

Full Data Protection Impact Assessment (DPIA)

When to complete this form. Please make sure that you have been told by a member of the Data Protection Advice Team (DPAT) to complete a full Data Protection Impact Assessment (DPIA). A full DPIA **must** be completed where there is a **high-risk** in the processing of personal data ([Examples of processing 'likely to result in high risk' | ICO .](#)) otherwise only a pre-screen is needed, see [Data Protection Impact Assessments \(sharepoint.com\)](#)

When not to complete the form: If you haven't been told by DPAT or in a pre-screen you need a full DPIA. Don't spend time doing a full one if it's not needed. If you will be using the processing to prosecute people then don't use this form. We are working on a new DPIA especially for that as it's a different part of Data Protection law. Ask DPA@camden.gov.uk for advice.

Top Tips: please complete all sections 1-9 in as much detail as you can. If you're not sure please ask the Information Rights Officer (IRO) you're dealing with or DPA@camden.gov.uk . **Please don't use technical** terms or jargon without explaining what they mean. Please explain acronyms the first time you use them. Explain your project in clear terms, as though the reader knows nothing about it. We publish full DPIAs but will redact junior staff names. If you have any concerns about publication your IRO can discuss redactions with you.

When completed: share with your Information Rights Officer (IRO) via OneDrive with edit rights.

Project Name	Lilli Assistive Technology
Your ref	
Who has completed the DPIA?	Jamie Spencer
Who are the Information Asset Owners? (Data Roles & Responsibilities (sharepoint.com))	Jamie Spencer

DPAT Use Only

DPAT Reference (DP24_ xxx)	DP25_001
Officer dealing	Sarah Laws
Date Received	2 Jan 2025
Date cleared by DPAT	21 Feb 2025
Date submitted to DPO	21 Feb 2025
Date Approved	25 Feb 2025

1. General Details

Project Title:	Lilli Assistive Technology
Purpose and Benefits : what data processing are you doing that is new or different. Why are we doing it? What are the outcomes, and the benefits to the council and/or residents/ stakeholders?	Following a successful bid for funding from NCL the council has been awarded 50 licenses for a pilot to use Lilli. Lilli provides remote monitoring of people who are normally living alone and needing or receiving some form of care. Each person is provided with a communications hub and sensors are distributed around their home. Data transmitted to Lilli are measurements of door openings, movement inside the property, ambient temperature, light levels, power usage. The Lilli service analyses the measurements, calculates what is normal activity and tracks changes, such as regularity of kettle usage or number of movements around the house at night. The purpose of the processing is: • To provide insights for practitioners in Camden, such as Occupational Therapists, to do their job as effectively as possible by exposing trends and patterns of behaviour in an automated way that might warrant further professional evaluation. • To provide insights about people's activities at times when Home Care Agency workers are not in the properties, e.g. for night-time activity. • To provide reports on the analysis that minimise time required for making time-consuming summaries of behaviour - before recommending changes in care packages. The sensor data streams are linked to peoples' environment and ambient conditions, not the person. For example, door sensors can be triggered by carers or family visits and light level sensors may just indicate cloudy or sunny days. The location of the sensors is recorded by the staff during installation and not personal data about people (Data Subjects). The Council intends to use the pilot to support people who live alone and have either been recently discharged from hospital or who are having their support plan reviewed, particularly those at risk of falls. The aim is to maintain and/or improve independence and for reablement. The pilot will initially focus on those with capacity to consent.
Summary of the data processing: (where will the data come from and how will you obtain it, what will you do with it. Will you be sharing it with any third parties eg companies or agencies like police/NHS?)	Through smart, non-intrusive technology and proprietary AI and machine learning (LLM), Lilli observes patterns and trends among individuals to equip care workers with clear and accurate insights into wellbeing and what is happening in the home. This supports accurate decision-making and means behavioural changes can be easily identified before conditions become acute, improving health outcomes and reducing hospital visits. Lilli uses an algorithm to

