Equality impact assessment: Template for Live Facial Recognition Tactical Deployments

How to complete an equality impact assessment

The equality impact assessment (EIA) will help you to evidence your public sector equality duty (PSED) compliance. It is a live document that outlines the way equality has been considered throughout the life of the policy, process or other project (hereafter referred to as 'product').

Version control

Version number	Date	Author	Comments
0.1	19/08/2024	Nicola Cain	First Draft
1.0	23/08/2024	Sharon Warwick	Amendments for final draft
2.0	26/11/2025	Gabe Snuggs	Document review

Overview

Name of product under development or review	Live Facial Recognition (LFR)
Description of the product	Live Facial Recognition software takes images obtained from CCTV cameras, takes the biometric data from facial images obtained, and cross refers them to a pre-loaded watchlist of images / biometric data, highlighting if it is believed that there is a match between the two.

EIA start date	10/09/2024 – date of 1st proof of concept LFR deployment
EIA author and role	Nicola Cain – Principal Consultant, Handley Gill Limited
EIA owner and role	C/Supt Tim Rowlandson - Head of Intelligence & Serious Organised Crime and Strategic LFR Lead
Date of last review	First review 26/11/2025
Date of next review	26/05/2026

Key product development dates

To evidence PSED compliance, equality and inclusion must be considered throughout the life cycle of a product. You can do this by integrating EIA reviews into key product development stages. List your product's key stages and the dates you will review your EIA here.

Key stage	Date
Production prior to Proof of Concept Trial – w/c 09/09/2024	01/09/2024
Review prior to 1st deployment, after adopting LFR into HIOWC's existing suite of deployable policing tactics.	26/11/2025

Research and evidence

To undertake effective equality assessment that meets PSED compliance standards, you must work from an evidence base. Use this section to list the research you will use to understand the product's potential or actual equality impacts (for example, surveys, customer feedback, protected characteristic data, academic research).

1. National Physical Laboratory: Facial Recognition Technology in Law Enforcement

frt-equitability-study_mar2023.pdf (science.police.uk)

Consultation record

Stakeholder consultation will give you a better understanding of your product's impacts and is crucial to satisfying the PSED requirements. Use this section to record the engagement you have undertaken, summarise the feedback received and note subsequent actions. This section can also be used to record nil returns.

Name of group or organisation	Date of contact	Date reply received	Feedback	Action taken or reason why no action was taken
HIOWC Ethics Committee	23.04.24 04/12/2025	23.04.24	Supportive	
Independent Audit Group	02.04.24 04/12/2025	05.04.24	Supportive	
Police & Crime Commissioner	24.05.24 25/11/2025	24.05.24 25/11/2025	Supportive Supportive	

General considerations

Use this section to note any general diversity, equality and inclusion activities or considerations that are relevant to the product. Please only document general considerations here. Protected characteristic analysis can be completed in the section below.

Before any deployment of equipment, a watchlist is created. The watchlist is bespoke for every deployment and the rationale for the make-up of the watchlist must be intelligence-led, justified, proportionate and necessary, with the nature of the watchlist recorded prior to each deployment.

The criteria for the construction of watchlists for use with LFR must be approved by the Authorising Officer (the 'AO') and be specific to an operation or to a defined policing objective. Watchlists, and any images for inclusion on a watchlist, must also be limited to the quality and the categories of image articulated in Force policy documents which are images of people where:

a) A court has issued an arrest warrant during criminal proceedings because the defendant failed to appear in court and we have been subsequently unable to locate and arrest them.
b) An individual who has been released from prison on licence but due to breaching their licence conditions have had their licence revoked and have failed to return to prison ('recalled to prison').
c) Outstanding suspects for a range of criminal offences, including high risk crimes and those relating to local district priorities which justifies the inclusion.
d) Missing persons considered at increased risk of harm and HIOWC have assessed them to be medium or high risk.

