LONDON BOROUGH OF HAMMERSMITH & FULHAM

Report to: Cabinet

Date: 15 September 2025

Subject: CCTV and Artificial Intelligence – new innovations and improved infrastructure to help combat crime and anti-social behaviour

Report of: Councillor Harvey, Cabinet Member for Social Inclusion and Community Safety

Report author: Neil Thurlow, AD Community Safety Resilience and CCTV

Responsible Director: Bram Kainth, Executive Director of Place

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EXECUTIVE SUMMARY

The Council has the largest Community Safety Unit in the Country. It has invested in establishing the largest Law Enforcement Team; invested in the innovative and unique Gangs Violence and Exploitation Unit; upgraded and enhanced the boroughs CCTV provision where we have the most CCTV cameras per head of population, alongside making investments in Violence Against Women and Girls plus modern slavery.

The Council invests considerable resources in its CCTV network of more than 2,000 cameras (including housing estates), including almost £1m investment in the team that oversees this work. Additionally, an existing 4-year CCTV Capital Investment Programme of £4.5m is due for completion this financial year, giving the borough more cameras per person than anywhere else in the UK and enabling real-time sharing of footage with police officers.

As patterns and trends of crime and anti-social behaviour evolve, so too must our strategies to address them. Robbery, knife crime, drugs, anti-social behaviour, exploitation, and violence all impact residents, businesses, and visitors in the borough. While it is the police's responsibility to investigate and respond to these issues - in partnership with the Council where appropriate - they do not have sufficient officer numbers to always provide a visible deterrent or take the desired action. Additionally, day-to-day abstractions further reduce their presence on the streets.

To address these concerns, it is proposed that a further £3.2 million be invested to enhance the Council's extensive CCTV network with advanced technologies, including live and retrospective facial recognition, AI-assisted cameras, and upgraded physical infrastructure to improve crime detection and prevention, as well as additional cameras in parks. This will elevate H&F to an exceptionally advanced level of CCTV crime detection capability.

The use of facial recognition will require the support and cooperation of the Police to identify and take action against those responsible for perpetrating crime and anti-social behaviour in the borough. The report emphasises the importance of AI governance processes, ethical considerations, and cyber security measures to ensure the responsible and secure use of facial recognition technology.

Drones have also been investigated as an additional tool to aid enforcement and surveillance in the borough.

RECOMMENDATION

1. To approve a £3.2m CCTV Capital Investment from 2025/26 to 2027/28 to deliver the additional CCTV cameras, technological advances and additional capabilities outlined in this report.

2. The Cabinet is asked to approve the use of drones as an enforcement aid and for additional surveillance via conducting a trial if approvement is obtained from the Civil Aviation Authority.

Wards Affected: All

Our Values	Summary of how this report aligns to the H&F Values
Building shared prosperity	The paper set out plans which aim to reduce crime and anti-social behaviour which will improve the quality of life of all residents and visitors to the borough.
Creating a compassionate council	The recommendations aim to reduce the number of victims of crime and anti-social behaviour in the borough and ensure that victims see action taken against those who have committed offences in the borough. Enforcement will be consistent and fair whilst addressing the issues that are having a significant impact on our residents. All officers involved in enforcement will have a clear understanding of safeguarding and support available to all victims and perpetrators of crime and anti-social behaviour.
Doing things with local residents, not to them	Residents have told us that tackling crime and anti-social behaviour is of high importance to them – the proposed actions demonstrate our commitment to tackling these concerns.
Being ruthlessly financially efficient	Investment in our video surveillance systems leading to further commercialisation opportunities in the future to

	fund the service and that can be used for further upgrades.			
Taking pride in H&F	We know that crime and anti-social behaviour impacts negatively on perceptions of an area so; by addressing the crime and anti-social behaviour in a consistent and visible manner, we will be able to deliver a safer borough for all.			
Rising to the challenge of the climate and ecological emergency	All of our work and investment delivered via the crime strategy will seek to minimise the climate and ecological impact by purchasing low energy and/or clean energy technological solutions			

Financial Impact

This report sets out potential further investment in H&F's CCTV infrastructure and capability, at an estimated one-off capital cost of £3.2m as summarised in the table below, with £1.5m in £2025/26, £1.2m in 2026/27 and £0.5m in 2027/28.