	perform data analysis on the streams of sensor readings to learn patterns of behaviour unique to each individual. Insights about changes in these patterns are presented to the Council staff via the Lilli App, which is designed to be viewed on both desktop and mobile devices. Within this App, PDF summaries of data can be generated to reports that can be used in discussions about individuals with non-users of the platform or attached to individual care records. Email notifications may also be sent when changes in patterns of behaviour are detected, and these direct the staff to log into the app to view the data. Decisions relating to the collection, usage and sharing of data reside will be undertaken by their authorised staff in the Council. As data controllers, the Council will follow GDPR internal processes. The sensors help to build a picture of what is 'normal' for individuals, so that any activity that is deemed unusual can be flagged accordingly. Staff will be able to access details about the service users they are supporting. Information can be downloaded and stored against the individual's file in the Mosaic case management system. Residents will also have an option to share the information recorded by Lilli sensors with friends and family via the app. They will be able to decide which individuals can access their information when they sign the consent form to agree to the installation of Lilli sensors in their homes. This will be a personal decision and those who draw on care will have the choice as to whether access will be granted to others or not.
Start/go live date/s (can be approximate)	March 2025

2. **Types of Data and Data Subjects:** Whose data are you going to be using, and what types of data will you process?

Whose data? Please list them Eg Resident/service user, employees, children etc	Patterns of behaviour by individual's using their home environment. Personal information to identify each data subject
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What data? Check the boxes for a yes

Personal Data			
Name	☒	Telephone/mobile	☒
Address	☒	Email	☐
Date of birth	☐	National Insurance No.	☐
Gender	☐	Other data	☐
Financial data	☐	If other data please list it here:	

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What data? Check the boxes for a yes

Special Categories of Personal Data			
Religious or philosophical beliefs	☐	Genetic data	☐
Social care records	☐	Fingerprints/biometrics	☐
Race or ethnic origin	☐	Health	☐
Political opinions	☐	Data concerning sex life and/or orientation	☐
Trade-union membership	☐	Criminal convictions or allegations, status as witness/victim/survivor perpetrator of a crime	☐
Physical or mental health	☒	Please give a bit more detail if needed. Data about movements in an individual's home environment – so not actual details of physical health issues – but may be an indicator Information pertaining to the individual's care may be recorded such as health conditions, next of kin, doctor's contact details. NHS numbers are not recorded at any point. Special Category data in the form of health data concerning the health of individual's may be optionally added to the database in the form of notes by Care Agency staff.	

3. **Data Protection Principles:** In this section you need to describe how the activity/project complies with the Data Protection Principles

Principle	Describe how the activity/project complies with the Data Protection Principle
a. Lawfulness, fairness and transparency: Explain how the processing of personal data will be fair and transparent. (Please note: you	The council has duties to provide care under the Care Act, however, in this case, the lawful basis is Consent.

will also need to complete <i>Section 4 Lawful Bases and Condition of Processing</i> below for the lawfulness element.). Fairness: Consider how the processing may affect the individuals concerned and how you can justify any adverse impact. We should only handle people's data in ways they would reasonably expect eg as set out in the privacy notice, or where we can explain why any unexpected processing is justified. Transparency: We need to make sure we are open and honest, and comply with 'the right to be informed' Is this processing covered in the Privacy Notice for the service? If not, we need to think about adding it.	Therefore, Articles 6a and 9a, Consent of UK GDPR is being relied on. In the case of staff data being used for access to the system the lawful basis is contract (Article 6b, contract of UK GDPR). The processing will have a beneficial impact on individuals as it will ensure care and preventative interventions can be more carefully planned. The ASC privacy notice will be updated. The consent form is embedded here
b. Purpose limitation: we can't use data we already have for a new purpose unless that aligns with why we collected/got it originally, or there is some law that allows this extra use. Provide details of how we got this data originally, and what we are using it for now, and how the new usage is compatible with that. If it's new data collection, explain where it is coming from.	New data collection based on usage of an individual's home environment. The personal information collected already was to support the provision of care and support – this usage enhances our ability to do this.
c. Data minimisation: we need to collect/use what we need to achieve the aims of the project. But we mustn't collect or use data that is excessive ie that we don't need or 'just in case'. Explain how data processed will be adequate, relevant and limited to the purposes for which it is processed.	Data collected will only involve activity in an individual's home environment – the sensors have limited functionality which ensures data minimisation. In order to minimize the data we use privacy enhancing technical and organisational controls such as data minimisation (removal or manipulation of any data fields or items which are not required for the particular processing activity) will be applied as part of reporting functionality to support reporting for recipients that do not require access to identifiable data. This will further protect confidentiality and privacy and reduce any potential risk to individuals.
d. Accuracy: we need to take all reasonable steps to ensure the personal data is factually correct. Explain how you will do that eg relying on	Sensor data only shows activity in a property – not who did the activity.

