned at the margins of institutional power often develop distinctive and analytically valuable forms of knowledges (Haraway, 1988; Harding, 1991). From this perspective, families' accounts are not treated as subjective complements to institutional data, but as primary sources of insight into the infrastructure of making a DNA test to support an immigration application..

Central methodological question: navigating the migration system

The central methodological question guiding data collection was how refugee families navigate the migration system, particularly in the context of family reunion and decisions about DNA testing. Interviews and informal conversations focused on families' own descriptions of navigation, including how they interpreted requirements, sought information and managed uncertainty.

Community knowledge and collective expertise

Methodologically, the project paid particular attention to the collective and distributed nature of expertise by experience. Families were encouraged to speak about how they learned what they knew, including the role of friends, relatives, diaspora communities, NGOs, and legal intermediaries. This aligns with research on experiential expertise which emphasises that such knowledge is often socially produced through comparison, repetition, and shared exposure to risk (Faulkner, 2017; Mazanderani, Locock & Powell, 2020).

Safety, danger, and ethical orientation

A core methodological commitment of the project was to centre family safety, including families' exposure to real danger when lawful routes to reunion were delayed or inaccessible. For this reason, discussions of DNA testing and evidentiary decisions were approached as safety-critical moments rather than neutral technical steps, reflecting feminist standpoint arguments that starting inquiry from those most affected by harm produces more robust and ethically accountable knowledge (Harding, 2004).

Transparency and experiential evaluation

The study also treated transparency as an experiential phenomenon, assessed by families through their ability to understand consequences, anticipate timelines, and make informed decisions about documenting their eligibility for family reunion in the UK. Where institutional guidance was unclear, families often relied on experiential and community-based knowledge to compensate, and epistemic responsibility was frequently shifted onto families themselves (Haraway, 1988).

Institutional context and University of Sanctuary

The research was conducted within King's College London, a recognised University of Sanctuary. By positioning refugee families as experts by experience, the RFR project adopts a methodological approach that foregrounds lived navigation of migration systems as a legitimate and necessary source of knowledge, supporting the project's broader aim of contributing to safer routes to family reunion.

4.5 Limitations

The project encountered several limitations that are themselves indicative of wider structural issues in the field. One such limitation was the relatively low response rate to surveys distributed to practitioners and stakeholders. Initially, this was unexpected, as the research team assumed a higher baseline level of knowledge about DNA testing within migration and family reunion contexts.

However, stakeholder meetings, particularly with refugee-supporting NGOs and advocacy organisations, indicated that limited survey engagement reflected not a lack of interest but a lack of familiarity and knowledge about DNA testing specifics in immigration cases. This points to a wider

informational gap concerning the nature, purpose and limits of DNA evidence in migration decision-making, and reinforces the case for Objectives 3 and 4.

Qualitative engagement through meetings, workshops and informal discussions therefore proved essential for identifying knowledge gaps that survey and documentary methods did not capture on their own.

The market-mapping component has a different limitation. Ownership structures within the DNA testing market are subject to change. The picture reported in Sections 5.2 and 5.3 reflects the market as verified when this report was finalised and should be rechecked before use in any future publication or policy submission.

An outstanding data gap

One data source that would have strengthened this report directly was sought but could not be obtained. Actual Home Office and HMPO refusal decision letters citing DNA evidence remain unavailable: an FOI request for even a small, anonymised, sample of such letters was refused in full under section 31(1)(a) and (e) (Appendix E, request 7), so Sections 5.1 and 5.4 rely on practitioner and legal-practitioner accounts of refusal reasoning rather than the primary refusal documents themselves. This points to a concrete next step for follow-on research: a further, narrower FOI request or internal review request focused specifically on redacted refusal reasoning.

The consolidated family fieldnote and transcript corpus: strengths and remaining constraints

A significant gap in the initial evidence base was the limited direct testimony from families beyond the King's clinic sample. Subsequent fieldwork has substantially, although not entirely, addressed this limitation: Section 4.2 describes clinic fieldnotes and family interview transcripts/notes, covering 21 family cases, analysed thematically and reported in Sections 5.1 to 5.5. The corpus is weighted toward families who successfully reached the King's clinic, giving less direct access to those who abandoned testing, could not afford it, or could not reach an accredited sampler at all. For these reasons, the corpus is treated throughout Section 5 as rich, triangulating qualitative evidence consistent with how the practitioner interviews and surveys are also read (Section 4.2).

5. Findings

> ***Analytical focus:*** *The findings are organised by research objective (Section 1.4), so that each strand of evidence maps directly and visibly onto a specific research question. Sections 5.2 and 5.3 in particular draw on the companion market-mapping study, tracing DNA evidence from the official accredited list through to the consumer-facing market and the state-contracted passport route. Before turning to the objective-by-objective evidence, the illustrative case study below sets out a single, anonymised case encountered directly during this research, showing how Objectives 1 to 3 can converge within one family's experience of DNA testing.*

Illustrative Case Study: An Aunt–Niece DNA Test in Practice

This case study concerns a single anonymised case first brought to the research team during an interview with a caseworker at a UK-based international NGO supporting refugees, and followed through subsequent correspondence between September 2025 and May 2026. During the interview, the caseworker showed the research team a DNA report that the family had commissioned before obtaining legal advice. The research team then sought an independent scientific review through its professional network. The case is included because it brings together three concerns: the statistical uncertainty beneath an apparently clear result (Objective 1), the relationship between reporting format and complex kinship analysis (Objective 2), and the opacity of the commercial and cross-border route through which the report was produced (Objective 3). The caseworker, family and commercial entities remain anonymised to reduce the risk of identification.

The case: aunt–niece relationship

The case concerned a claimed aunt–niece relationship: a woman settled in the UK sought to bring her niece, then a three-year-old unaccompanied child who had been orphaned, to join her under the RFR route for non-parent relatives (Appendix CRP; Section 1.1). As is typical of such cases (Objective 2, Section 5.2), the relationship fell outside the simple parent–child pairing that most standard tests are designed around. The family initiated DNA testing themselves, before instructing a lawyer, through a UK-based, direct-to-consumer DNA company that does not itself appear on the MoJ's section 20 list of accredited entities. The sample and report were, however, routed through a large, multinational forensic laboratory group, one of the corporate clusters identified below (Section 5.2) as sitting behind several of the twelve accredited MoJ entries. Neither the family nor their caseworker had visibility, at the point of instructing the test, of this broker-to-laboratory relationship, or of which country the analysis was ultimately carried out in, an information gap consistent with the wider brand-to-laboratory opacity documented later in this section (5.3).

The report presented the result as a very high percentage probability of the claimed relationship (unusually high for a second-degree relationship) rather than as a likelihood ratio (LR), as required,

reflecting the reporting-format inconsistency documented more generally in Section 5.2. On its face, however, the result appeared very strong and supportive of the claim.

A second opinion, and what it found

Aware of how much rested on the report and because of the reporting anomaly, the caseworker asked the research team whether a second, independent opinion could be obtained before it was relied on further. Securing that opinion depended entirely on the research team's own professional network: a King's College London-affiliated forensic geneticist reviewed the redacted report as a matter of professional courtesy, rather than on any formal or accessible route open to a caseworker or applicant acting alone.

> ***Analytical focus:*** *Second-opinion assessment (reproduced with identifying details removed): "The reason the percentage probability [and recalculated LR] is so high for an aunt-niece [relationship] is because there are some really rare alleles..., so I'm guessing these two individuals are from a remote area of Africa where there is a lot of population substructure, and hence there will be a lot of general relatedness in the local population, and so the pan-African frequencies [used in the original report] will not be appropriate. Having said that, these two do share a lot of DNA, so even when using a 5% FST correction [to allow for population substructure] the calculation still comes out in favour of the claimed relationship, just with a much lower LR. So the calculation is probably unreasonably inflated, but the conclusion is probably correct."*

In plain terms, the reviewer considered that the percentage reported to the family relied on generic pan-African allele frequencies that might not adequately account for population substructure relevant to the family's regional background. Applying a 5% fixation-index (FST) adjustment, which allows for population substructure in the calculation, reduced the recalculated strength of support substantially, although the result still favoured the claimed relationship. The review therefore did not overturn the conclusion; it showed that the original report may have overstated its strength and did not make the underlying population-frequency assumption visible to the family or caseworker, nor take into account the variable genetic frequencies found in some parts of Africa.

What the case illustrates

First, on interpretation and uncertainty (Objective 1, Section 5.1 below): an accredited laboratory's headline result is not a fixed, self-evidently reliable number. It depends on modelling choices, here, the choice of reference population, that may be inappropriate for a specific family, without the report disclosing that risk. A decision-maker reading only the percentage figure, exactly as Home Office and HMPO officials are described doing in the findings that follow, would have had no way to understand the importance of employing an appropriate reference population or know that a substructure correction was even relevant, let alone that it would materially change the result.

Second, on differences in tests and reports (Objective 2, Section 5.2 below): reporting the result as a percentage rather than an LR, as internationally recommended, is not a cosmetic difference and is a distinction that is rarely appreciated. Expressing the result as a percentage probability that a particular relationship exists requires the use of a prior probability—an assumption about the likelihood of that actual relationship before considering the DNA evidence, based on information that is unlikely to be available to the testing laboratory. An LR instead evaluates the genetic findings (which is all the tester can do) by comparing how probable they are under the proposed relationship with how probable they are under an alternative hypothesis, typically that the individuals are unrelated. This was the position evaluated in the example case: how much more likely the pair were to be related as aunt and niece, rather than unrelated to each other.

Third, on transparency of capability (Objective 3, Section 5.3 below): nothing in the broker's consumer-facing offer indicated that the accredited test would be carried out by a different company. Neither did it indicate that the testing laboratory forms part of a corporate cluster shown later in this section to handle a substantial share of the accredited market, nor in which country the work would take place. The only reason for this discovery was due to the caseworker's informal connection with a scientist who reviewed the report as professional courtesy. That is not a repeatable or accessible safeguard: for every case where a second opinion is available through a research project, there will be many where it is not, and the families might end up having to re-take a DNA test.

As of May 2026, the case also remained undecided: a request to prioritise the application, made in light of the child's age and unaccompanied status, had been refused, and the sponsor had submitted further evidence while awaiting a decision. The material available to the research team did not indicate that the delay resulted from the scientific review or the DNA finding; it formed part of a much longer period of unresolved casework. This serves as a reminder that behind each of these technical and organisational gaps there is a specific family and, in this case, a three-year-old child, still waiting.