The deployment of LFR has to be to a specified location(s), which are intelligence led, and consideration is given in accordance with Force LFR policy documents to the location and the impact on local communities and organisations of the deployment as well as to the impact on individuals seeking to avoid the LFR deployment.

CCTV footage obtained as part of the LFR deployment may identify a person's race, religion, sex and/or their disability status. However, the footage is only used by LFR to obtain biometric data to compare against the watch list and is deleted after 31 days unless part of it is required for inclusion on a prosecution file, to respond to a Right to Access request or to investigate a complaint.

Following the National Physical Laboratory Equitability Study, LFR is deemed to be equitable, with no significant statistical difference across all demographics, when used in accordance with the configuration permitted by the Force LFR policy documents.

Notwithstanding any potential match flagged by the LFR system, no action is automatically taken against an individual and officers are required to exercise their own independent judgement before taking a decision even to engage with an individual.

Impact assessment and actions

Apply learning from research, consultation and project knowledge to consider equality considerations relevant to your project. This should include any potential or actual impacts (positive or negative), as well as how the project will uphold the three PSED aims for each of the **protected characteristics**.

1. Eliminate discrimination, harassment and victimization.
2. Advance equal opportunity.
3. Foster good relations between people of different characteristics.

If you have identified a negative impact, note what mitigating action will be taken to reduce or eliminate that impact. If no mitigating action can be taken, please explain why. The issues or impacts identified may change, or new factors may emerge, as your project

develops. Use the EIA to document these and how your project has evolved to accommodate equality considerations.

Don’t forget to consider intersectionality. This refers to when characteristics overlap to shape experiences of inequality and discrimination. For further information, please refer to the ‘Addressing Intersectionality within Policing’ report.

Duplicate the boxes below if required. If you need further information about a protected characteristic, open the webpage linked to each subtitle.

All characteristics

Details of positive and/or adverse impact or other issue
Whilst LFR deployments will not target persons owing to any protected characteristics or equality groups, there are issues that may arise because of the deployment that can have an impact. If a group is not listed below, it is because there is no anticipated differential impact on that group: **Age** – Facial images uploaded will be sourced primarily from existing HIOWC records (usually custody images) or, where necessary and authorised in accordance with Force LFR policy documents, from other sources, such as from family and friends of persons reported as missing. The reference image database, consequently, may have images of subjects that were taken a number of years ago, albeit that all images must meet minimum quality standards and the proposed inclusion of non-police sourced images is the subject of specific consideration. The age of criminal responsibility in the UK is 10 years old. Image capture via Custody Imaging on which FRT is reliant, is dependent on the age, date and time at which the custody image was taken. In addition, the European Union's Agency for Fundamental Rights 'Facial Recognition Technology Fundamental Rights Considerations in the Context of Law Enforcement Report 2019' highlights that as a child grows and time passes, the accuracy of a biometric match can diminish. The risk of a failure to match increases when facial images recorded at a young age are compared more than five years after they were collected. The report further indicates that the accuracy of FRT is in general significantly lower for children younger than 13 years old. They associate this to "rapid growth and change in facial appearance". Accuracy and efficacy can also be affected simply by the positioning of LFR CCTV cameras and the density of crowds, which may make it harder for younger people who are likely to be less tall than adults to be picked up on camera. It is noted that the NPL report tested for the impact of age on efficacy and equitability but did not combine age with gender and ethnicity. Children approaching the LFR zone of recognition may be less likely to effectively engage with or understand transparency measures. Research by Age UK suggests that 1 in 3 people over the age of 65 lack the basic skills to use the internet successfully, and therefore transparency measures such as the publication of Force LFR policy documents and/or prior notification of LFR deployments on the Force website and social media channels may not reach these groups, who may also face greater challenges in seeking to avoid LFR deployments by taking alternative routes. Almost a third of NHS outpatient appointments are taken by individuals in the 60-79 age group, and such individuals may be more significantly affected should an LFR deployment be located in the vicinity of a health facility access to which requires them to enter the LFR zone of recognition.