the people to give us the right information or it will come from a council system. Will you need to keep the personal data updated? If so how? And how will you correct anything that is wrong?	The DPIA produced by Lilli includes mitigations for this risk. In addition to installing the sensors in areas that are unlikely to be impacted by stimuli other than the movement of a person, consultations with care staff can take place to review outputs that are “unpredictable”, and the number of sensors can be increased to identify sensors that may be submitting incorrect information. Likewise, comparisons can be made between similar cohorts to ensure that the AI algorithm is working correctly, and the data being collected isn’t incorrect. Furthermore, data from sensors is collected and transmitted continuously, usually between 10 and 100 data points per hour. In the event of a telecoms or power outage, data can be stored in hubs before it is transmitted. This will help ensure the accuracy of the data collected. The data generated by the sensors will not automatically influence how an individuals’ care may change. Instead, the information should be used to support conversations around how care provisions could be amended to better support individuals. Once data is collected, it will be reviewed by ASC practitioners to understand what it means. Practitioners will then need to work with those who draw on care, their families, and other healthcare professionals to understand the results generated by Lilli sensors. By engaging with the resident to understand these deviations from everyday behaviours, practitioners will be able to identify when results can be ignored or when changes are significant so care needs may be changing. By taking this approach, health and care professionals will be able to identify errors or anomalies in the results produced by the Lilli sensors (e.g. detected changes in behaviour that are due to external factors such as holidays, or people visiting the home). This will help ensure the accuracy of the data collected, meaning only relevant and accurate data is being used to inform conversations around amending care packages.
Storage limitation: we must keep data for as long as the law requires or for as long as we have a business need for it, if there’s no set period. We must not keep it just in case or longer than needed. Explain how long you will keep it for. How will you delete it at the end of the retention period?	To support data minimisation, the automatic deletion of data can be configured in line with identified retention periods. Records held within the Lilli app will normally need to be retained for 7 years after the last activity. Data can therefore be automatically deleted 7 years after that date. However, data can be deleted if requested by the data controller. Examples of this being a data

	deletion request to the controller from a person who draws on care under a Data Subject Request. However, fully anonymised data may be stored indefinitely, for example where statistical averages over large cohorts of users (where anonymisation is guaranteed) may be used to improve our analysis techniques.
e. Security (Integrity and confidentiality). This is covered in section 6 below.	N/A. This is covered in section 6 below.

4. **Sharing with other organisations or companies.** We need to know if we are sharing some or all of the data with any other party, and if so what their status is. List the organisations/third parties/partners involved with sharing or processing the data for this activity in the table. Please add/delete rows, as appropriate. If you're not sure if anyone is a processor or controller please check the don't know box and we will assist you when the DPIA is submitted.

We also need to know what documentation we have (or will have) to put the terms and conditions with those 3rd parties in writing. This might be a contract or a Data Sharing Agreement or a Memorandum of Understanding, in draft or live. If you don't know please say so and we will advise you.

Party	Data Controller	Data Processor	Joint Controller	Don't know and need help	What do we have to set out the agreement with them?
Camden council (usually data controller)	☒	☐	☐	☐	N/A
Intelligent Lilli (data processor)	☐	☒	☐	☐	See GCloud 14 contract
<i>Add details</i>	☐	☐	☐	☐	
<i>Add details</i>	☐	☐	☐	☐	

5 **Lawful Basis and Conditions of Processing.**

Data protection law says we have to have a lawful basis to use personal data and an extra one for special category (sensitive) data and for criminal offence data. DPAT will help you identify your lawful basis and will fill this in. **But you need to tell us what law you're working under.** Is there some law that says you must or can or should do this? It might be very specific - eg 'you must collect council tax in this way' - or it might be an enabling power eg 'the council has a general power to provide anti-smoking advice'. We need to know what it is to help work out the data protection lawful basis. If you

think you need consent please read our advice page [Consent and Data Protection \(sharepoint.com\)](https://sharepoint.com) first, and if you still think you need consent say so below and DPAT will have a chat with you about it.