Key Programmes	25/26	26/27	27/28	Total
	£000	£000	£000	£000
Upgrading our fixed and deployable (temporary) CCTV cameras with speaking and spotlight capability	194			**194**
Upgrading and installation of new multi-directional cameras on Thames Path/King Street	248			**248**
AI Cameras	750	750		**1,500**
Other Technology (Drone Trial/Data Storage)	60			**60**
Additional CCTV in Parks		500	500	**1,000**
Other Investment	201			**201**
Total One-off Capital Cost	**1,453**	**1,250**	**500**	**3,203**

It is to be noted that the costs provided are estimates based on current pricing schedules and consultation with partners. The final costs will be verified when site surveys have been completed.

It is expected that this investment is funded from existing and future developer contributions and income from other boroughs that contract their CCTV service from H&F. Funding for the 2025/26 plans has been identified and hence this element can be added to the capital programme. Funding for the years after 2025/26 have not yet been identified and will be considered at a later point as part of our wider capital spending programme.

Kellie Gooch, Head of Finance (Place), 13 August 2025

Verified by James Newman, Assistant Director of Finance (Deputy S.151 Officer), 28 August 2025

Legal Implications

There are no legal impediments to agreeing the recommendations set out in this report. Section 163 of the Criminal Justice & Public Order Act 1994 authorises the Council to install surveillance equipment to "promote the prevention of crime and the welfare of victims".

Before installing new equipment, the Council needs to commission an Equalities Impact Assessment. This is in addition to a Data Protection Impact Assessment which ensures that sufficient safeguards are in place to protect the security of the information collected by the new equipment.

Finally, as explained in the report the Council is required to adhere to statutory codes of practice issued by both the Surveillance Commissioner and the Information Commissioner relating to CCTV systems.

Completed by Glen Egan, 5 August 2025

Background Papers Used in Preparing This Report
None.

DETAILED ANALYSIS

1. The world of surveillance and CCTV is changing as Artificial Intelligence (AI) becomes more readily available, varied, and affordable. We have an opportunity to adapt to emerging technology, embracing advancements in AI to take the CCTV offering to the next level of crime detection and prevention.

2. The existing four-year CCTV capital upgrade program will be completed by the end of the current financial year. This is a comprehensive program of works, migrating the entire CCTV network onto a single advanced video surveillance platform with smart capability, introducing modern 360 degree and upgraded Pan Tilt Zoom (PTZ) cameras, replacing out of date analogue camera systems.

3. These upgrade works have also included installation of new CCTV infrastructure, such as fibre optic cabling, the repair and replacement of existing infrastructure, and the connection of new locations to our network – including libraries and football Clubs. In addition, extensive physical and cyber security controls have been implemented to safeguard the resilience of the network.

4. The upgrade programme, particularly the introduction of a unified smart video surveillance system and associated infrastructure works, facilitates the use of AI and other emerging technologies to enhance CCTV operations. This will help

tackle crime and anti-social behaviour in collaboration with the LET and Metropolitan Police, ensuring the safety of residents.

5.   H&F now has more than 2,000 fixed cameras plus 38 deployable CCTV cameras that are temporarily placed at emerging crime and ASB locations.

CCTV Technology Investment

6.   It is proposed to procure and install a variety of new CCTV solutions that leverage the advanced technology, ensuring we are optimally equipped to address crime and anti-social behaviour in the Borough. The following options are recommended for consideration:

- **Live facial recognition cameras** – new static cameras which match faces against a defined police database in real time, with police on standby to engage with matched individuals. To be installed at identified crime hotspots.

- **Enhanced Artificial Intelligence capability for 500 cameras** - Artificial Intelligence capability will be used on selected cameras around the borough to enable more efficient video playback; automatic vehicle tracking and enable use of other tools that will make more effective use of the camera system by increasing CCTV operator efficiency and response times. Importantly, this will enable Retrospective Facial Recognition (RFR) across H&Fs camera network, allowing CCTV footage to be automatically searched to efficiently track the routes taken by criminals across the borough.