Disability - People can undergo facial change for several reasons. They may suffer facial disfigurements through trauma or a medical intervention or their face may have reconstructive surgery which would result is a significant change to their facial features. Genetic conditions such as neurofibromatosis also cause progressive facial change. Consequently, the images that HIOWC hold may not accurately reflect their present facial appearance.

The accuracy and efficacy of LFR can also be affected simply by the positioning of LFR CCTV cameras and the density of crowds, which may make it harder for disabled people, particularly individuals in wheelchairs, who may not be picked up as well or at all on camera.

Individuals in this group may also face greater challenges in seeking to avoid LFR deployments by taking alternative routes.

Gender reassignment – The Facial Recognition Technology (FRT) probe image is based on the mapping of key facial indicators when comparing a reference image database image for an individual. Therefore, the functionality, accuracy, and performance of FRT may be less effective if changes to facial appearance have occurred between the time the reference image database image was taken, and the time a comparison is made.

This may impact persons who are transitioning from one gender to another if gender presentation differs from the time the comparator image was taken. It may also affect trans, non-binary and gender- fluid people who adopt to flex between gender presentations.

Scientific research conducted by researchers from Ben-Gurion university of the Negev in Israel published in 2021, suggested that facial contouring using cosmetic make-up application adversely impacted upon the efficacy of the ArcFace model against which it was tested, a different model to that proposed to be deployed by HIOWC.

Racial Groups – HIOWC is a diverse multi-cultural area which incorporates both rural and metropolitan areas. It is therefore important to ensure that the technology does not and is not perceived to unfairly impact or cause division between persons of different race/ethnicity.

FRT is based on the mapping of key facial indicators. They are also dependent on the ability of the algorithm to determine the key facial indicators within an image. This can be impacted by environmental factors such as ambient light and shadows. This may also be impacted by the depth of skin pigmentation and the use of contouring make up.

To date ethnicity biases have received considerable attention, particularly from academics and government bodies. Relevant studies include Klare et al (2012), NIST (2018) and Buolamwini and Gebru (2018). The findings from Buolamwini and Gebru's study were widely reported, as they found the algorithms tested were particularly biased in terms of gender and ethnicity: performance was best for men and white individuals, and poor for women and black individuals.

The NPL report found that, breaking down the Test Cohort into ethnicity-gender groups, “the best TPIR was the Asian-Female group, and the poorest TPIR was for the Black-Female group”.

Religion or Belief - The wearing of religious headwear or coverings and the growing of facial hair may have an impact on the effectiveness of FRT. In addition, certain cultures or sexes within a religion i.e. Amish, refuse to allow themselves to be photographed. Sensitivity therefore needs to be taken with cross-community dialogue to ensure the deployment is both necessary and proportionate and that individuals have opportunities not to participate.

The location of an LFR deployment could adversely impact on individuals associated with religious or cultural organisations, by either discouraging them from attending or resulting in them feeling compelled to enter the LFR zone of recognition.

Respect for Diversity Awareness training is undertaken by all HIOWC police officers and staff and its principles are embedded HIOWC Culture.

Sex – Social observation indicates women change their appearance more frequently and significantly than men which may impact the performance of LFR as source images may become out of date more readily.

Scientific research conducted by researchers from Ben-Gurion university of the Negev in Israel published in 2021, suggested that facial contouring using cosmetic make-up application adversely impacted upon the efficacy of the ArcFace model against which it was tested, a different model to that proposed to be deployed by HIOWC.

Mitigating action for any adverse impact or rationale for no further action

Equitability

HIOWC has carefully considered issues regarding bias and algorithmic injustice. When considering the algorithm and software used for LFR by other forces (South Wales Police and the Metropolitan Police Service) at the authorised relevant configurations, there have been no observed disproportionality across any particular ethnic group with regards to the generation of false alerts.

Research has been undertaken by the National Physics Laboratory (published April 2023) entitled ‘*Facial Recognition Technology in Law Enforcement: Equitability Study’.* This research is referred to as the NPL Equitability Study.