Our underpinning law for this project/processing	The Care Act (2014)
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For DPAT to complete

Personal data art 6(1)	Art 6(1)(e) public task
Special Category Data art 9 (2)	Art 9 (2)(g) public task and (h) provision of social care
Criminal Offence Data art 10: what art 6(1) and DPA18 schedule conditions:	Not applicable

6. Data security We must keep data safely and securely. This includes protection against unauthorised or unlawful access or use, and against accidental loss, destruction and damage.

Area	Give details
Where will data be stored? (eg council system like Mosaic, shared drive, online portal, new system, processor doing this).	AWS – see full Lilli DPIA in Appendix Data is stored securely and encrypted with the industry standard AES-256 algorithm on a hosted database from AWS located in the UK datacentre and data does not cross international borders. Data is encrypted at rest and in transit, from the individual sensors, through hubs and telecommunication networks to the server database. Data is accessed via logging in to the app or API as an authorised user and transferred securely using TLS-secured HTTPS, with automatic logout of idle sessions. Specific users can only access user data that is relevant to them personally through their accounts.
How will data be transferred? (eg secure file transfer, email, online portal)	Online portal Data is transferred from devices to the servers via TLS 1.2-secured MQTT channels with unique cryptographic certificates individual to each device, ensuring that if one device is compromised, no other devices are affected or impersonated.
What roles will have access to the data? Is there effective Role Based Access Control (RBAC) to make sure only those who should have access do have access?	RBAC will be put in place. When a resident is loaded on to the Lilli system, their assigned ASC Practitioner will be assigned to review their movements on Lilli. This will mean that ASC Practitioners that do not work with them will not be able to view their accounts.

Can the systems being used be audited to see what user has done what actions?	Yes. Role Based Access Controls to be applied and all access to data to be formally authorised by the data controller prior to user accounts being created.
Have you consulted with the Information Security Team? Have they cleared the system/equipment etc? Give details of their advice/clearance:	Lilli have submitted an Information Security Assessment and provided a DPIA. Infosec have requested a technical architecture diagram of the Lilli system along with the findings from their most recent penetration test. Once this has been provided, Infosec will be able to advise if we have clearance to proceed.

7. Other processing types: There are some special areas of processing that are much higher risk where we will need additional information and or other forms completing. At this stage we need a yes/no and a little information. If we think the answer is yes then DPAT will ask for extra information/forms.

Area	Yes	No	Don't Know	Details
Will you be using AI (artificial intelligence)?	☒	☐	☐	The machine learning models are being used to build a pattern of behavior specific to the environment they are deployed in. Over the course of 5-7 days, the Lilli platform learns the behavior via data from sensors deployed throughout the property. For example, it will establish how many times someone may use the bathroom on particular days and will recognise days when there usually an increase in movement in the property due to factors such as regularly scheduled homecare visits. Lilli's AI will be used to analyze data gathered from their sensors, which are placed within a person's residence / care setting. The data collected is habit (opening doors e.g., bathroom, fridge / motion data e.g., movement in specific rooms). Any minor deviations from established behaviours will be flagged on the Lilli system as 'unexpected' and any significant deviations from usual activity will be flagged as 'at risk'. ASC practitioners will then get alerts of these change in