5.1 Objective 1: Interpretation of DNA Evidence by Decision-Makers

Practitioner interviewees described Home Office queries that, in their view, suggested an expectation of "100% certainty" from DNA reports, although forensic conclusions cannot provide such certainty. Home Office and HMPO decision-makers were not interviewed for this study. LRs compare the probability of observing the results under two competing relationship hypotheses, and interviewees described instances in which these were misread or undervalued.

Interviewees described cases in which inconclusive results appeared to be treated as negative evidence. An inconclusive outcome does not itself exclude the claimed relationship; for complex kinship questions, it can reflect the limited power of the particular marker panel or the family samples

available (see Objective 2, Section 5.2). Treating a test limitation as negative evidence may disadvantage applicants.

Practitioner interview evidence

Practitioner interviews provide indirect evidence on this objective because Home Office and HMPO decision-makers were not interviewed. The findings therefore describe how laboratory, clinic and casework staff experience the interpretation of their reports. Syndercombe Court and Nott of DNA@King's describe officials writing to ask for confirmation of information already set out in a report. They also report HMPO asking whether a genuine parent could produce a result below 99.9% probability, a question that signals uncertainty about how evidence should be presented within a statistical framework. Nott described a separate case in which a report addressed maternal, paternal and sibling relationships but did not appear to have been read or understood in full before the case was refused. Staff from another provider similarly report routine queries about whether reports are genuine, including queries about the status of a long-established accredited laboratory. A separate provider's account adds that HMPO may request detailed procedural information about test type, identity evidence and the sample collector's qualifications. This suggests that decision-makers assess procedural reliability alongside the biological conclusion, but do not always do so consistently. Nott described cases in which queries raised simultaneous doubts about the DNA report, supporting documents and even whether the applicant had paid for testing. This is her account of how the evidence was questioned; the study did not interview the officials involved or establish their reasons for doing so. Multiple, overlapping objections are harder for applicants and their representatives to address than a single, specific concern.

Survey evidence

The legal practitioner survey (n=27) shows a divided picture. Several practitioners report confidence, for example, that reports are generally accepted without challenge and that DNA evidence has repeatedly overturned refusals based on doubted family relationships. Others raise specific interpretive failures: one practitioner described hearing 'accounts of Presenting Officers who think [DNA reports] are faked even if from an approved provider', which they considered 'worrisome' because it approaches genuine cases 'under the lens of a falsified/forged DNA report'; another was 'fairly certain' that half-sibling relationships had 'not been properly understood' in some cases; a third described a tribunal that rejected a DNA report despite the instructing laboratory providing a considered explanation for an unusual result, a decision the practitioner regarded as unsupported by the evidence. A further practitioner reported refusals in cases where DNA supported a claimed relationship but the birth certificate originally used to obtain the tested person's passport was considered unreliable. The survey response does not establish whether the biological relationship itself was rejected or whether the applicant's identity remained in doubt. The practitioner said this

'makes a mockery of the whole system', since the same document chain had underpinned the identity check for sampling.

The provider survey (n=7) reinforces this picture from the opposite side of the process. King's reported that the Home Office is 'often not' able to interpret results correctly, stating that officials 'don't seem to read the reports fully and just look for key words', with cases where findings were 'misinterpreted or not understood... to the detriment of the clients'. One provider stated plainly that it does 'not know the level of understanding the Home Office staff have'. Another reported that it is 'almost impossible to speak to anyone at the Home Office' to seek feedback about a reported rejection; the survey did not establish how the provider learned of that outcome. By contrast, three other providers all responded 'Yes' when asked whether the Home Office has sufficient knowledge to interpret their results, although the basis for those responses was not explained and it is therefore unclear what level of knowledge or interpretive capability respondents had in mind. The survey responses should therefore be read as evidence of divergent experiences, not as a single measure of caseworker competence.

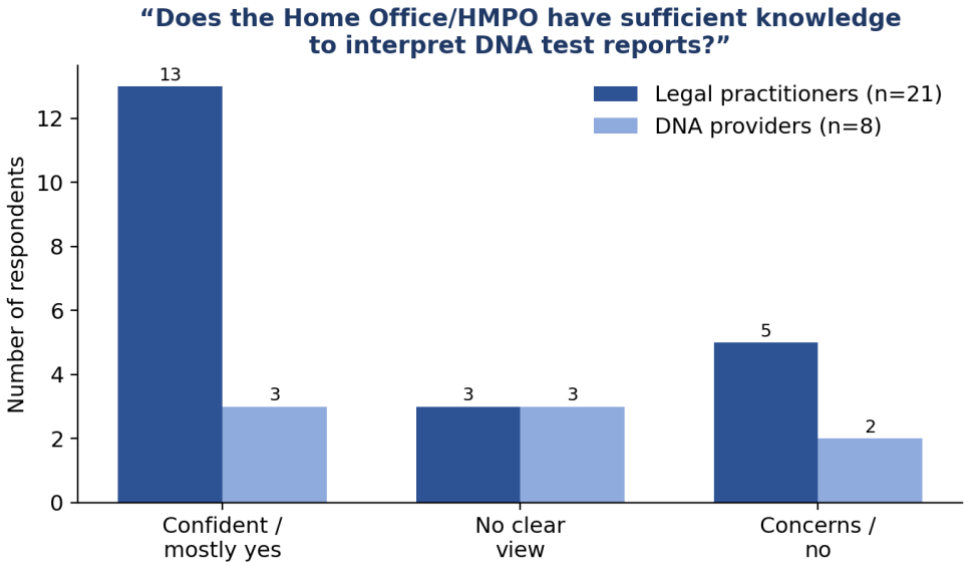

Figure A. Views of legal practitioners (n=21 responding) and DNA providers (n=7) on whether the Home Office/HMPO has sufficient knowledge to interpret DNA test reports.

Taken together, three independent sources, practitioner interviews, a 27-respondent legal survey, and a 7-respondent provider survey, converge on the same conclusion: Home Office and HMPO interpretation of DNA evidence is uneven rather than uniformly poor or uniformly adequate. Confidence is highest where results are unambiguous and identity documents, birth certificates and other supporting records are complete; specific, recurring failure points are the meaning of LRs and statistical thresholds, sibling and half-sibling findings, and doubts about the authenticity of reports from properly accredited providers. FOI requests submitted for this project add a structural

explanation for this unevenness: as detailed in Appendix E, the sole training resource for Home Office and HMPO decision-makers has not received a substantive content update since 2018 and has never been evaluated for effectiveness.

Family perspectives: interpretation as the fragile bridge

The consolidated fieldnote and family transcript corpus (Section 4.2) adds a further vantage point on this objective: families' own sense of who is reading their case and how. Applicants describe the outcome of their case as depending on an unpredictable individual reader rather than a consistent standard: 'You never know who will be the caseworker at the Home Office and the way they are reading your case' (Interview 10). Provider-side interview material corroborates this from the opposite direction, describing repeated, avoidable verification requests for information that was already in the report: 'Each week, I probably get two or three emails from the Home Office asking for verification... 99% of the time [the information] has been included in the report' (provider-interview meeting). Read alongside the practitioner interviews and survey evidence above, these accounts suggest uneven interpretation between cases. Families and providers also describe the process as depending on the individual assigned to a file. A single, standardised LR reporting convention (Section 5.2) would not by itself resolve this concern, which uniform decision-maker training and guidance (Objective 4, Section 5.4) are intended to address.

The illustrative case study at the start of this section shows why the NGO caseworker sought a second opinion even though the reported result looked strong. A high LR supporting the claimed aunt–niece relationship rested on a reference-population assumption that the review found questionable for the family's background. The original report did not make that assumption clear, making its evidential weight difficult for an adviser to judge in advance.

5.2 Objective 2: Differences in the Tests and Reports Provided by MoJ-Accredited Laboratories

The analysis identified substantial variation between laboratories accredited by the MoJ. Differences were observed in the number of genetic markers used, the treatment of complex relationships such as half-siblings, and the handling of genetic mutations. Reporting practices also varied, with some laboratories using percentages rather than LRs, contributing to confusion and misinterpretation.

A key finding is that many private DNA companies predominantly offer standard parental (parent–child) tests, even in cases involving complex kinship structures under Appendix CRP. These tests are often marketed as cheaper and quicker options, making them more accessible to applicants with limited financial resources. However, in cases involving non-parent relatives, such tests frequently result in inconclusive findings, which may then be interpreted negatively by decision-makers, or will require significant additional expense by the families as they seek a more suitable test. Importantly,

this practice is not solely driven by technical limitations: even leading DNA testing companies with the capacity to conduct more complex and accurate kinship analyses often default to standard testing models with limited power, shaped by market incentives, standardised service offerings, and assumptions about what legal representatives and applicants will request, rather than by the evidential needs of complex RFR cases. The concern is whether the method and marker panel are suitable for the claimed relationship and whether their limitations are explained before the family commits to a test. DNA remains formally voluntary, although it may become difficult to decline when other evidence has been treated as insufficient.

The twelve accredited companies

The official MoJ section 20 list contained twelve DNA testing companies[1]. Table 3 reproduces those entries alongside the analysis site, owner or cluster, and working classification identified through the market-mapping exercise. Not every entry on the list operates as a laboratory in its own right; some are trading names or UK-facing arms of wider corporate or international arrangements, and several entries combine an institutional and a consumer-facing brand name under a single MoJ listing.

Table 3. The twelve MoJ section 20 accredited entries, with analysis site, owner or cluster, and working classification (market mapping, September 2026).