The NPL Equitability Study is available via the link:

frt-equitability-study_mar2023.pdf (science.police.uk)

This study shows:

- TPIR (true positive identification rate) of the system at face-match threshold 0.6 is equitable across gender and ethnicity groups, but continues to demonstrate statistically significant differences when comparing under 21 year olds and over 42 year olds.
- FPIR (false positive identification rate) is equitable between gender and ethnicity and age at face-match threshold 0.6 and above
- At face-match thresholds lower than 0.6 FPIR equitability will depend on settings of the operational deployment, including size and composition of the watchlist, and the number of crowd subjects passing through the zone of recognition during the deployment.

Given the observations on the demographic variation in FPIR, NPL would recommend, where operationally possible, the use of a face-match of 0.6 or above to minimise the likelihood of any false positive and adverse impact on equitability.

With the above findings in mind, the LFR threshold when deployed in HIOWC by will set at 0.64 in accordance with the Force LFR policy documents, as this is the level whereby equitability of the rate of false positive identification across all demographics is achieved.

Code of Ethics

The College of Policing Code of Ethics and supporting Code of Practice for Ethical Policing set and define the exemplary standards of behaviour for everyone who works in policing. The Code of Ethics is about self-awareness, ensuring that everyone in policing feels able to always do the right thing and is confident to challenge colleagues irrespective of their rank, role or position. The Code's principles include "Challenging unprofessional behaviour and practice" which requires officers to "challenge all prejudice, discriminatory behaviour and any activity that undermines the impartiality of policing", and "In ensuring that everyone is treated equally and fairly, regardless of background or circumstance, we recognise the need to tailor our response to ensure that we are being responsive to individual needs and acting with integrity and respect".

Governance

The undertaking of this EIA, as part of the wider Force LFR policy documents, also serves to address any adverse impact.

Ongoing monitoring of the efficacy and equitability of the Force LFR deployments, with the input of appropriate stakeholders, will be carried out as part of the governance and oversight of the operation.

Age

Details of positive and/or adverse impact or other issue
Facial images uploaded will primarily be sourced from existing HIOWC records or, where necessary and authorised, from alternate sources such as family and friends of persons reported as missing. The reference image database, consequently, may have images of subjects that were taken a number of years ago, albeit that all images must meet

minimum quality standards and the proposed inclusion of non-police sourced images is the subject of specific consideration.

The age of criminal responsibility in the UK is 10 years old. Image capture via Custody Imaging on which FRT technology is reliant, is dependent on the age, date and time at which the custody image was taken. In addition, the European Union's Agency for Fundamental Rights 'Facial Recognition Technology Fundamental Rights Considerations in the Context of Law Enforcement Report 2019' highlights that as a child grows and time passes, the accuracy of a biometric match can diminish. The risk of a failure to match increases when facial images recorded at a young age are compared more than five years after they were collected. The report further indicates that the accuracy of FRT is in general significantly lower for children younger than 13 years old. They associate this to "rapid growth and change in facial appearance". Accuracy and efficacy can also be affected simply by the positioning of LFR CCTV cameras and the density of crowds, which may make it harder for younger people who are likely to be less tall than adults to be picked up on camera.

It is noted that the NPL report tested for the impact of age on efficacy and equitability but did not combine age with gender and ethnicity.

Children approaching the LFR zone of recognition may be less likely to effectively engage with or understand transparency measures.

Research by Age UK suggests that 1 in 3 people over the age of 65 lack the basic skills to use the internet successfully, and therefore transparency measures such as the publication of Force LFR policy documents and/or prior notification of LFR deployments on the Force website and social media channels may not reach these groups, who may also face greater challenges in seeking to avoid LFR deployments by taking alternative routes.

Almost a third of NHS outpatient appointments are taken by individuals in the 60-79 age group, and such individuals may be more significantly affected should an LFR deployment be located in the vicinity of a health facility access to which requires them to enter the LFR zone of recognition.