				behaviours which will prompt them to discuss this with residents.
Will you be using automated decision making? (This is where a computer makes the decision that makes a material difference to someone and a human doesn't have the final say so. It's not for very basic things like emailing a letter.)	☐	☒	☐	If YES what system/tool/product and what will it do?
Will you be using CCTV, body worn video, dash cams or similar?	☐	☒	☐	If YES what system/tool/product and what will it do?
Will you be doing profiling? That is automated processing of personal data to evaluate certain things about an individual. There are specific rights around this, and if applicable we will expand this section to cover them.	☒	☐	☐	If YES exactly what are you doing? By using Lilli technology, we will be able to identify what are "usual" behaviours for residents in their homes. After establishing this, Lilli sensors will then be able to detect when established behaviours are changing which may indicate a change in care and support needs. While profiling will be taking place in the sense that ASC practitioners will monitor sensor data to understand how behaviours and care needs may be changing, it will not result in automatic decision making. Once results have been generated, practitioners will need to work with those who draw on care, their families, and other healthcare professionals to understand the reason behind these results and how care packages could be amended to meet the needs and wishes of residents. Furthermore, this profiling will not have a legal impact or similar effects on the residents who have Lilli installed in their homes.
Will you be using facial recognition/finger prints or other biometric data?	☐	☒	☐	If YES what system/tool/product and what will it do?
Will you be doing any Marketing? This includes advertising of products and services.	☐	☒	☐	If YES what exactly are you doing?
International Data Transfers: will any of the data be transferred or processed or stored etc outside the UK? This includes by data processors eg companies or organizations doing processing for us. It also includes their sub-	☐	☒	☐	If Yes: list the countries. (If they are outside the EU and not on a list of 'adequate' countries there will be additional information required).

processors – often IT support companies used by contractors.				
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8 **Data Subject Rights:** data subjects (the people whose data is being used) have some rights. Which ones apply depend on the legal basis being used. [Data Subject Rights under Data Protection Law \(sharepoint.com\)](https://sharepoint.com).

Data Subject Right	Detail Required
Right to be informed: When collecting personal data detailed information in the form of a privacy notice needs to be made available to data subjects, explaining why and how personal data is being collected /used. Check if this is already covered: Data protection, privacy and cookies - Camden Council .	Is it already covered in your Privacy Notice? YES and paste in link to it ☐ No ☒ If it's not covered you will need to do one either in full or a short paragraph. DPAT will advise you.
Right to access (also known as 'subject access requests'): Everyone is entitled to have a copy of the personal data we are processing, there are some exceptions when information would be withheld.	Tick to check you have understood this right: ☒
Right to rectification: Data subjects have the right to correct inaccurate factual personal data about them (this is factual data not opinions of professionals)	Will you be able to correct factually wrong data? YES ☒ NO ☐
Right to object: depending on the legal basis data subjects may have the right to object to the processing of their personal data by a data controller, requiring them to cease the processing in certain circumstances.	If your legal basis means this right applies we will advise you and you will need to add in here how it will be met.
a) Right to erasure (also known as 'Right to be forgotten'): depending on the legal basis data subjects may have the right to request the erasure of their personal data.	If your legal basis means this right applies we will advise you and you will need to add in here how it will be met.

9 **Risk Management.** We have to identify the data protection, privacy and security risks of this new processing, and then assess their severity and identify mitigations to reduce risk to an acceptable level (medium or low).

- i) Identify and detail the risk in the first column. Use one row per risk.
- ii) Use the ICO's risk assessment matrix below to see what level of risk each one is and enter that in the Initial Risk column.

- iii) Then identify what measures there are or could be to mitigate (reduce or eliminate) any risks identified as medium or high risk. Low risks do not need to be reduced. Remember you do not need to eliminate risks if not practical: it is adequate to reduce to an acceptable level and medium risk can be acceptable. Put the details in the 'measures' column.
- iv) Reassess the risk with those mitigations in place using the ICO's table. It might be the same or lower- it shouldn't be higher!
- v) Enter the mitigated risk level in 'residual risk'.
- vi) When the Information Asset Owner/s agree the DPIA they will put 'yes' (or 'no' if they disagree) in the last column.

ICO's Risk Assessment Table

Severity of impact	Serious harm	Low risk	High risk	High risk
	Some impact	Low risk	Medium risk	High risk
	Minimal impact	Low risk	Low risk	Low risk
		Remote	Reasonable possibility	More likely than not
		Likelihood of harm		

Identify and assess risks		Identify measures to reduce risk		
Describe the source of data protection, privacy and security risks risk and nature of potential impact on individuals. (Please add more rows if needed.)				
Risks	Initial risk (based on Likelihood and Severity of harm)	Measures to reduce risk to acceptable level	Residual risk	Does the Information Asset Owner accept this risk?