MoJ-listed entry[2]	Analysis performed at	Owner / cluster	Type
Alpha Biolaboratories (AlphaBiolabs)	Warrington, UK (in-house)	Certek Group (UK)	Operating lab
AttoLife Limited	Norwich, UK (in-house)	Independent UK (in administration, September 2026)	Operating lab
Biofortuna Limited (NorthGene)	Deeside, UK (in-house)	Independent UK	Operating lab
Cellmark (Orchid Cellmark Ltd)	Abingdon and Chorley, UK (in-house)	Eurofins Scientific SE (LU)	Operating lab
Complement Genomics (Dadcheck)	Lanchester, UK (in-house)	Independent UK	Operating lab

[1] The list was re-checked on September 2026 and still contained the same twelve entries; GOV.UK states that these laboratories are accredited until the Ministry of Justice reviews the list in October 2026, so the composition of the list may change shortly after this report is finalised.
[2] The list can be found on the GOV.UK website: https://www.gov.uk/get-a-dna-test/if-youre-getting-a-test-to-use-in-court

DDC Laboratories UK	Hammersmith, UK office; parent in Ohio, US	Eurofins cluster (via DDC US)	Operating lab
Analysis at King's College London	London, UK (in-house clinic and lab)	King's College London (academic)	Operating lab
Endeavor DNA Laboratories	El Paso, Texas, USA	Endeavor DNA Inc. (US)	Operating lab
Eurofins Forensic Services Limited	UK (Eurofins cluster)	Eurofins Scientific SE (LU)	Operating lab
Eurofins Medigenomix Forensik GmbH (DNA Legal[3])	Ebersberg, Germany	Eurofins Scientific SE (LU)	Accredited lab (DE)
Genetrack Biolabs	Vancouver, Canada (UK-facing site)	Foreign (Canada)	Operating lab (CA)
Genomics for Life (Paternity for Life)	Brisbane, Australia (UK-facing brand)	Foreign (Australia)	Operating lab (AU)

Where laboratories operate and where owners are based

Where a laboratory operates and where its owner is registered are different questions, and in this market the answers do not line up neatly. On the operational side, most testing physically happens in the UK: eight of the twelve companies analyse samples in England, one in Wales, and three route analyses outside the UK (Genetrack Biolabs to Vancouver; Genomics for Life (Paternity for Life) to Brisbane and Eurofins Medigenomix Forensik (DNA Legal) to Ebersberg).

Ownership is more international. Four of the twelve entries sit inside Eurofins Scientific SE, headquartered in Luxembourg. Endeavor DNA Laboratories is owned by a US holding company. AlphaBiolabs is owned by the Certek Group, a UK consolidation vehicle. Three are independently UK-owned, two are foreign single-lab operators, and one is based within a university. The combined picture is that DNA testing may be carried out locally, even when the provider forms part of a wider, sometimes internationally owned, corporate group. This distinction is not always obvious to the

[3] At DNA Legal Limited's website (Company number 05976135) it is stated that "In 2013 Eurofins Medigenomix Forensik GmbH adopted the trading name "DNA Legal" for Section 20 Court directed testing within the United Kingdom" ref: https://www.dnalegal.com/about-us, although they appear to be under distinct ownership.

families and is relevant to questions of corporate accountability, transparency, regulation, and the commercial organisation of evidence.

Brand names and accredited entities are also distinct. Several consumer-facing brands do not appear on the section 20 list themselves, so the company an applicant contacts may not be the company that holds the accreditation or carries out the analysis (Section 5.3). Corporate ownership is a further and separate question, and the two should not be read off one another: an independently owned company may arrange testing that is performed elsewhere, and a listed entity may belong to a larger group.

Corporate-consolidation clusters

Six of the twelve entries fall within three corporate-consolidation clusters, summarised in Table 4.

Table 4. Corporate-consolidation clusters behind six of the twelve MoJ-accredited entries.

Cluster	MoJ-listed entries in cluster	Notes
Eurofins Scientific SE	Cellmark / Orchid Cellmark Ltd; DDC Laboratories UK; Eurofins Forensic Services Limited; Eurofins Medigenomix Forensik GmbH	Multinational laboratory-services group; UK forensic and paternity DNA operations consolidated under one corporate umbrella over several years.
Endeavor DNA Inc.	Endeavor DNA Laboratories	US-domiciled holding company; one MoJ-listed laboratory plus associated consumer-facing brokerage capacity in the UK.
Certek Group	Alpha Biolaboratories (AlphaBiolabs)	UK consolidation vehicle; acquired AlphaBiolabs in March 2026, materially altering the ownership picture during the study window.

This mapping shows both the scale of the companies involved and how an apparently diverse market resolves into a small number of transnational ownership clusters once brands, brokers and laboratories are traced. This matters for transparency because the state may rely on evidence produced within a market whose corporate structure is not visible to the public. Applicants may not know how their data are shared within or between DNA testing companies. In this sense, the mapping is an exercise in infrastructural inversion (Star, 1999): the commercial arrangements behind a report stay in the background until something fails, such as an inconclusive result, a query from a caseworker, or a test that cannot answer the relationship question in the case.

Consolidation over time

The clusters were not assembled at the same time. The Eurofins cluster, consisting of a number of laboratories both MoJ accredited and non-accredited, has grown over more than a decade: DDC Laboratories was acquired in 2021 and Cellmark in 2024. Endeavor DNA Inc. acquired UK-facing brands in 2025. Certek Group acquired AlphaBiolabs in March 2026, while this research was already in progress. The speed of these changes matters: a disclosure or regulatory system built around a stable map of ownership would need to update regularly, otherwise the published accreditation list and the live market may drift apart.

Which laboratories legal practitioners actually use

The legal practitioner survey confirms that referrals concentrate on a handful of the ten accredited entities identified as practising in the UK or Europe. Of 27 respondents, three providers represented over 50% of the named referrals, a further two were mentioned less frequently; the remaining providers were each mentioned by only one practitioner. This referral pattern should be read alongside Section 5.2's ownership analysis: several of the most-used providers sit inside the same corporate clusters, so apparent choice between brands may not always translate into a choice between independent laboratories.

Provider self-reported testing capability

The provider survey makes the capability differences identified qualitatively in the interviews directly measurable. Self-reported panel sizes range from 24 to over 50 STR markers. Others report using additional STR or SNP methods. Accreditation applies to a laboratory's specified scope of work; the survey did not establish whether every supplementary method fell within that scope.

In parent–child testing, an exclusion threshold is the laboratory's criterion for declaring that DNA findings exclude a proposed relationship, rather than reporting an inconclusive result. Providers' stated criteria vary: three mismatches is a common requirement, but providers combine this differently with combined paternity/probability index cut-offs (for example one provider requires three inconsistencies to report an exclusion; another requires a minimum of three mismatches, or two mismatches combined with a relatedness probability below 0.01%; a further provider requires at least three markers and a paternity index below 0.001) and a fourth at least four inconsistencies. Mutation handling also differs in statistical approach: some providers cite published methods, while others describe a laboratory-dependent approach. A mutation can produce an apparent mismatch even where a biological relationship is genuine, so its possibility matters to the statistical assessment.

Two providers are described, including by external legal practitioners in the survey, as specialists in complex immigration and kinship work; others describe themselves as handling mainly paternity and maternity cases, some referring complex or inconclusive cases to others.

‘Accreditation’ is also not a single, uniform descriptor. All providers hold or rely on ISO 17025 for DNA analysis which is an essential requirement for the MoJ list, but our interviews indicate that the wider accreditations that some providers hold are varied and not well understood. The independent sample collector interviewed for this report observed that some companies display accreditation badges without making clear what the accreditation covers, or whether the accreditation belongs to them or to a partner testing laboratory.

Kinship beyond the nuclear family

The corpus also documents, from the applicant side, the practical difficulty of testing relationships beyond the parent–child pairing that the market is built around (Objective 2, above). Roughly a fifth of the identified family cases in the collection concern siblings, half-siblings, or uncle/aunt–nephew/niece relationships rather than a parent and child, and families describe having to actively work out, often without expert guidance, what relationship a test can and cannot establish: one applicant is recorded asking directly whether a result could show an uncle rather than a father ('Could the dad be an uncle?', Fieldnote 2). Questions of this kind require more than a routine parent–child comparison. The laboratory must consider the specific relationships that could plausibly explain the genetic findings and assess the evidence under appropriate competing hypotheses. The test must also contain sufficient genetic information to distinguish between closely related alternatives. Where testing is instead based on a routine parental model (see Section 5.2), or where a more complex relationship is analysed without sufficient discriminatory power, the result may be inconclusive or may fail to address the actual relationship in question. Families with more complex kinship configurations are therefore particularly dependent on providers recognising that complexity and selecting an appropriate testing and analytical strategy.

The illustrative case study at the start of this section shows the material consequences of the inconsistency between percentages and LRs. A consumer-facing broker presented the result of a complex non-parent-child test as a percentage rather than an LR. When the underlying LR was reconstructed for a second opinion, it became clear that the calculation used a reference-population assumption that was inappropriate for the family's background and substantially overstated the strength of the result, weakening the test credibility.

5.3 Objective 3: Transparency of the Capabilities of Accredited Laboratories and Agencies Offering Accepted Legal DNA Reports

DNA Analysis at King's College London

One entry on the MoJ list, DNA Analysis at King's College London, is also the site on which this research is based. Section 1.2 sets out the site, its published service and the disclosures this requires.

For this objective, its position within the market matters. DNA@King's is the only academic-sector entry on the section 20 list and, unlike most other entries, does not market through a consumer brand network; referrals come mainly from legal professionals. It is therefore highly visible on the official list but comparatively invisible in consumer-facing searches by families without legal representation. Brokers show the inverse pattern: they may be highly visible to consumers while their relationship to an accredited laboratory remains unclear. The same accreditation framework thus covers organisations with very different routes to applicants without signalling those differences.

Broker-side opacity in the consumer market

The public-facing market contains far more names than the official list. This research identified at least twenty-three consumer-facing brands and brokers advertising immigration DNA tests to UK consumers. Tracing brands to the company that performs the test, and then to the ultimate owner, shows that this larger public market resolves down to the twelve MoJ-accredited entities and to a smaller number of ultimate ownership clusters (Section 5.2).

Several consumer-facing brands do not identify which of the twelve section 20 companies performs the analysis. An applicant may be unaware that the testing is not done by the company they have approached, may not know which company is producing the evidence for which they have paid, or whether that company's accreditation cover the specific kinship test their case requires.

This opacity is not only a consumer-protection problem; it affects the evidential pathway itself. In immigration cases, the DNA report is likely to be read as expert evidence by decision-makers who are not themselves forensic specialists. If the applicant and solicitor cannot easily see who performed the test, where it was performed, and which relationship hypotheses were tested, they are less able to assess in advance whether the test was appropriate for the case, which in turn feeds directly into the misinterpretation and inconclusive-result problems identified under Objective 1.

Provider self-disclosure of subcontracting

The provider survey gives a direct, provider-reported measure of this transparency gap. Asked whether they subcontract DNA testing to another accredited laboratory, four respondents reported that they did not subcontract, while other providers indicated that some or all of their testing was undertaken by another laboratory, in some cases outside the UK. This distinction is important because the organisation first contacted by an applicant may therefore act primarily as an instructing or coordinating intermediary rather than as the laboratory undertaking the DNA analysis.

The overseas laboratories identified through the survey were accredited to ISO/IEC 17025. Such accreditation provides assurance of technical competence for activities within the laboratory's accredited scope, but does not by itself demonstrate that the particular testing strategy used will be sufficiently informative for every complex relationship encountered in immigration casework.