Mitigating action for any adverse impact or rationale for no further action

Any images contained in a watchlist are required by the Force LFR policy documents to be lawfully held and to wherever possible to meet minimum quality thresholds. Watchlists will be as close to the deployment as possible and no earlier than 24 hours in advance, therefore hoping to ensure the most accurate and up to date images of persons being added are uploaded. If the LFR software highlights a potential match, Police personnel will check the images highlighted for accuracy and exercise their own independent judgement as to whether there is a valid match and whether steps should be taken to seek to engage the relevant individual.

At a threshold of 0.64, as required by the Force LFR policy documents, the NPL confirm testing shows the false positive identification rate was equitable between all age groups tested, which included individuals in the 12-18 age bracket in one of the deployments.

No subjects under the age of 13 are permitted by Force LFR policy documents to be included in a watchlist unless they are on the watchlist because they are wanted on Warrant. Suspects aged 13-18 would only be included on the watchlist where they are outstanding suspects for offences high risk described (as described in the LFR Application).

In any case where an individual under the age of 18 is anticipated to be included in a watchlist, this is required to identified in the LFR Application and explicitly authorised in the LFR Authorisation, with consideration being given to whether any additional safeguards or adjustments are required as a consequence.

There will be a manual review of the watchlist images prior to uploading, with particular attention being paid to individuals under the age of 18. The review will include consideration of their continued inclusion and removal where it is not believed to be necessary and proportionate to include them and/or in their best interests (noting that the potential involvement of a child in criminality may require police intervention to prevent further involvement in an escalation of that criminality and for safeguarding purposes). Where the manual review of the individuals / images results in the continued inclusion in the watch list the pre-deployment briefing of LFR system Operators and Engagement Officers will make them aware, enabling them to pay due regard when reviewing and determining the veracity of matches flagged by the LFR system.

As identified in the NPL report, the LFR system demonstrated lower performance which was deemed due to factors including the subject in respect of the under 20s.

Ongoing monitoring of the efficacy and equitability of the Force LFR deployments, with the input of appropriate stakeholders, will be carried out as part of the governance and oversight of the operation.

As to the impact of age on the efficacy of transparency measures, it is anticipated that the advance publication of proposed deployments on the Force website and social media platforms will also lead to publicity in more traditional forms of media such as local news and radio, which may be more likely to be read by older people. In addition, all LFR deployments are required to be overt and will be identified through signage at the perimeter of the LFR deployment zone, which will also be staffed by police officers and staff to enable individuals to be aware of and understand the fact and nature of the LFR deployment. This will enable individuals to either avoid the LFR deployment by adopting an alternate route or, where individuals are unwilling or potentially unable to take alternate routes, to take measures to evade the cameras while traversing the LFR zone of recognition.

Most social media services require individuals to be of at least 13 years of age in order to use the service and therefore it is feasible that individuals in the 13-18 age group could be exposed to HIOWC's transparency notices. Younger children may not be aware of

those notices or be equipped to engage with signage and other transparency measures at LFR deployment locations. While younger children are likely to be accompanied by their parents, children approaching or around the age of 13 may not. In respect of such individuals, police officers and staff deployed at the perimeter of the LFR zone may be in a position to engage with them. In any event, due to the positioning of LFR cameras, children's images may not be captured. In accordance with the Force LFR policy documents, consideration is given when determining an appropriate LFR location to the businesses and organisations, such as schools, which may be in the vicinity to ensure that appropriate locations are identified for the deployment which do not adversely impact individuals with a protected characteristic.