1	Lack of capacity	Medium Risk	In the pilot stage we will only offer this service to those that we know have mental capacity	Low	Yes
2	Data could be downloaded to a personal device	Medium	Staff guidance will be put in place as will staff training on use of Lilli installing, uninstalling access and downloading of data and practice guidance on how data will inform best practice. Staff will not be permitted to install the app on their personal device.	Low	Yes
3	Other visitors to the property won't know that their activity is being recorded	Medium	The sensors are non-intrusive (No microphone and no cameras). No personal data of visitors will be captured.	Low	Yes
4	Data shared with an unauthorised recipient	Medium	All data will be processed within the Lilli App which will be subject to Role Based Access Controls. Infrastructure provided by Lilli is encrypted in transit and at rest, holds Cyber Essentials certification and is subject to Lilli's organisational and technical security measures which are demonstrated via its NHS DSPT submission. Privacy enhancing techniques including data minimisation are applied to all data. Role Based Access Controls to be applied and all access to data to be formally authorised by the data controller prior to user accounts being created.	Low	Yes
5	There is a risk that this project and the use of Lilli sensors could result in an inherent privacy intrusion.	High	This project aligns to Camden's ambition that "Assistive technology will proactively support the residents of Camden to feel independent, safe and part of their local community. Residents will be able to access assistive technology when they need it, will live as independently as possible with individually-tailored solutions that promote their strengths, and maximise community assets. This will	Medium	Yes

			ensure that the service delivers the best use of limited Council resources. People will have control over key decisions relating to assistive technology and feel empowered to achieve their desired outcomes.” Lilli sensors will not be installed in a property without the consent of the individual who lives there. Before the sensors are installed, residents will be required to sign a form to give their consent and to identify friends or family who should also be able to access their activity data. In the event that people do not want family members to access this data, they will not be able to review it. When / if family members visit homes with Lilli sensors, it will not collect any of their personal information and there will be no way to determine which external individual is responsible for which activity within the house. Furthermore, residents will be able to withdraw their consent at any time which will trigger the process to remove the sensors and stop data collection going forward.		
6	There is a risk that Camden Council keeps the data collected by Lilli for too long	Medium	To support data minimisation, the automatic deletion of data can be configured in line with identified retention periods. Records held within the Lilli app will normally need to be retained for 7 years after the last activity. Data can therefore be automatically deleted 7 years after that date. However, data can be deleted if requested by the data controller. Examples of this being a data deletion request to the controller from a person who draws on care under a Data Subject Request.	Low	Yes

			Furthermore, if the council decides not to pursue Lilli following the conclusion of the pilot project, the information collected on the Lilli system can be deleted.		
7	There is a risk that a data breach could occur from Lilli, resulting in personal data being shared too widely. This would not only put residents at risk, but would lead to financial and reputational damage for Camden Council	Medium	Infrastructure provided by Lilli is encrypted in transit and at rest, holds Cyber Essentials certification and is subject to Lilli's organisational and technical security measures which are demonstrated via its NHS DSPT submission. All data will be processed within the Lilli App which will be subject to Role Based Access Controls. This will ensure that the information is only accessed by those with a legitimate reason. Furthermore, the only sensitive information recorded on the Lilli system will be name/address/dob and any support needs such as dementia. This will limit the likelihood of confidential personal information being exposed because of a data breach.	Low	Yes
8	There is a risk that this data is used for other purposes by council to the detriment of an individual (e.g. using it to show individuals don't qualify for assistance)	Medium	Results generated by Lilli will not automatically determine whether an individual qualifies for care or how an existing care package may change. Instead, the information should be reviewed by practitioners and used to support conversations around care needs. (So, if someone has requested homecare support for personal care and Lilli sensors indicate that they have been undertaking personal care, a conversation can take place to understand how difficult they have found this, or whether they have been unable to carry out certain activities). This information will be processed with the intent of	Low	Yes

			supporting ASC practitioners and residents in determining the level and type of social care support an individual is requires. This information will not be shared with 3 rd parties or processed in anyway by Camden Council that is not stated in the privacy notice.		
9	sharing with 3rd parties to person's detriment eg requests for data by DWP to show they left property when their PiP claim says they cannot	Medium	As part of this project, a privacy notice will be produced which will explain why Lilli sensors are being installed and how the information they generate will be used. This information will be processed with the intent of supporting ASC practitioners and residents in determining the level and type of social care support an individual is requires. This information will not be shared with 3rd parties or processed in anyway by Camden Council that is not stated in the privacy notice.	Low	Yes