Examination of publicly available information for some of these laboratories confirmed the use of STR-based testing but did not establish the number or range of markers used. Similarly, reports reviewed during the study did not consistently identify the population frequency database used in calculating the LR, making it difficult to assess whether the reference population selected was appropriate to the individuals tested.

These findings illustrate a wider transparency issue: the provider approached by an applicant may not be the laboratory that ultimately performs the analysis, and important information about the analytical methods, subcontracting arrangements and statistical basis of the reported result may not be readily visible. This cannot be determined from the MoJ list alone and is consistent with the market-mapping findings in Section 5.2 that some consumer-facing providers do not clearly identify the accredited laboratory undertaking the underlying analysis.

The independent sample collector interviewed for this report added a further transparency concern: some companies advertise complex relationship testing while displaying accreditation badges that, on closer inspection, belong to a partner laboratory rather than the company itself. This matters because accreditation is granted for specific work, not as a general seal of approval, so a badge alone does not tell an applicant, lawyer, or decision-maker whether the specific test they need is within the accredited scope of the company they are dealing with.

"Who are actually labs and who are actually agents"

A provider-side interview conducted for this project put the underlying problem in blunt terms: 'There is a lack of transparency... to separate the accredited list into who are actually labs and who are actually agents' (provider-interview meeting). The same interview described the practical consequence for families: 'It is quite difficult for families to really know who is actually doing what for them.' Accreditation, on this account, does real work: it narrows the field to organisations whose evidence the state will accept. It does not, however, reveal whether a listed entry will process the sample, route it elsewhere as an agent, or trade as a consumer-facing brand under a parent company's accreditation. Family-side material corroborates this from the demand side. Applicants describe choosing providers through solicitors, community recommendations or previous clients' experience rather than through analytical use of the official list. Price itself can become a sign of reliability rather than simply a cost. One family explained that they would 'rather pay a higher fee and make sure I get a good test... suspicious of [a test being] so cheap' (Fieldnote 21). This is a rational response to an opaque market, but it means that access to a suitable provider depends as much on good informal information as on a list provided by the MoJ.

The illustrative case study at the start of this section sets out a case encountered directly during this research in which exactly this structure was in play: the family instructed a consumer-facing DNA testing company that does not itself appear on the MoJ's section 20 list, and whose report was then

produced through a large, multinational forensic laboratory group, one of the corporate clusters identified above (Section 5.2) as sitting behind several MoJ-accredited entries. The report itself did not make clear to the family or their NGO caseworker the broker's relationship to the accredited laboratory that produced it, or the country in which the analysis was carried out.

5.4 Objective 4: Transparency of Official DNA Guidance and Its Interpretation by Decision-Makers

As set out in Section 2.1, Home Office guidance formally treats DNA testing as supporting evidence only, states that testing should not be mandatory and requires a holistic assessment of all available evidence. In practice, however, this research found limited transparency regarding how DNA evidence is weighed alongside other forms of proof. Inconsistent record-keeping, unclear standard operating procedures, and variation across tribunal decisions all contribute to unpredictability and uncertainty for applicants and their representatives.

This gap between the formal guidance and its practical interpretation echoes the concerns raised in the Independent Review of the Home Office's response to the mandating of DNA evidence (Singh, 2019), which called for clearer safeguards, transparency, and oversight. Its persistence, despite the Review and successive restatements of Home Office policy, suggests that the problem lies less in the wording of the guidance itself than in how it is communicated, incorporated into training, and applied by individual decision-makers/caseworkers. It is compounded by the absence of any clear public-facing explanation of how DNA evidence should be evaluated alongside other forms of evidence.

Provider evidence on guidance awareness versus application

All seven respondents to the provider survey confirmed awareness of the Home Office's published DNA policy guidance, so the interpretive problems described here cannot be explained by provider unfamiliarity alone. King's described rejections or queries involving changed guidance, outdated MoJ lists, broken links, identity documentation, doubts about report authenticity, and decision-makers not following or fully understanding published guidance or information in the report. Another provider reported 'confusion between policy makers and the operational staff at the HO as to what is acceptable'. King's called for uniform reporting guidance, consistent terminology and presentation of strength of evidence as an LR, alongside training for decision-makers on what to expect from a DNA test.

A legal practitioner reported cases in which DNA supported a claimed relationship but an underlying identity document, such as a birth certificate used to obtain a passport, was questioned. The survey does not establish whether the decision-maker rejected the biological relationship or remained unconvinced about the tested person’s identity. The same document chain had been used for sample collection. Read together, the two surveys suggest that the transparency problem under this objective

is less about whether guidance exists (it does, and providers are aware of it) than about whether it is applied consistently once a case reaches a decision-maker, and whether outdated published materials, an inaccurate provider list, broken links, unclear formatting requirements, are themselves contributing to inconsistent outcomes.

FOI findings reported in Appendix E sharpen this point further: the Home Office holds no central record of what it did to implement its own commissioned review of DNA evidence practice (Singh, 2019). Read alongside the provider survey's call for uniform reporting guidance and caseworker training, this suggests that the transparency gap under this objective extends beyond the guidance document itself to the absence of any visible, auditable mechanism for teaching or monitoring its application.

The consolidated family and provider corpus adds a further, concrete symptom of this gap: repeated post-submission requests to verify information already contained in a report. A provider interviewed for this project estimated receiving 'two or three emails from the Home Office asking for verification' most weeks, for information that 'has been included in the report' in 99 per cent of cases (provider-interview meeting). If decision-makers were consistently applying a shared standard for what a report must show and how it should be read, this volume of avoidable verification activity would be difficult to explain. It is more consistent with individual caseworkers independently, and inconsistently, working out what to look for. This is precisely the absence of a visible and auditable application mechanism identified under this objective.

5.5 Objective 5: Transparency of the Process from Identifying and Instructing DNA Services through to Home Office Evaluation

Delegation, gatekeeping, and legal creativity

Although the Home Office cannot formally require DNA testing, the responsibility for suggesting DNA evidence has effectively shifted to legal representatives and third-sector organisations. This informal delegation positions charities and lawyers as gatekeepers, raising ethical questions about consent, pressure, and responsibility, particularly given the financial burden placed on applicants.

DNA as evidential escalation: Formally voluntary, practically difficult to decline

The consolidated family fieldnote and transcript corpus (Section 4.2) shows this process from the point where it begins for a family: DNA rarely appears at the start of a case. It enters after documentary and testimonial evidence has already been submitted, questioned, or treated as insufficient: 'I've sent a whole lot of documents and I feel it is not enough. That's why I proceeded to this matter' (Interview 6). Across the corpus, DNA is introduced through several different routes that families themselves often do not clearly distinguish: an explicit Home Office request, a solicitor's

recommendation to 'strengthen' a case, or an applicant's own pre-emptive decision to test before applying at all, in anticipation of being asked. In every route, families describe the test as formally voluntary but practically very difficult to decline once they believe reunification depends on it, and sometimes explicitly framed by a solicitor or relative as a confirmatory step rather than a genuine choice: 'They want to confirm me, he is my brother or not' (Interview 1). Where a route carries an age threshold, this constrained choice acquires a further, harder edge: in one case, an uncle seeking to reunite with a nephew approaching his eighteenth birthday described legal time itself as part of the pressure bearing on the family's decision to test.

Beswick's (2015) British Red Cross study identifies an earlier version of this evidential escalation: birth certificates were unavailable in 31 of the 67 cases involving children, and the report discusses advisers suggesting DNA tests before an application is submitted (p. 38). It also records that passports or other official identification could be needed to access DNA testing (pp. 38–39). Read alongside the present findings, this exposes a documentary circularity: families may turn to biological evidence because documents are missing, yet still need documents to obtain that evidence. These figures describe the earlier study's sample; the comparison identifies a practical problem to address before a test is commissioned.

Financial, geographical, and ethical burdens on applicants

DNA testing in RFR cases imposes significant financial and ethical burdens on applicants. As DNA tests are not funded by the Home Office and no systematic data are collected on their use, cost operates as a substantial barrier, particularly for families already living with uncertainty and insecurity, and may constrain provider choice. A cheaper test may have limited power for a complex kinship question (Objective 2); the study does not establish in every case what families were told about that limitation before testing. The absence of Home Office funding and systematic data collection is independently confirmed by the Home Office's own inspectorate: as of October 2022, 'the Home Office's position on funding for DNA tests remained unchanged in that the Home Office does not fund them,' and 'no data was being collected on their use' (Independent Chief Inspector of Borders and Immigration, 2023, para. 9.20).

In addition to cost, the geographical availability of authorised DNA samplers represents a major and under-recognised barrier. Private DNA testing companies are not always able to offer sample collection services close to applicants or family members residing abroad; in some regions, including countries such as Somalia and Nigeria, approved sampling locations may be limited, distant, or entirely absent. This lack of accessible sampling infrastructure can compel family members, including children, to undertake long and potentially dangerous journeys in order to provide DNA samples, undermining the protective purpose of RFR pathways and raising serious ethical concerns about proportionality and safeguarding of the child. Concerns were also raised regarding informed and

proxy consent in these contexts, particularly where children are involved and where logistical pressures constrain families' ability to make fully voluntary and informed decisions.

The transnational geography of proof

The consolidated family corpus makes this barrier rather concrete. The strongest single transnational pattern in the corpus connects the UK with Somalia and Somaliland, and these cases in turn depend on third-country or infrastructural places such as Nairobi, Hargeisa and Mogadishu; other family attachments in the corpus run to Nigeria, Albania, Italy, Sweden, Uganda, Ghana, Sierra Leone and Bangladesh. One family's first choice of provider could not offer sample collection in Somaliland at all, and could only offer Nairobi as an alternative, 'which would cost him thousands of pounds' for the children who would need to travel (Fieldnote 9). The sample itself, once taken, has its own border life: one fieldnote records that a collection kit could take up to three months to reach a sampler in Egypt and cost approximately £200 to send. A relationship is therefore not provable merely because it is genetically testable; it must also be logistically testable through a recognised collection route, and the corpus shows that this second condition, not the science itself, is frequently the binding constraint on whether a family can produce evidence at all.

The Red Cross's report The Long Road to Reunion places such journeys within a wider pattern of procedural exposure to risk. Drawing on a survey of 100 refugee sponsors and nine in-depth interviews with reunited families, it describes costly and dangerous travel to visa application centres, including repeated journeys and border crossings (British Red Cross, 2020, pp. 3–4, 7). These findings concern visa application procedures; the present study's fieldnotes document the DNA-specific difficulties. Together, they show why the accessibility of evidence must include the collection location, required travel and ability to complete the procedure, alongside the availability of a suitable test.