- **Enhanced CCTV support assets** – attach speakers to 50 existing camera sites so that officers can warn and inform members of the public. An additional 50 cameras will have spotlights attached so officers can increase brightness in anti-social behaviour hotspots as necessary. These enhanced capabilities will cover both fixed and deployable camera sites.

- **Upgrade and add 360-degree cameras** - Replace the current Pan Tilt Zoom cameras with 360-degree cameras along King St (x12) and on The Thames Path (x5). This will provide more effective coverage, and coverage of the Thames Path will more than double.

- **Additional CCTV in Parks** - following increased reports of Anti-social Behaviour and assaults, it is proposed to invest an additional £1m to install more CCTV in the borough's parks to make them safer places for residents and visitors. This increase in assets will mean an increase in annual maintenance and support costs to keep them operational.

Facial Recognition Cameras

7.   It is important to make clear the distinction between live facial recognition (LFR) and retrospective facial recognition (RFR) as both options are proposed in this report. However, the technology implemented to upgrade the cameras can be used for both purposes.

8. LFR matches faces in real time against a set database of faces held in a carefully controlled and managed Police watchlist. The Police recently used this to identify people of concern approaching Notting Hill Carnival so they could take pre-emptive action. The technology is also being piloted by Croydon Council alongside the Police using two specialised camera units designed for this purpose.

9. RFR works differently, matching faces against specified facial data after incidents occur. This is usually a police facial database as with live recognition, however, RFR also has the potential to outline a particular offender within post-incident footage, and search for that specified face to be able to track that individual across multiple cameras. This can only be used on review by analysing the camera footage data held on analytic servers.

10. **Live Facial Recognition**: It is proposed to utilise LFR in the following 10 locations across the borough (which may only be changed with approval of the Cabinet Member for Community Safety and Social Inclusion) :

Proposed locations – with two cameras per location	
Uxbridge Rd outside Shepherd's Bush Market	Lillie Rd Junction North End Rd
Uxbridge Rd Junction Askew Rd	North End Rd Outside West Kensington Station
Wood Lane Outside Westfield	King St
Hammersmith Rd Outside Hammersmith Station	Fulham Rd Outside Fulham Broadway Station
Harbor Ave Outside Imperial Wharf Station	Wood Lane Junction Du Cane Rd

11. This list has been produced based on strategic assessment of the top 10 crime hotspot locations for where serious crimes take place, in addition to estimated footfall where live facial recognition could have the greatest impact.

12. It is proposed to trial two live facial recognition cameras at each of the ten locations identified to prove the concept within H&Fs technology setup. These 20 cameras will make H&F a nation-leading borough for this technology with the potential for future expansion.

13. Introduction of live facial recognition cameras is heavily contingent on police support. For instance, the Police facial recognition van trials and camera trials with Croydon Council (a Home Office pilot area for static use of this technology), only operates with a dedicated police presence in the zone of camera operation. The scheme cannot and does not operate without a police support team.

14. Initial discussions with Police have been positive as the use of LFR increases and the outcomes delivered continue to grow. Working with the Police we will

deliver this investment to better safeguard our borough, however, there are factors that need to be considered and progressed:

- The Police has one pilot site for static LFR cameras at this time with Croydon testing the concept this summer, with analysis of the impact in the autumn.
- The Police has a small team of dedicated officers to work on facial recognition deployments. H&F would need a dedicated team, or at least minimum commitment, from the Borough Command Unit to respond to the camera "hits".
- The Police own and retain all personal data from the LFR cameras. As a Council we will not automatically know or see where people of interest are identified, so we may not know how many arrests, etc., are delivered because of this investment.
- The use of fixed facial recognition cameras, in the public realm, are still new and, as such, we may experience unexpected challenges in delivering this capability.
- The council would need to have a robust EIA (despite the Police owning the data) and significant signage at entry and exit points advising that facial recognition is in use.

15. The matters as listed above are not "blockers" to installing the capability but do require further discussions with the Police to progress which are ongoing at this time.

16. **Retrospective Facial Recognition (RFR) and AI Assisted Cameras:** It is proposed to invest in upgrading 500 existing cameras with RFR and AI assistance capabilities. The opportunities for service optimisation offered by RFR and AI are extensive, including:

- automatic tracking and GPS tagging of suspect vehicles and offenders across the network of 500 cameras.
- the ability to search thousands of hours of stored footage in seconds.
- crowd buildup alerts.
- object recognition (i.e. knives)
- counter terror support, etc.