Disability or neurodiversity

Details of positive and/or adverse impact or other issue
Disability - People can undergo facial change for several reasons. They may suffer facial disfigurements through trauma or a medical intervention or their face may have reconstructive surgery which would result is a significant change to their facial features. Genetic conditions such as neurofibromatosis also cause progressive facial change. Consequently, the images that HIOWC hold may not accurately reflect their present facial appearance. The accuracy and efficacy of LFR can also be affected simply by the positioning of LFR CCTV cameras and the density of crowds, which may make it harder for disabled people, particularly individuals in wheelchairs, who may not be picked up as well or at all on camera. Individuals in this group may also face greater challenges in seeking to avoid LFR deployments by taking alternative routes.
Mitigating action for any adverse impact or rationale for no further action
Should a person's face have changed for any of the reasons above (or an additional / different reason) between their image being taken / provided and an LFR deployment, it would ultimately mean that the LFR software would be less likely to highlight a match between the image taken during deployment and that on the watchlist. Should a match be highlighted, this is the checked by police personnel for accuracy before additional activity is considered. The reality is that if we were trying to locate someone for safeguarding purposes, wanted persons etc, the software may not highlight a match due to a facial change. There are no actions that can be undertaken to stop this from happening. When the watchlists are created there will be a manual review of the watchlist images prior to uploading, with particular attention being paid to individuals that have visible disabilities that may make a facial match less likely. The review will include consideration of their continued inclusion and removal where it is not believed to be appropriate to include them. Where the manual review of the individuals / images results in the

continued inclusion in the watch list the pre-deployment briefing of LFR system Operators and Engagement Officers will make them aware, enabling them to pay due regard when reviewing and determining the veracity of matches flagged by the LFR system.

As to the impact of disability on the efficacy of transparency measures, it is anticipated that the advance publication of proposed deployments on the Force website and social media platforms will also lead to publicity in more traditional forms of media such as local news and radio, which may increase accessibility. HIOWC's website, like other public authority websites, is required by law to meet accessibility criteria, including in respect of individuals with impaired vision, motor difficulties, cognitive impairments or learning disabilities and/or deafness or impaired hearing.

All LFR deployments are required to be overt and will be identified through signage at the perimeter of the LFR deployment zone, which will also be staffed by police officers and staff to enable individuals to be aware of and understand the fact and nature of the LFR deployment. This will enable individuals to either avoid the LFR deployment by adopting an alternate route or, where individuals are unwilling or potentially unable to take alternate routes, to take measures to evade the cameras while traversing the LFR zone of recognition.

Gender reassignment

Details of positive and/or adverse impact or other issue
The Facial Recognition Technology (FRT) probe image is based on the mapping of key facial indicators when comparing a biometric template extracted from a reference image database image for an individual with a biometric template extracted from a live CCTV feed. Therefore, the functionality, accuracy, and performance of FRT may be less effective if changes to facial appearance have occurred between the time the reference image database image was taken, and the time a comparison is made. This may impact persons who are transitioning from one gender to another if gender presentation differs from the time the comparator image was taken. It may also affect trans, non-binary and gender- fluid people who adopt to flex between gender presentations. Scientific research conducted by researchers from Ben-Gurion university of the Negev in Israel published in 2021, suggested that facial contouring using cosmetic make-up application adversely impacted upon the efficacy of the ArcFace model against which it was tested, a different model to that proposed to be deployed by HIOWC.
Mitigating action for any adverse impact or rationale for no further action
Should a person's face have changed for any of the reasons above (or an additional / different reason) between their image being taken / provided and an LFR deployment, it would ultimately mean that the LFR software would be less likely to highlight a match between the image taken during deployment and that on the watchlist. Should a match be

highlighted, this is the checked by police personnel for accuracy. The reality is that if we were trying to locate someone for safeguarding purposes, wanted persons etc, the software may not highlight a match due to a facial change. There are no actions that can be undertaken to stop this from happening. There will be a manual review of the watchlist images prior to uploading, with particular attention being paid to individuals who have undertaken gender reassignment and it is believed or suspected to be that the watchlist would be using an image of that person prior to their reassignment are included in the proposed watchlist. The review will include consideration of their continued inclusion and removal where it is not believed to be appropriate to include them. Where the manual review of the individuals / images results in the continued inclusion in the watch list the pre-deployment briefing of LFR system Operators and Engagement Officers will make them aware, enabling them to pay due regard when reviewing and determining the veracity of matches flagged by the LFR system.