State-contracted brokers and sample collection in practice

A second, distinct process operates where the state itself commissions sample collection through a private contractor, visible in the HM Passport Office route for first-time child passport applications. An FOI response from HMPO, dated 15 May 2026, confirmed that VFS Global currently contracts with Cellmark to process DNA samples collected for UK passport applications; that the VFS Global VCAS contract began on 30 August 2023; and that under the previous NGOV arrangement, TLScontact operated a DNA contract with DNA Diagnostics Centre (DDC) until the transition to VCAS in September 2023. The response is reproduced in full in Appendix A.

Two findings follow from the FOI response. First, the state-contracted broker changed from TLScontact to VFS Global, but both routes connect to laboratories within the Eurofins cluster (VFS to Cellmark; the previous TLScontact route to DDC), so a change in the contracted broker did not necessarily change the ownership cluster of the laboratory carrying out the analysis. Second, this is

not a case of a consumer choosing a DNA company through a public website: it is a state-organised evidential chain delivered through private contractors, about which applicants have limited visibility.

Interview evidence adds a further layer to this process. An interview was conducted with an experienced sampler who described VFS as part of a wider for-profit infrastructure around immigration DNA testing, and a recurring tension between careful sample collection and pressure to make the process faster: VFS had asked for sample collection to be condensed into a ten-minute appointment, which Sampler's team refused as incompatible with proper identity checks, consent, handling of personal information, and safe collection of DNA samples.

Sampler also raised concerns about the physical facilities available for sample collection, including settings where privacy was not adequately protected and where staff could be expected to process documents and collect samples in or near waiting rooms, raising both privacy/GDPR concerns and contamination risks, since DNA samples require a controlled and secure environment. Their team's practice was to refuse to collect samples unless suitable facilities were provided. The interview also pointed to smaller forms of commercial activity around the clinic, such as high-priced photo or photocopying booths for applicants who arrived without the correct documentation, minor-seeming costs that are nonetheless part of the wider commercial infrastructure families encounter when trying to produce evidence.

This material adds to the map. The FOI response shows the formal route: VFS to Cellmark, and previously TLScontact to DDC. The interview shows what that route can mean in practice: pressure on appointment times, unsuitable rooms, privacy concerns, contamination risks and additional costs for applicants. The production of DNA evidence for Home Office and HMPO evaluation is therefore not only a laboratory event. It is an organisational and commercial process that begins well before the sample reaches the laboratory, and families receive very little information about it in advance.

Chain of custody as the central vulnerability

Interviews with laboratory and sample-collection practitioners identify chain of custody, what happens to a sample before it reaches the laboratory, as a recurring concern in how DNA evidence is produced for Home Office and HMPO evaluation. The concern is not primarily whether the laboratory analysis is accurate, but whose sample was actually taken, under what conditions, and with what verification. Interviewees gave examples of repeated DNA profiles appearing across unrelated cases under different identities, and of concerns about substituted samples, particularly where sampling takes place overseas through intermediaries with variable levels of oversight.

The family corpus shows what this vulnerability looks like from the applicant's side when it goes wrong. One family's earlier DNA evidence was not accepted by the Home Office and had to be retested, a fieldnote linked the problem specifically to the original sampler and an incorrectly

completed witness section: 'Home Office didn't accept the evidence, that is why they get retest' (Fieldnote 35). The family bore the resulting cost and delay even though the underlying biological relationship was not in question; what had failed was the administrative apparatus around the sample, identity checks, consent documentation, witness signatures, that converts a biological sample into evidence an immigration decision-maker will accept. This is consistent with the practitioner point above: the clinic and collection site are where evidentiary trustworthiness is made through routine administrative steps, and a defect at that stage can undo an otherwise sound test.

Privatisation and the shift away from direct reporting

The provider survey shows that reporting routes are not uniform across the market, which is directly relevant to this concern. King's and other providers report sending results directly to the Home Office, if it is requested from the applicant, as one of several channels; one provider states that it 'always recommend[s]' sending directly to the Home Office; another that the majority of results go to the tested person or their representative, depending on who is the paying customer, with direct Home Office transmission available in some cases; a further provider sends results to the tested person or other instructing party rather than directly to the Home Office. This spread of practice means that whether a decision-maker receives a report directly from an accredited laboratory, or via the applicant or their representative, currently depends on which provider was instructed rather than on a single consistent rule.

Institutional fragmentation and lack of a stable Home Office contact

Interviewees also described inconsistency between different parts of the Home Office system: the passport route was described as following a more structured process, including a state-contracted intermediary and more direct laboratory reporting (Section 5.5 above), while general immigration/visa decision-making was described as relying more on privately commissioned reports. Providers reported difficulty identifying a stable point of contact within the Home Office to raise technical or fraud concerns, or to seek feedback after a rejection. One provider noted that it is 'almost impossible to speak to anyone at the Home Office' even to clarify why an application was rejected. Interviewees also raised concerns that the Home Office's published list of DNA testing companies mixes laboratories with agencies and intermediaries and is not always kept up to date, which King's survey response linked to some of its own rejections ('may have an outdated list or haven't read the guidance').

Fraud concerns and their effect on genuine applicants

Fraud is a serious concern in its own right and its detection is complex. Interviewed also emphasised a secondary effect: fraud by some applicants may increase scrutiny and suspicion directed at all applicants, including genuine refugee families who are already navigating a stressful and expensive process. This connects directly to the financial, geographical and ethical burdens described above:

families most exposed to the practical difficulties of overseas sampling are also those most likely to be affected by a system-wide increase in suspicion driven by a minority of fraudulent cases.

Trust is relational, not read off the accredited list

The family corpus shows how applicants choose a provider within the opaque market described above (Objective 3, Section 5.3): overwhelmingly through lawyers, friends, previous clients, and community networks rather than by evaluating the official list analytically. One long-term UK resident chose King's because 'a friend who has previously been tested told him King's College is the best place... very reliable' (Fieldnote 25); other families cross-checked a solicitor's provider list against someone in their community or church with prior testing experience before proceeding. This relational trust infrastructure compensates for a genuine gap in official information, but it also distributes access unequally: families with well-connected communities or experienced legal representatives reach a suitable, reliable route faster than those navigating the market alone, and fear of scams, heightened wherever large payments are requested for overseas sampling, further pushes families toward reputation over price.

The hidden labour and emotional cost of producing evidence

Across the corpus, the practical work of assembling DNA evidence is substantial and largely invisible to the decision-maker who ultimately reads the report. Families describe gathering and re-gathering documents, contacting hospitals and schools, translating, arranging care for children abroad, communicating across time zones and borders, paying legal and testing fees, and waiting, sometimes for years, while a route remains open only until a child turns 18. This labour is repeatedly linked to significant emotional strain: 'Sometimes I feel like: what have I done wrong?... Maybe I should have involved a professional' (Interview 6). This should be understood as family labour in the fullest sense, not merely as a 'barrier': applicants are actively assembling, at their own cost and initiative, the evidentiary record on which the state will decide their case, in a role that the reproductive justice framing set out in Section 3.4 treats as central rather than incidental to how family reunion actually functions in practice.

Combined with the FOI-documented state-contracted route and the interview evidence on sample collection practice, these findings indicate that the process from identifying and instructing a DNA service through to Home Office evaluation varies according to the reporting practices of the specific provider chosen and is only partly visible to decision-makers. The process is also vulnerable both to commercial opacity and to fraud at the sampling stage, risks that current arrangements may not be well placed to detect systematically.

Further FOI requests, compiled and analysed in Appendix E, extend this picture to the end of the evidential chain. The Home Office declined to name a designated Data Controller for DNA profile data, would not confirm or deny whether the Information Commissioner's Office has been consulted

on this processing, and stated that data breach information was not held within the scope of a direct request on the point; a separate request for even a small, anonymised sample of DNA-related refusal letters was refused in full. While the Home Office requires providers to supply supporting genetic data, there is little publicly available information on how those data are subsequently handled, including whether they are reviewed or audited, how long they are retained, or when they are destroyed. Irrespective of whether the data are used for comparison purposes, genetic information constitutes special category personal data and any collection, storage, use, retention or destruction must comply with applicable data protection requirements, including the UK GDPR.

Taken together with the sampling-stage findings above, this suggests that the opacity affecting this objective is not confined to the point of instruction and sample collection, but persists through storage, sharing, and the final decision itself.

6. Discussion

Read together, the five sets of findings show how DNA evidence functions as both a technical tool and a moral technology within RFR decision-making, and how each research objective illuminates a different point of failure in the same evidential chain. The reliance on forensic science reflects broader trends toward biometric governance, yet the absence of standardisation and proper training (Objective 1) undermines claims to objectivity and fairness, while the concentration and opacity of the accredited market (Objectives 2 and 3) means that neither applicants nor, in practice, many decision-makers can easily verify what a given DNA report can and cannot show.

The gap between formal Home Office guidance and its practical interpretation (Objective 4) compounds these problems. Because the weight given to DNA evidence is unclear and inconsistently applied, responsibility can remain displaced onto legal representatives, third-sector organisations and private contractors (Objective 5) without corresponding accountability. This displacement obscures state accountability while intensifying pressure on refugees, who must navigate a market that is more commercially concentrated and less transparent than the official accreditation list suggests. In the state-contracted passport route, the evidential chain also passes through private visa-service providers before reaching the laboratory.

This reading is strengthened by triangulating four independently collected sources: qualitative practitioner interviews, a 27-respondent survey of legal practitioners, a 7-respondent survey of DNA testing providers, and a consolidated corpus of clinic fieldnotes and family transcripts covering approximately 21 provisional cases (Section 4.2). Each source has its own limitations; the practitioner and provider material reflects professional rather than direct Home Office or HMPO accounts. Both surveys are based on self-reported information, and the family evidence is provisional and weighted toward those who reached the clinic. These limitations should be recognised. However, similar patterns recur across the four strands of evidence: uneven decision-maker interpretation; provider variation in capability and reporting; gaps in guidance application, and constrained rather than genuinely free choice at the point families decide to undertake a DNA test. The convergence of these findings suggests that they are more likely to reflect structural features of the current system rather than isolated incidents.

This matters particularly in RFR and related cases because families are already navigating uncertainty and may lack documents as a result of displacement, conflict, separation or administrative breakdown. DNA testing can appear to stabilise a case, yet this report shows that testing must itself be navigated. Families and advisers must choose providers, understand costs, arrange sampling, manage documentation and assess the risk that a test will be inconclusive or inappropriate. Families seeking DNA testing therefore become practical experts, not in the technical forensic sense, but through lived

and procedural knowledge of which organisation to contact, what documents are needed, what a test can show, what it costs, where samples can be taken and how a decision-maker may interpret the result. Because DNA testing is not something families do every day, they remain dependent on providers to identify and explain an appropriate test and on decision-makers to interpret the report correctly. The current system relies on families' practical expertise while making the formal expertise they need unevenly accessible.