17. This upgrade would also ensure camera units are compatible with the "Internet of Things" devices and sensors, opening the future possibility of smart city enhancement. The Internet of Things (IoT) being a network of physical objects—"things"—embedded with sensors, software, and network connectivity, allowing them to collect and share data over the Internet. For example, there is the potential to link identification of ASB to street light illumination levels in the future.

18. Below is a flow diagram of how RFR works. Operators remain central to the CCTV processes and are required to operate facial recognition systems.
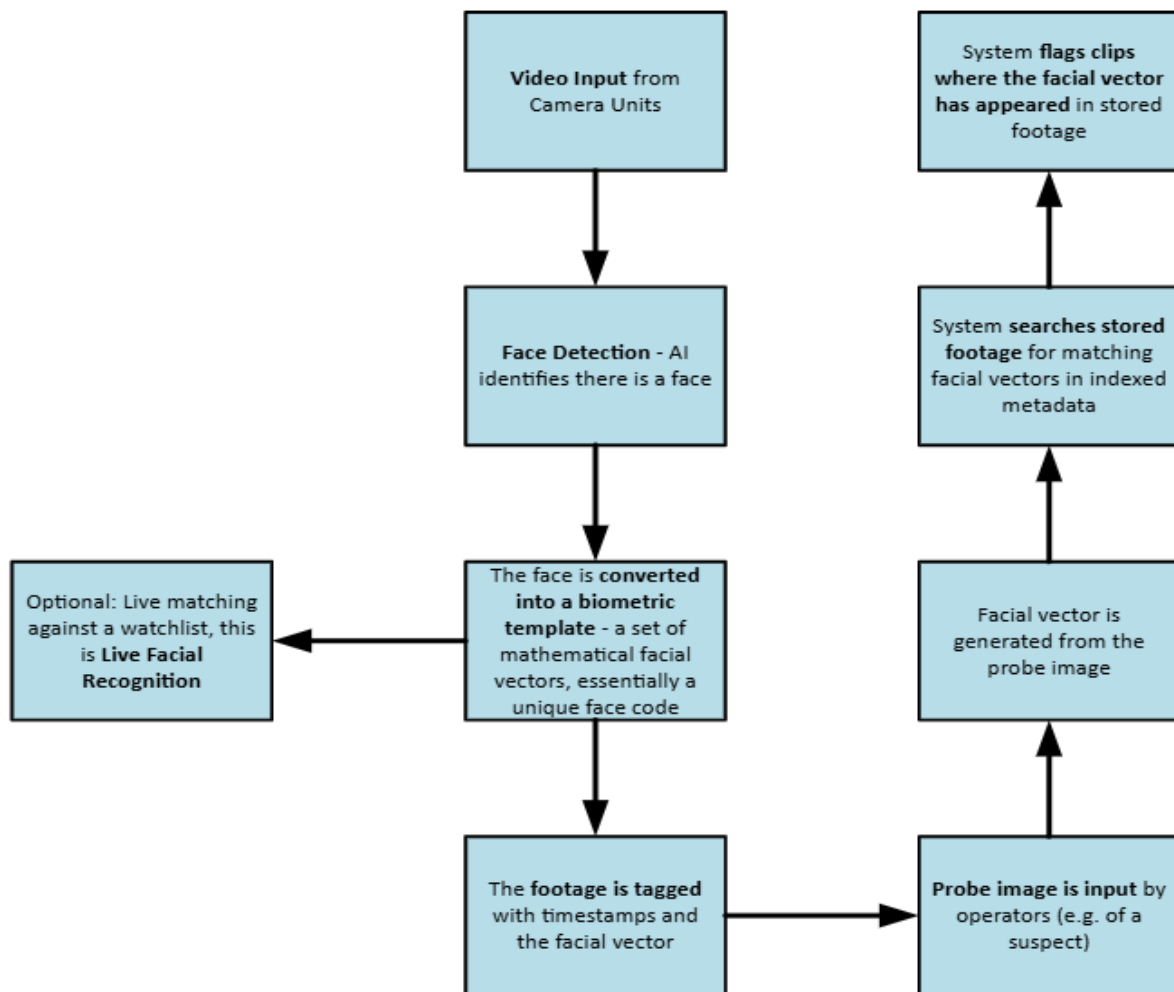
19. RFR technology relies on server-based analytics, rather than individual new camera units to function. This new investment in technology would leverage existing camera assets, only requiring reconfiguration of existing camera units, to be able to use analytics servers.