Marriage and civil partnership

Details of positive and/or adverse impact or other issue
There is no anticipated differential impact based on marriage or civil partnership.
Mitigating action for any adverse impact or rationale for no further action
N/A

Pregnancy and maternity

Details of positive and/or adverse impact or other issue
Individuals in the late stages of pregnancy or maternity may find it more difficult to choose to avoid entering the LFR deployment zone.
Mitigating action for any adverse impact or rationale for no further action
Transparency measures should ensure that individuals in this group are able to choose to avoid the LFR deployment location or to take measures to evade the cameras while traversing the LFR zone of recognition if an alternate route is not suitable.

Ethnicity

Details of positive and/or adverse impact or other issue
HIOWC is a diverse multi-cultural area which incorporates both rural and metropolitan areas. It is therefore important to ensure that the technology does not and is not perceived to unfairly impact or cause division between persons of different race/ethnicity. FRT is based on the mapping of key facial indicators. They are also dependent on the ability of the algorithm to determine the key facial indicators within an image. This can be impacted by environmental factors such as ambient light and shadows. This may also be impacted by the depth of skin pigmentation and the use of contouring make up. To date ethnicity biases have received considerable attention, particularly from academics and government bodies. Relevant studies include Klare et al (2012), NIST (2018) and Buolamwini and Gebru (2018). The findings from Buolamwini and Gebru's study were widely reported, as they found the algorithms they tested, which pre-date the LFR to be deployed by HIOWC, were particularly biased in terms of gender and ethnicity: performance was best for men and white individuals, and poor for women and black individuals. The NPL report found that, breaking down the Test Cohort into ethnicity-gender groups, "the best TPIR was the Asian-Female group, and the poorest TPIR was for the Black-Female group".
Mitigating action for any adverse impact or rationale for no further action
The NPL findings show that with a threshold setting of 0.64 and above, as required by the Force LFR policy documents, the false positive identification rate and the true positive identification rate between different ethnicities were equitable. While the NPL report did find a differential in performance between the Asian-Female group and the Black-Female group, the report stated that the difference was not statistically significant "at the 0.05 significance level". If the LFR software highlights a potential match, Police personnel will check the images highlighted for accuracy before additional activity is considered. In accordance with the Force LFR policy documents, consideration is given when determining an appropriate LFR location to the businesses and organisations, such as religious or cultural organisations, which may be in the vicinity as well as to local demographics to ensure that appropriate locations are identified for the deployment which do not adversely impact individuals with a protected characteristic. Ongoing monitoring of the efficacy and equitability of the Force LFR deployments, with the input of appropriate stakeholders, will be carried out as part of the governance and oversight of the operation.

Religion or belief

Details of positive and/or adverse impact or other issue
The wearing of religious headwear or coverings and the growing of facial hair may have an impact on the effectiveness of FRT. In addition, certain cultures or sexes within a religion i.e. Amish, refuse to allow themselves to be photographed. Sensitivity therefore needs to be taken with cross-community dialogue to ensure the deployment is both necessary and proportionate and that individuals have opportunities not to participate. The location of an LFR deployment could adversely impact on individuals associated with religious or cultural organisations, by either discouraging them from attending or resulting in them feeling compelled to enter the LFR zone of recognition. Respect for Diversity Awareness training is undertaken by all HIOWC police officers and staff and its principles are embedded HIOWC Culture. It is noted that testing undertaken by NPL intentionally omitted declarations of 'Mixed or Multiple' and 'Other ethnic group' from the self-declared categories of ethnicity.
Mitigating action for any adverse impact or rationale for no further action
Any images contained in a watchlist are required by the Force LFR policy documents to be lawfully held and to wherever possible to meet minimum quality thresholds, with the watchlist created as close to the deployment as possible, and no earlier than 24 hours in advance, therefore hoping to ensure the most accurate and up to date images of persons being added are uploaded. If the LFR software highlights a potential match, Police personnel will check the images highlighted for accuracy. Ongoing monitoring of the efficacy and equitability of the Force LFR deployments, with the input of appropriate stakeholders, will be carried out as part of the governance and oversight of the operation. Should a person be wearing some form of headwear or covering, it could mean that the LFR software would be less likely to highlight a match between the image taken during deployment and that on the watchlist. The reality is that if we were trying to locate someone for safeguarding purposes, wanted persons etc, the software may not highlight a match. There are no actions that can be undertaken to stop this from happening; police officers and staff have no power to require individuals to remove such accoutrements while traversing the LFR zone of recognition absent some other justification. In accordance with the Force LFR policy documents, consideration is given when determining an appropriate LFR location to the businesses and organisations, such as religious or cultural organisations, which may be in the vicinity as well as to local demographics to ensure that appropriate locations are identified for the deployment which do not adversely impact individuals with a protected characteristic.