10. Record Data Protection Officer advice and outcome

Names of Information Asset Owner and their acceptance of residual risks	Jamie Spencer
DPO advice	Cleared subject to Information Security team clearance
Date cleared	25 Feb 2025
Date review due	March 2026
This DPIA will kept under review by:(usually the author or the IAO)	Kyle Macdonald

11. Version control

Provide details of the first and subsequent versions. (Please add more rows if needed.)

Version	Completed Date
Version 1 (Jamie Spencer)	12.12.24
Version 2 (Kyle Macdonald)	

12. Appendices

Provide add copies of any documents referenced in the DPIA.

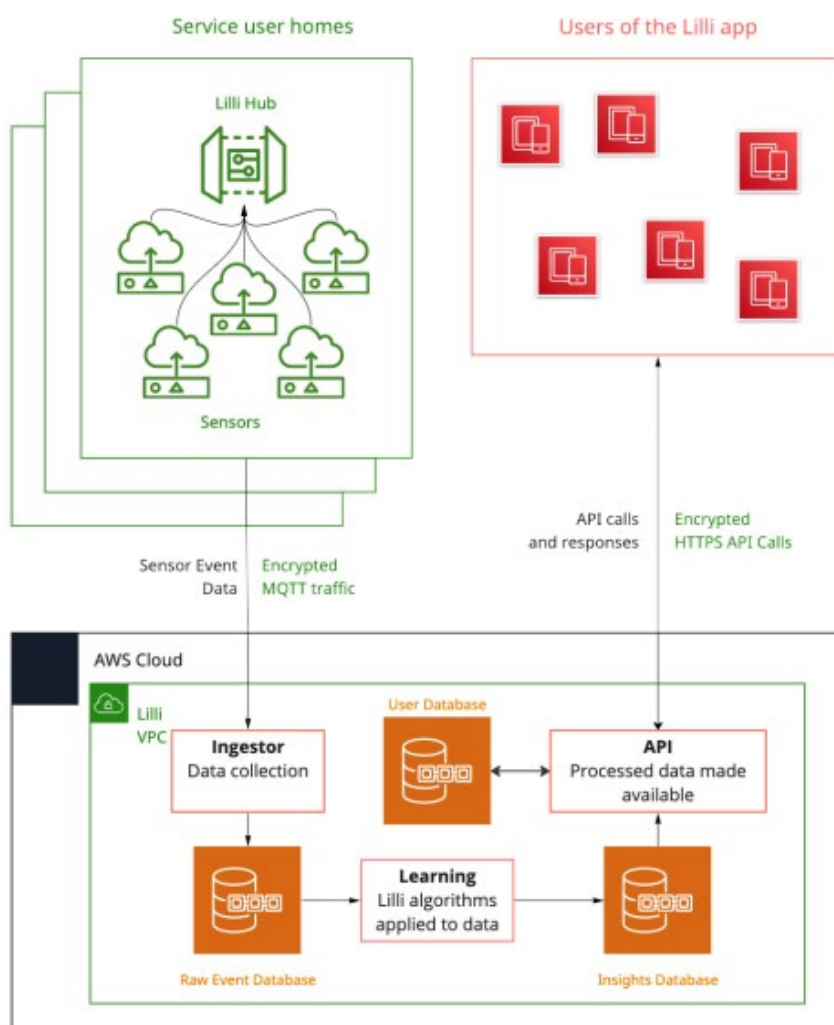
Appendix 1- Data Flow Diagram

Appendix 2- Lilli's DPIA

Appendix 3 – Ethics Assessment

Appendix 4- AI Risk Assessment (attached)

Appendix 1 - Data Flow Diagram



Appendix 2

Lilli's DPIA



DPIA Lilli.pdf

Appendix 3

Ethics Assessment

Ethical Assessment. In assessing ethics you need to consider the benefits, proportionate use, possible biases and transparency of the impact of the proposed processing and analysis of personal data on individuals and groups. It is the responsibility of the Project Manager and Sponsor to assess the potential ethical impacts that the intended processing may pose. (These answers can be reused for questions dealing with the same issues in the Full DPIA if the outcome of this pre-screen requires you to do one) Please see our Data Charter page for more information on ethical use of data in Camden <https://www.camden.gov.uk/data-charter>

1. Effects on Residents

a) How does use of this data benefit our residents? (Is there evidence of this approach being likely to meet a public need?)