20. The figure of 500 cameras is therefore a provisional number of cameras identified for reconfiguration as part of the upgrade. A detailed asset survey would be required to discover if a higher number of cameras would be suitable for the upgrade.

21. **Artificial intelligence Governance Processes:** Facial recognition technology is powered by AI, which means that H&F must adhere to its AI governance processes. These protocols ensure that AI systems are developed and utilised responsibly, ethically, and in compliance with relevant regulations. This includes ensuring that artificial intelligence models are trained on diverse datasets to minimise bias—a common concern with facial recognition systems that can result in false positives (incorrect identification)—and that system outputs are regularly monitored for fairness and accuracy.

22. **Resident Facing Impact and Ethics Board Consideration:** Given the high resident-facing impact of facial recognition technology, this initiative meets the threshold for consideration at the council's Ethics Board. The Ethics Board would evaluate the ethical implications of using such technology, ensuring that it aligns with the council's values and principles. This includes assessing the potential benefits and harms, ensuring transparency, and maintaining public trust.

23. **Cyber Security** - H&F must utilise its supplier security process to thoroughly assess the supplier's security practices, and the CCTV solution. This evaluation is essential for identifying potential risks and ensuring that such risks can be effectively mitigated before implementation. Biometric data, such as facial recognition patterns, is intrinsically linked to an individual's physical characteristics and cannot be changed. The likelihood of successful technological attacks is increased by advancements in AI, which can generate convincing deepfake videos or images to manipulate facial recognition systems and therefore appropriate controls and mitigations must be applied.

24. **Governance**: Delivery and use of any technology, especially within the CCTV and artificial intelligence spheres, requires several governance and legal pathways to be followed:

    (a) **UK GDPR and the Data Protection Act 2018** – information sharing and data is underpinned by GDPR legislation. All that we do to share improved intelligence, and data will be governed by this.

    (b) **A Data Protection Impact Assessment (DPIA**) is a mandatory requirement when implementing facial recognition technology. The DPIA helps identify and mitigate risks to individuals' privacy and ensures that the processing of biometric data is necessary and proportionate. It also helps in identifying the correct lawful basis for processing and ensures that appropriate safeguards are in place to protect the data.

    Under UK GDPR individuals have the right not to be subject to solely automated decision-making. Therefore H&F would undertake that no enforcement action should be taken based solely on facial recognition technology. Every identification must be reviewed and confirmed by a human to avoid errors.

    Under UK GDPR, individuals have the right to rectification, meaning they can request corrections to inaccurate or incomplete personal data. Therefore H&F would maintain a formal process that allows individuals to challenge identification errors to ensure mistakes can be corrected promptly.

Drone Trial

25. To expand the LETs enforcement capabilities to help manage certain issues, i.e. ASB and fly tipping, work is being undertaken to explore the utilisation of drones. There are a limited number of local authorities that have piloted using

drones to combat these types of activities due to the regulations surrounding drone usage, including risk assessments and the need to submit 'flight plans' for approval, and weather restrictions.

26. To fly a drone within H&F would require authorisation by the Civil Aviation Authority (CAA). Discussions with the CAA have confirmed that the borough is covered by a prohibited area and flight restriction zone, associated with the London Heliport Flight Restriction Area and the area around Wormwood Scrubs Prison is a restricted area. The whole borough also lies within a 'dangerous zone' due to flight paths and how congested the area is. This will make obtaining a license to fly in the borough challenging due to the aforementioned reasons. Local authorities that already use drones are not within restricted flying zones.