The clearest way to hold these five objectives together is as stages in a single evidence-making infrastructure, rather than as five separate problems. A biological sample becomes DNA evidence capable of affecting an immigration decision only after it has passed through a distributed and partly commercial chain: a family identifies or is directed toward DNA as a response to institutional doubt (Objective 5); a provider is selected within a market that is regulated by accreditation but not made transparent by it (Objectives 2 and 3); a sample is collected, transported, and analysed against a chosen reference population (Objective 2); a report is produced in a format that may or may not communicate its own uncertainty (Objectives 1 and 2); and a decision-maker interprets that report against guidance that is not consistently taught or monitored (Objectives 1 and 4). This framing extends the anthropological and STS literature discussed in Sections 3.1–3.3, in which documents and scientific tests do not merely reflect reality but actively participate in producing it, to DNA evidence specifically: the evidential authority of a DNA report is not inherent to the molecule, but is assembled, and can fail, at any link in this chain. Family testimony collected for this report supports treating this infrastructure, rather than the laboratory test in isolation, as the unit of analysis for future research, guidance, and reform.

The contribution of this study can therefore be specified in relation to the Red Cross research. Beswick (2015) shows the specialist work needed to assemble family reunion applications, while the British Red Cross (2020) examines the journeys required to complete them. The present study follows the additional scientific and commercial decisions through which DNA becomes usable evidence. Its “burden of knowledge” concerns families being expected to coordinate requirements distributed among advisers, laboratories, collectors and decision-makers. Families bring practical knowledge to this work, while the authority to explain testing capability and evidential weight remains with professionals. This connects the difficulties identified in earlier research to specific responsibilities within DNA evidence production, without treating the different studies as a single dataset.

7. Impact and Engagement

7.1 Toolkit Development and Dissemination

The project places strong emphasis on practical impact and collaboration with civil society organisations. As part of the next phase of the RFR work, the research team plans to collaborate with the NGO Right to Remain to develop a free, publicly accessible toolkit aimed at supporting refugees and migrants navigating decisions about DNA testing in family reunion applications.

The toolkit, to be hosted on Right to Remain's website, will be designed to:

- Support applicants' informed decision-making regarding whether and when DNA testing may be appropriate
- Provide clear, accessible information about the steps involved in DNA testing processes
- Offer a practical checklist to assist applicants, legal advisers, and advocates when making enquiries with private DNA testing companies, including questions about testing capabilities, sampling locations, reporting formats, and limitations
- Reduce the risk of applicants commissioning inappropriate or inconclusive DNA tests due to cost pressures or lack of information

By foregrounding transparency, accessibility, and informed consent, the toolkit aims to mitigate some of the structural and informational inequalities identified in this research.

In autumn 2026, the research team plans to apply for additional funding to organise a joint workshop with Right to Remain and other NGOs, bringing together refugees, migrants, legal practitioners, advocates, and other stakeholders to share findings, pilot and refine the DNA testing toolkit, build capacity among advisers and community organisations, and identify further advocacy and policy priorities.

7.2 Mapping Immigration Routes Where DNA Evidence May Be Relevant

As part of the toolkit, an infographic will be developed outlining the different immigration routes in which DNA testing may be considered relevant or is commonly used as supporting evidence, mapping in plain language: RFR routes, including Appendix FM and Appendix CRP; child-specific routes and applications involving non-parent relatives; situations where documentation is unavailable or contested; and distinctions between cases where DNA evidence may add probative value and cases where it is unlikely to do so. By visually situating DNA testing within the broader landscape of immigration routes, the infographic aims to reduce confusion, prevent unnecessary testing, and support informed, proportionate decision-making by applicants and their advisers.

7.3 Issues Flagged for Ongoing Monitoring

Table 5 sets out the points, arising primarily from the market-mapping component, that remain live and should be kept under review as the toolkit and further stakeholder engagement are taken forward:

Table 5. Issues flagged for ongoing monitoring.

Issue	Question for review
Disclosure at point of sale	Should brokers advertising immigration DNA testing be required to identify the MoJ-listed company that will perform the analysis?
Ownership transparency	Should the MoJ list include information about corporate ownership and whether an entry is an operating laboratory, broker, or UK-facing arm of an overseas laboratory?
Sample collection standards	Should there be clearer minimum standards for appointment length, privacy, consent, document handling, and contamination control in immigration DNA sampling?
State-contracted routes	How should government contracts with private visa/passport service providers disclose the laboratory route used for DNA samples?
Applicant-facing guidance	What information do families and legal advisers need before commissioning a test, especially in complex kinship cases?
Further empirical work	Additional interviews with families, legal practitioners, and sample collectors should test whether the patterns described here are consistent across different routes and locations.

8. Recommendations

8.1 For the Home Office (Objectives 1, 4 and 5)

Each recommendation below states the action required, the body responsible for it, the mechanism through which it can be delivered, and the change it is intended to produce.

- The Home Office should make training on probabilistic DNA evidence mandatory for all caseworkers who assess relationship evidence, covering likelihood ratios, the meaning of an inconclusive result, and the limits of standard parent-child tests. This can be delivered through existing mandatory-learning modules, with content developed jointly with accredited laboratories and forensic geneticists and refreshed at fixed intervals, so that fewer inconclusive results are treated as negative findings and decisions in cases involving relationships other than parent and child become more consistent (Section 5.1).
- The Home Office should publish a public-facing statement of the evidential weight of DNA reports and of how inconclusive results are to be handled, issued alongside the DNA policy guidance and mirrored in applicant-facing GOV.UK content. This would give applicants and their advisers the same account of the rules that caseworkers work to, reducing the uncertainty reported by stakeholders throughout this research (Section 5.4).
- The Home Office should record, in structured fields on the case record, whether DNA evidence was submitted, which relationship was tested, and what weight it carried, and should report this in annual transparency data. Implemented through the casework system and standard operating procedures, this would allow the weighing of DNA against other evidence to be audited rather than inferred, which the Freedom of Information responses obtained for this research show is currently impossible (Section 5.4 and Appendix E).
- The Home Office, with the Ministry of Justice and the Legal Aid Agency, should meet the cost of DNA testing where it is requested or effectively expected on protection routes, whether through a fee waiver at the point of testing or by bringing testing and sampling fees within the scope of legal aid. Several surveyed practitioners reported that legal aid rates do not cover these costs, forcing delay or reliance on historical documentary evidence, and families described borrowing from their communities to pay for tests (Section 5.5). Several surveyed practitioners reported that legal aid rates do not cover these costs, forcing delay or reliance on historical documentary evidence.
- The Home Office and HM Passport Office should require, as a contractual term in visa and passport service contracts, that the contractor discloses the accredited laboratory route used for DNA samples, with compliance checked at contract award and renewal and the route

published. This would make the state-organised evidential chain visible to the applicants who pass through it (Section 5.5 and Appendix A).

- The Ministry of Justice, with the Home Office, should keep the published list of accredited companies current on a dated review cycle that records ownership and subcontracting, and should give caseworkers a single named channel for verifying accreditation and querying a report. Without this, the published list and the live market drift apart, as the ownership changes documented during this project show (Section 5.2).

8.2 For Accredited Laboratories and Brokers (Objectives 2 and 3)

- Accredited laboratories should report relationship results as likelihood ratios rather than percentages, and state the alternative relationships the test can and cannot exclude. This can be delivered through a common reporting template agreed among the accredited providers and referenced in their accreditation scope, so that a report means the same thing whichever provider produced it (Section 5.2).
- Accredited laboratories and the brokers selling their tests should state, before purchase, whether the test offered can address the specific kinship question in the case, published as a standard capability statement on the product page, so that applicants do not pay for a test that cannot answer their question (Section 5.3).
- Providers should publish the sampling locations available in each country, the documents required and the expected waiting times, maintained as a public list and updated when arrangements change, so that families can judge the cost, delay and travel risk before committing to a test (Section 5.5).
- Brokers advertising immigration DNA testing should name, at the point of sale, the MoJ-accredited company that will perform the analysis and the country in which it will be carried out. This could be required through the accredited laboratories' own contracts with the brokers they supply, or through a condition of MoJ accreditation, so that the applicant knows who is producing the evidence in their case (Section 5.3).
- Adopt a single, published set of reporting conventions across accredited providers, with consistent terminology, LRs rather than percentages, and explicit statements of test scope and mutation handling.

8.3 For Legal Practitioners and NGOs (Objective 5)

- Professional bodies and practitioner networks, working with NGOs, should issue ethical guidance on suggesting DNA testing, covering consent, financial pressure and how to advise when a client cannot afford a test. Issued as practice guidance and supported by training, this

would give representatives a shared standard for a responsibility that has been informally transferred to them (Section 5.5).

- Practitioners and providers should strengthen informed consent procedures where children are involved, through a standard consent discussion covering what the test shows, who will see the result and what happens if it is inconclusive, so that consent is not reduced to a signature on a sampling form (Section 4.3 and Section 5.5).
- Representatives should exhaust documentary and testimonial evidence before DNA testing is proposed, supported by the toolkit developed with Right to Remain, so that testing is not the default response to an evidential gap and the escalation described in this report is interrupted (Section 5.5).
- Representatives should check the capability of the specific test before instructing it, using the checklist to be developed with Right to Remain, so that avoidably inconclusive results and repeat testing are reduced (Sections 5.2 and 7.1).

8.4 Cross-Cutting: Oversight and the Voluntary–Mandatory Gap

- Government should establish independent oversight of DNA testing used for immigration purposes, either by extending the remit of an existing regulator such as the Forensic Science Regulator or by creating a multi-stakeholder oversight board including the Home Office, HM Passport Office, the Ministry of Justice, accredited providers, practitioners and refugee-led organisations. Its functions would include standards for relationship reporting, transparency of ownership and subcontracting, and a route of complaint for applicants, none of which currently sits with any single body (Sections 5.2 and 5.3).
- The Home Office should resolve the gap between DNA testing being formally voluntary and effectively expected. This requires an explicit statement of when DNA evidence may be invited, a prohibition on treating a refusal to test as adverse to the claim, a record of each invitation on the case file, and funding where testing is invited, so that a voluntary status that families report being unable to decline is either made real or openly replaced (Sections 5.4 and 5.5).