Sex

Details of positive and/or adverse impact or other issue
Social observation indicates women change their appearance more frequently and significantly than men which may impact the performance of LFR as source images may become out of date more readily. Scientific research conducted by researchers from Ben-Gurion university of the Negev in Israel published in 2021, suggested that facial contouring using cosmetic make-up application adversely impacted upon the efficacy of the ArcFace model against which it was tested, a different model to that proposed to be deployed by HIOWC.
Mitigating action for any adverse impact or rationale for no further action
Any images contained in a watchlist are required by the Force LFR policy documents to be lawfully held and to wherever possible to meet minimum quality thresholds, with the. watchlist created as close to the deployment as possible, and no earlier than 24 hours in advance, therefore hoping to ensure the most accurate and up to date images of persons being added are uploaded. If the LFR software highlights a potential match, Police personnel will check the images highlighted for accuracy. Should a person's face / image have changed for any between their image being taken / provided and an LFR deployment, it would ultimately mean that the LFR software would be less likely to highlight a match between the image taken during deployment and that on the watchlist. Should a match be highlighted, this is the checked by police personnel for accuracy. The reality is that if we were trying to locate someone for safeguarding purposes, wanted persons etc, the software may not highlight a match due to a facial change. There are no actions that can be undertaken to stop this from happening.

Sexual orientation

Details of positive and/or adverse impact or other issue
There is no anticipated differential impact based on sexual orientation.
Mitigating action for any adverse impact or rationale for no further action
N/A

Socio-economic background

Our socio-economic background is a combination of different factors, such as our income, occupation and social background. A person's socio-economic background can expose them to inequalities, so it's important to understand how your project could affect different

socio-economic groups. Further information about socio-economic status can be found in the Cabinet Office **Measuring socio-economic background in your workforce** guidance.

Details of positive and/or adverse impact or other issue
There is no anticipated differential impact based on socio-economic background.
Mitigating action for any adverse impact or rationale for no further action
N/A

Other characteristics

Use this section to consider the PSED aims and any impacts your product may have on characteristics that are not protected under the Equality Act 2010 but are still significant to equality and inclusion. For example, your product may have a particular effect on people with caring responsibilities or on people with English as an added language, or you may need to consider the Welsh Language (Wales) Measure 2011 in delivery. Think creatively and invite input from stakeholders.

Details of impact or other issue
For any non-English speakers, transparency measures such as the publication of Force LFR policy documents and/or prior notification of LFR deployments on the Force website and social media channels, as well as signage and the positioning of police officers and staff at the perimeter of the LFR zone of recognition may be ineffective.
Mitigating action or rationale for no further action
Given that transparency measures will be available online in documented form, non-English speakers may be able to utilise services such as Google translate to translate documents into their native or preferred language. In the event that individual was to be the subject of an engagement and further action, in accordance with existing Force policies and procedures the individual would be entitled to have reasonable steps be taken to provide them with information in their own language. The Force engages an external interpretation and translation provider.

Action log

Record EIA actions and monitor action progress in the optional action log.