27. Operators of the drones would need to receive training to be awarded with a General Visual Line of Sight Certificate (GVC) which is accredited by the CAA. Drones must fly below 400ft, remain within visual lines of sight, and maintain a safe distance from people (50m) and property (150m). In addition, the 'pilot' must complete a certain number of 'practise flight hours' each year in order to maintain their license. All drone usage must comply with the Data Protection Act and a risk assessment and public liability insurance must be in place prior to deployment. For these reasons, other authorities have outsourced drone deployment.

28. Each time the drone is planned for use, permission would need to be sought from the CAA and National Air Traffic Services (NATS) with details of each flight.

29. Cabinet is asked to approve the work of officers to further explore the use of drones, and to carry out a limited trail if permission is received from the CAA, to assess the benefit of using this capability.

30. **Underpinning Strategies**: This proposals in this paper, work alongside and in support of:

    * H&F Combatting Drugs Partnership and the associated Drugs Strategy
    * Community Safety Partnership work and the associated Strategic Assessment
    * Serious Violence Duty and the associated Serious Violence Duty Strategy/Action Plan
    * Youth Crime Prevention Partnership Plan
    * Anti-social behaviour hate crime Policy
    * VAWG and Modern Slavery Strategies
    * Hate crime strategy

Equality Implications

31. **Algorithmic Bias:** Facial recognition systems have been shown to have higher error rates for darker-skinned individuals, particularly Black men and women. This can lead to false positives, wrongful stops, or arrests

32. **Over-Policing of High-Harm Areas**: Many of the proposed live facial recognition locations (e.g., Shepherd's Bush, Hammersmith Broadway) are areas with high Black and multiethnic populations. This could lead to disproportionate surveillance and enforcement.

33. **Lack of Transparency**: The public may not be fully informed about how data is used, stored, or shared—raising concerns about privacy and consent.

34. **Community Trust**: There is a high risk of backlash, especially if communities feel targeted or surveyed without clear justification or accountability.

35. **Risk of Institutional Racism:** Embedding biased technology into policing infrastructure without robust safeguards could deepen existing inequalities.

36. The lack of police resource to respond to live facial recognition, "hits" may lead to selective enforcement or misuse.

37. **Potential Negative Impacts**
   - Disproportionate criminalisation of Black youth and other marginalised groups.
   - Erosion of trust between communities and local authorities.
   - Negative media coverage and reputational damage, especially if enforcement appears racially biased.
   - Legal challenges under the Equality Act 2010 and Human Rights Act (e.g., Article 8 – right to privacy, Article 14 – protection from discrimination).

38. **Potential Positive Impacts.** These benefits are contingent on equitable implementation and robust safeguards:

   - Improved safety in public spaces if implemented fairly and transparently.
   - Increased detection of serious offenders (e.g., through retrospective facial recognition) if used with strict oversight.
   - Victim protection in areas with high levels of violence or exploitation.

39. Before using Facial Recognition in the borough, a copy of the police's EIA should be obtained to have a full understanding of the equality's implications.

Approved by Yvonne Okiyo, Strategic Lead Equity, Diversity and Inclusion 22 .08.25

Risk Management Implications

40. There is a reputational risk that the establishment of the additional cameras will be viewed negatively by residents as being authoritarian.

41. This can be reduced though contact with residents describing the benefits which in turn adhere to the LBH&F value of 'Doing things with local residents, not to them'.

42. There is a financial risk that the camera themselves will become targets for vandals thereby incurring additional costs once they are installed. This should be accepted. However, readiness to such attacks may dispel further damage by having replacement cameras in reserve, and a prompt and effective team ready to repair any damage.

Verified by Jules Binney, Risk and Assurance Manager, 14th August 2025

Climate and Ecological Emergency Implications

43. The computational power required by AI datacentres demands a huge amount of electricity, which leads to increased carbon dioxide emissions and pressures on the electric grid. AI datacentres also consume large amounts of water to keep them cool. These environmental impacts will need to be factored into any assessment of the environmental impacts of the proposals.

44. These proposals will help to ensure residents and visitors to the borough continue to feel safe and secure on our streets and transport system giving them confidence to walk, cycle and use public transport rather than drive. This supports the Council's mode share targets to reduce private vehicle trips on the borough's road network and meet carbon emissions reduction targets.

Ben Kennedy
Senior Service Manager – Transport & Climate Change, 13 August 2025