9. Conclusion

(Policy context note: This report should be read in light of ongoing immigration reform initiatives set out in the UK Home Office White Paper Restoring Control over the Immigration System (Home Office, 2025), which shaped the broader policy environment during the research period.)

This report has examined the efficacy and fairness of Home Office policy and practice concerning evidential requirements in RFR. The research began with a focus on cases involving non-parent relatives and later expanded to other immigration cases in which DNA is used to verify family relationships. The analysis is structured around five objectives developed with the Home Office, HMPO and legal agencies supporting family reunion applications.

On interpretation (Objective 1), the research shows that not understanding fully the probabilistic DNA evidence among decision-makers and legal practitioners contribute to inconsistent and, at times, unfair outcomes. On laboratory differences (Objective 2), variation in testing capability and reporting practice, within a market where six of twelve accredited entries sit inside three ownership clusters, means that the provider selected can materially affect whether a test can address the relationship question in a case. On capability transparency (Objective 3), the gap between the official accredited list and a larger, less transparent consumer-facing market leaves applicants poorly placed to assess what they are paying for. On guidance (Objective 4), formal Home Office policy is more measured than its practical application, and this gap has persisted despite independent review (Singh 2018, 2019). On process transparency (Objective 5), responsibility for navigating DNA testing has been informally transferred from the state to legal advisers, third-sector organisations and, in the passport route, private contractors, without adequate guidance, resources or accountability.

Together, these findings demonstrate that DNA testing, although often perceived as objective and authoritative, is shaped by legal frameworks, institutional practice, market incentives and uneven knowledge across stakeholders. These conditions combine with cost pressures and limited access to authorised sampling locations to place disproportionate burdens on refugee families. In some cases, they actively undermine the safeguarding and child-protection purposes that family reunion routes are intended to serve.

Addressing these issues requires more than technical fixes. It calls for sustained investment in training, clearer and more consistently applied guidance, improved oversight of private actors and their ownership structures, and meaningful collaboration with civil society. The proposed toolkit and collaboration with Right to Remain and other NGOs represents an important step toward empowering applicants and advisers, but they are not a substitute for systemic reform.

Ultimately, ensuring fairness in RFR decision-making depends on recognising that DNA evidence does not speak for itself and is dependent on the interpreter of the result.

We return, in closing, to the position set out in Section 4.4: this project is concerned with DNA evidence because, firstly, with whether families displaced by conflict and persecution can be reunited and can parent safely, a reproductive justice commitment (Section 3.4) that this report treats as inseparable from the infrastructure, technical and administrative detail documented in the preceding sections. Every inconsistency in interpretation, every opaque ownership structure, and every gap in guidance recorded here has on the other side of it, a parent, extended family member, child, or sibling, waiting. That is the standard against which the recommendations in Section 8 should be judged.

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Appendix A. FOI 2026/06006: HMPO Freedom of Information Response

This appendix reproduces the substantive content of the Freedom of Information response received from His Majesty's Passport Office, Home Office, on 15 May 2026, under reference FOI 2026/06006. The request was submitted on 30 April 2026.

Request question 1: The name of the Ministry of Justice-approved DNA testing laboratory (or laboratories) currently contracted, whether by HMPO directly, by VFS Global, or by TLScontact, to process DNA samples collected for British passport applications under the DNA testing service offered to first-time child cases.

HMPO response: VFS Global currently contract with Cellmark to process DNA samples collected for UK passport applications.

Request question 2: Where more than one laboratory is in use, please specify which laboratory is used in connection with VFS Global-operated Visa Application Centres and which is used in connection with TLScontact-operated Visa Application Centres, and the regions or countries each covers.

HMPO response: Cellmark have UK based laboratories for processing current DNA samples.

Request question 3: The start date and end date (or expiry/renewal date) of the current contract(s).

HMPO response: The VFS Global VCAS contract began on 30 August 2023.

Request question 4: Any prior suppliers in this role over the past five years, with the dates each held the contract.

HMPO response: TLS contact held arrangements under the previous NGOV contract. TLS contact operated a DNA contract with DNA Diagnostics Centre (DDC) until exiting in September 2023 when HMPO transitioned to VCAS.

Appendix B. Interview Note: VFS Global, Passport Office Clinics and Sample Collection

This appendix records the interview material used in Section 5.5 (Objective 5). It is included here in full, with the interviewee anonymised to role and organisation, for transparency and to support future publication or scrutiny of the findings.

In discussing the practical organisation of DNA sample collection for immigration applications, Sampler described working with VFS Global, which they identified as a private immigration services company with clinics across the UK, including London, Glasgow, Belfast, Cardiff, Birmingham and other locations. They framed VFS as part of a wider for-profit infrastructure around immigration DNA testing.

A central concern in their account was the tension between the time required for careful sample collection and the pressure to make the process faster and more commercially efficient. Sampler explained that VFS had asked them to condense the sample collection process into a ten-minute appointment window. Their team refused this, as they considered it incompatible with proper document checking, consent, handling of personal information and safe collection of DNA samples. They also noted frustration that the laboratory involved was not giving them strong enough support in resisting these pressures.

Sampler raised repeated concerns about the physical facilities in which sample collection was expected to take place, describing settings where privacy was not adequately protected, including expectations that staff might process documents, collect personal information and take samples in or near waiting rooms where other people were present. This was described not only as a privacy and GDPR concern, but also as a contamination risk, since DNA samples require a controlled and secure environment. Their team's practice was to refuse to collect samples unless appropriate facilities were provided. They also described small but significant forms of commercial activity around the clinic setting: for example, if an applicant arrived without the correct photograph or documentation, there might be a photo or photocopying booth outside, allegedly connected to a family member of clinic staff, charging high prices.

Sampler also reflected on earlier work carried out from a passport office clinic in London, describing the facilities there as similarly problematic, and said their team eventually stopped doing that work. The work was then passed to another laboratory, identified in the conversation, described as London-based but sending samples to America, and said to hold a contract for passport office clinics in London twice a month.

Follow-up comment from the Business Manager: […] I also experienced issues when I ran the clinic at the passport office.'

The interview account highlights several recurring issues: the privatisation and commercialisation of immigration DNA testing; pressure to accelerate sample collection; inadequate facilities for privacy, consent and data protection; contamination concerns; unclear accountability between clinics, laboratories and agencies; and the routing of samples through cross-border testing infrastructures.

Appendix C. Legal Practitioner Survey: Questions Asked

This appendix reproduces the questions put to legal practitioners in the survey of 27 respondents referenced throughout Section 5. Individual responses are not reproduced here in order to protect respondent anonymity (see Section 4.2); they are analysed in aggregate and as anonymised illustrative quotations in the Findings section. Question wording is reproduced as recorded in the survey export; a small number of longer question prompts were truncated in the original export tool and are marked accordingly.

1. Are you a legal practitioner working in UK immigration, asylum, and/or nationality law and have experience with the use of DNA testing for immigration purposes?
2. Which of the following best describes your job(s)? Please select all that apply.
3. Which region(s) of the UK does your practice cover?
4. For how long have you been practicing immigration law or advising in the UK?
5. How familiar are you with DNA testing?
6. Do you use DNA evidence to support immigration applications, including refugee family reunion cases?
7. When do you choose to advise clients to provide DNA evidence in support of their application for family reunion, immigration, etc.? Please explain the context for the usage of DNA evidence [prompt truncated in source].
8. Where do you seek information about DNA testing for migration cases?
9. What factors are most important to you when choosing a DNA testing laboratory?
10. Which laboratories from the Minister of Justice's approved list have you referred your clients to?
11. You may describe your experiences with these labs, including strengths, weaknesses, or any patterns you have observed.
12. Do you feel DNA laboratories provide clear and transparent information about the range of tests they offer (e.g., paternal/maternal, avuncular, grandparent, half-sibling, cousin, etc.)? Please provide detail [prompt truncated in source].
13. Have you ever received inconclusive results from a DNA testing laboratory?
14. Have you ever experienced that a client had to re-take a DNA test?
15. If yes, please indicate the relationship(s) tested: paternal, maternal, aunt/uncle–niece/nephew (avuncular testing), grandparent, half-sibling, half-other, cousins, others.

16. Has a DNA report been a significant factor in the decision-making process for a case?
17. Please give examples of cases where the DNA report has been significant as evidence in immigration cases.
18. Do you think the Home Office has sufficient knowledge to interpret DNA test reports? Please add your comments here.
19. Is there anything else you would like to share about using DNA testing in immigration cases?
20. Would you be interested in being contacted for a short follow-up interview regarding your experience of using DNA evidence in migration cases?

Appendix D. DNA Provider Survey: Questions Asked

This appendix reproduces the questions put to organisations offering DNA testing for UK Home Office immigration cases in the survey of eight providers who responded (see Section 4.2).

1. Where is your company / laboratory based (country)?
2. Does your organisation subcontract DNA testing to an accredited laboratory?
3. Do you offer DNA testing for UK Home Office immigration cases?
4. What accreditations does your company hold? (please specify)
5. Who contacts your company for a DNA test?
6. Do you use a template for reporting your DNA testing result to the Home Office?
7. Do you send results directly to the UK Home Office or representative, or do you provide them to the tested person?
8. How do you ensure chain of custody for immigration-related DNA tests? (Optional explanation: secure collection, witnessed sampling, documented handover, etc.)
9. Do you offer sample collection services internationally for UK immigration cases?
10. Who collects the DNA samples for your testing service?
11. What forms of identification (ID) do you accept at the time of collection?
12. Do you require a recent photograph of the person being tested?
13. Do you require specific written consent to perform a DNA test?
14. Do participants have the opportunity to withdraw consent after providing a sample?
15. Who provides consent for minors, and how is that consent recorded? (e.g. legal guardian, recorded via signed form, etc.)
16. How are DNA samples delivered to your laboratory?
17. What types of DNA relationships do you offer testing for?
18. How many markers do you use (e.g., DNA17 / DNA24 / additional markers)?
19. How many exclusions does your company consider sufficient to exclude a claimed relationship?
20. How does your company account for genetic mutations in the report?
21. What population frequency data do you use to calculate likelihood ratios (LRs) for kinship analysis, if any?

22. Are you aware of the Home Office DNA Policy Guidance on DNA?
23. Do you think the Home Office has sufficient knowledge to interpret your test results? Please add your comments here.
24. Has your company experienced test results being rejected by the Home Office despite your accreditation?
25. If your company has experienced test results being rejected, what were the reasons?
26. Is there anything else you would like us to know?
27. Would you be interested in being contacted for a short follow-up interview regarding your DNA testing services?

Appendix E. Compilation and Analysis of Freedom of Information Requests

This appendix compiles the nine Freedom of Information (FOI) requests submitted by Linda Pedersen and Nott to the Home Office, UK Visas and Immigration (UKVI), and HM Passport Office (HMPO) between October 2025 and July 2026, in support of this research. It sets out each request and response in chronological order (Table 6), then draws out the cross-cutting findings and connects them to the report's five research objectives. Two further copies among the files reviewed for this appendix were duplicates of requests already listed (FOI2025/13962 and FOI2026/06049), and are not counted separately.

Table 6. The nine Freedom of Information requests submitted for this research, October 2025 – July 2026.

Ref.	Dates (requested / responded)	Subject	Outcome	Key finding
1	15 Oct 2025 / 10 Nov 2025	Copies of DNA-related staff training materials (2018–present)	Refused in full (s31)	Home Office confirmed it holds training materials but withheld all of it, including any summary, citing prejudice to immigration control if evaluative processes were disclosed.
2	11 Nov 2025 / 11 Dec 2025	Who delivers DNA-related training to HO/UKVI/HMPO staff	Disclosed	Training is delivered entirely in-house via an e-learning module (built 2018/19, updated 2024) plus brief references within 'Definition of Parent' training. No external laboratory, scientific institution, or contractor is involved.
3	27 Jan 2026 / extension to 25 Mar 2026	Not stated (part of the 27 Jan 2026 batch on Singh Review follow-up)	Extension: outcome unknown	UKVI invoked s36(2)(c) to extend the deadline for a public interest test. No substantive response was available for this compilation.
4	27 Jan 2026 / 11 Feb 2026	Specific actions taken since the Singh	Refused (s12 cost limit)	Home Office holds no central record or index of what it did in response to the Singh review; confirming this

		(2019) review recommendations		would require searching multiple directorates, exceeding the £600 cost limit.
5	27 Jan 2026 / 12 Feb 2026	Content, dates, ownership and evaluation of the DNA e-learning module	Partially disclosed	Module built 2018; current version uploaded 14 Apr 2025, but this update was cosmetic (logo, typos), not a content review. No internal evaluation of its effectiveness has ever been conducted.
6	30 Apr 2026 / 15 May 2026	Which accredited laboratory processes passport DNA samples, and since when	Disclosed	VFS Global currently contracts Cellmark (VCAS, from 30 Aug 2023); the prior TLScontact/NGOV route used DDC until Sept 2023 (already cited in Appendix A and Section 5.5).
7	2 May 2026 / 15 May 2026	Sample of anonymised refusal letters citing DNA evidence	Refused in full (s31)	Home Office declined to release any refusal letters or extracts, even a small anonymised sample, arguing this could help applicants or facilitators adapt fraudulent submissions.
8	4 Jun 2026 / 23 Jun 2026	Retention of DNA data/profiles and applicant consent	Refused (s21, already published)	Response pointed to published guidance rather than giving specifics; confirmed DNA evidence is provided voluntarily, but no data on actual retention practice.
9	4 Jun 2026 / 3 Jul 2026	Third-party data sharing, named Data Controller, ICO consultation, data breaches	Partially disclosed	No specific Data Controller named; no confirmation or denial on ICO consultation or past data breaches, described as 'not held within the scope of this response.'

A full working version of this table, with source references and colour-coded outcomes, is held as a separate spreadsheet (RFR FOI Compilation.xlsx) alongside this report.

Analysis: what the FOI compilation adds to each objective

Objective 1: Interpretation of DNA evidence by decision-makers

Requests 2 and 5 explain, rather than merely describe, the unevenness in decision-maker interpretation documented in Section 5.1. Decision-makers are trained exclusively through a single internal e-learning module built in 2018/19. It has not received a substantive content update since then; the only 2025 revision was cosmetic, consisting of the HM government branding following accession of King Charles III, and typographical corrections. No evaluation has examined whether the training equips staff to interpret LRs, mutations or complex kinship results. This is consistent with, and helps to explain, the practitioner and survey evidence in Section 5.1 that Home Office and HMPO staff sometimes misread reports, question the authenticity of accredited laboratories, or fail to register the significance of sibling or half-sibling findings. The gap is not necessarily one of individual competence, but of an unreviewed and unevaluated training pipeline.

Objective 4: Transparency of official guidance and its interpretation

Requests 1 and 4 show that the opacity identified in Section 5.4 extends beyond the guidance document itself to how it is taught and monitored. Although Syndercombe Court and Nott were consulted in drafting the Home Office's DNA policy guidance (Section 2.1), the training materials used to operationalise that guidance for caseworkers are withheld in full, and the Home Office holds no central record of the actions it took in response to its own commissioned review (Singh, 2019), meaning neither outside researchers nor, on the evidence available, the Department itself can straightforwardly demonstrate that the review's recommendations were implemented and sustained. This corroborates the report's central Objective 4 finding: the problem is less the wording of the guidance than the absence of visible mechanisms for teaching, monitoring, and evidencing its consistent application.

Objective 5: Transparency of the process from instruction to Home Office evaluation

Requests 7, 8 and 9 extend the process-transparency findings in Section 5.5 to the decision-making end of the pipeline. The Home Office would not release even a small, anonymised sample of refusal letters that discuss DNA evidence, which means the reasoning connecting a DNA report to a refusal decision, the single most consequential step in the process for an applicant, cannot currently be examined by outside researchers at all. Requests on data retention and third-party sharing were met with generic references to published privacy notices rather than specific answers, and the Home Office could not or would not name a specific Data Controller for DNA profile data or confirm whether the Information Commissioner's Office has been consulted on this processing. Combined with the chain-of-custody and broker-opacity findings elsewhere in Section 5.5, this suggests that opacity in the DNA evidential process is not confined to the commercial market but extends into the Home Office's own internal accountability arrangements.

Cross-cutting observation: the pattern of exemptions

Across the nine requests, refusals cluster around two exemptions: section 31 (prejudice to law enforcement or immigration control), used to withhold training materials and refusal letters, and section 12 (cost limit), used to avoid searching for a central record of Singh Review implementation. Both exemptions are lawful and routinely used across government, but their concentration on precisely the questions this project asks, how decision-makers are trained, and how DNA evidence connects to refusal reasoning, means that the transparency gaps identified qualitatively throughout this report (Objectives 1, 4 and 5) cannot currently be closed through FOI requests alone. This is itself a finding: it points to the need for the proactive publication and independent audit recommended in Section 8, rather than reliance on ad hoc information requests, if the training and decision-making gaps this project has identified are to be addressed.

Appendix F: Semi-structured interviews with families

Refugee Family Reunion DNA project

This working guide follows the questions I asked when talking with families at the clinic. I start with why they have come in, then follow their account of the application and the DNA test. I do not need to ask every question or keep to this order.

Why they have come to the clinic

1. First of all, why have you come to the clinic today? What is the DNA test for?
2. Who are the family members you are applying for? Where are they now?
   Follow-up questions How old are the children? Are you in touch with them?

The application

3. When did you come to the UK? What kind of status do you have now?
   Follow-up questions Do you remember when you first got your status?
4. Is this the first time you have applied for them, or have you applied before?
   Follow-up questions When did you start collecting the documents? When did you submit the application?
5. What have you been asked to send to support the application?
   Follow-up questions Have you heard back? Was there anything that was difficult to get or send?

The DNA test

6. Who suggested getting a DNA test? Was it the Home Office, your solicitor, or did you decide to do it yourself?
   Follow-up questions What did they say the test would help to show?
7. How did you find this clinic?
   Follow-up questions Were you given a list? Did someone you know tell you about it? Did you contact another company first?
8. Where will your family be able to give their samples?
   Follow-up questions Can they get to the place where samples are taken? Would they have to travel to another city or country?
9. Have you been tested here before, or had a DNA test for another family member?
   Follow-up questions If so, who was tested, and what happened next?

Help and waiting

10. Are you doing the application yourself, or do you have a solicitor or lawyer helping you?
    Follow-up questions How did you find them? Who helped you choose the DNA test?
11. How long has the process taken so far?
    Follow-up questions How has the waiting been for you and your family? Is there anything about the process I have missed?

Appendix G: Consent form template

CONSENT FORM FOR PARTICIPANTS IN RESEARCH PROJECTS

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of project: Refugee Family Reunion: DNA-analysis		
Ethical review reference number: MRA-24/25-49621	**Version number: 12/09/2025**	
		Tick or initial
1. I confirm that I have read and understood the information sheet dated 16 Sept 2025 for the above project and that I meet the eligibility criteria. I confirm I have had the opportunity to consider the information provided and to ask questions which have been answered to my satisfaction.		
2. I consent voluntarily to be a participant in this project and understand that I can refuse to take part and can withdraw from the project at any time, without having to give a reason, up until **15 Dec 2025**		
3. I understand my information will be processed for the purposes explained to me in the Information Sheet. I understand that such information will be handled under the terms of UK data protection law, including the UK GDPR and the Data Protection Act 2018.		
4. I understand that my information may be subject to review by responsible individuals from the College for monitoring and audit purposes.		
5. I agree to be identified in any research outputs, as explained in the Information Sheet.		

_____	_____	_____
Name of Participant	**Date**	**Signature**
_____	_____	_____
Name of Researcher	**Date**	**Signature**

The Production and Interpretation of DNA Evidence in UK Family Migration Expertise, Communication and Decision-Making across Families, DNA Service Providers, Legal Representatives and the Home Office

Key Findings:

- Providers offering immigration DNA testing differ in testing, expertise, capabilities and accreditation scope, sometimes invisible to the family at point of instruction, affecting outcomes.
- There is a lack of knowledge in the legal community relating to the benefits, limitations, logistical challenges and costs of DNA evidence.
- Home Office DNA Policy states it is voluntary for a DNA test report to be provided, however, families, decision makers and legal representatives may feel DNA evidence will enhance the application.
- Unaccompanied children and vulnerable people often have to travel across international borders at great risk and cost for sample collection, sometimes without formal ID documents.

Key Recommendations:

- Improve guidance and transparency of MoJ accredited list of DNA service providers, including the laboratory's ability to resolve relationships beyond parent-child.
- Knowledge exchange and training in interpretation and standardisation of reports for Home Office and other decision makers.
- Families are experts by experience - central to policy and practice reform and should be consulted.
- Toolkit to provide accessible guidance and resources for families, legal representatives, DNA service providers and decision makers available on the Home Office website alongside the DNA Policy Guidance.

Scan the QR code to download and read the full report

Contact: Lesley Nott, Principal Investigator & Forensic Business Manager, DNA@King's
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