By processing this data, social care practitioners will be able to understand the daily activities of people who draw on care in their homes. The Lilli sensors will record movement and the Lilli's algorithm will establish what is usual activity and when changes in behaviour occur. This can be used by practitioners to identify when care needs may be changing, which will allow care packages to be changed. Therefore, by processing this data, more appropriate care packages will be put in place and residents will be able to safely live in their homes while maintaining independence as much as possible.

b) What would be the harm in not processing this data?

If this data is not processed, it would not be possible for practitioners or their families (if consent given) to monitor the everyday behaviours of those who draw on care in their homes. This would make it more difficult to identify when behaviours (and care needs) are changing. This will make it less likely for appropriate care provisions to be put in place. As a result, residents may receive too much or too little care in their homes, or more restrictive care arrangements such as care in a residential home. This would not only reduce the independence of these individuals, but would lead to overprovisions that increase costs and could delay individuals who cannot benefit from Lilli technology from accessing the support they require.

2. Data Bias

a) How do you plan to identify errors and biases in data collection, analysis and algorithms? Once errors and biases have been identified in data collections, how will they be taken into account for any future policy or service which uses this work as an evidence base?

When Lilli sensors are first installed in resident homes, they will establish "normal" behaviours patterns over the course of 5-7 days. Following this, any minor deviations from established behaviours will be flagged on the Lilli system as 'unexpected' and any significant deviations from usual activity will be flagged as 'at risk'. ASC practitioners will then get alerts of these change in behaviours which will prompt them to discuss this with residents. This will also allow them to identify and account for changes in activity. For example, if Lilli sensors detected a sudden increase in bathroom use, it could be a cause for concern, or the result of family / friends visiting the property for the day. By engaging with the resident to understand these deviations from everyday behaviours, practitioners will be able to identify when results can be ignored or when changes are significant so care needs may be changing. It should be noted that the results generated by Lilli sensors will not solely be used to establish care needs. Practitioners will need to work with those who draw on care, their families, and other healthcare professionals to understand this and the results generated by Lilli sensors should support this. By taking this

approach, anomalies and errors detected by Lilli sensors can be understood and ignored, preventing them from influencing the level and type of care someone receives.

Who could be negatively affected by processing this data? (How can you show there is a **fair balance** between the **rights of individuals** and the **interests of the community**)?

Residents could be negatively impacted if care provisions are amended solely based on the results and recommendations generated by the Lilli app. To mitigate these negative impacts, ASC practitioners will not solely use the results generated from Lilli assistive technology to inform any potential amendments to existing care packages. Instead, this information will be used by practitioners to support conversations with those who draw on care, their families, health and social care professionals, and care agencies to decide whether current care provisions are appropriate or if support should be increased or decreased based on the needs and wishes of those who draw on care. This will not only mitigate the negative impacts of processing this data, while ensuring appropriate care provisions are in place, but will allow ASC to continue to implement a person centred focus to care as set out in the 'What Matters' approach.

3. Limitations of Data

a) How will you make sure that you only process the data that is necessary and proportionate for the purpose of the project, and no more than is necessary?

Camden Council collects and processes personal information in order to meet its statutory obligations to provide adult social care to residents. The information that is being collected as part of this project relate to behaviours within the home of residents. For example, we will monitor movement within the home, the number of times a fridge is opened, how many times a resident uses the bathroom, home temperature, and how often the front door is opened. By capturing this information, ASC practitioners will have assurance that individuals are safe in their homes. They will be able to use this information to identify when care needs may be changing and to support conversations with those who draw on care on whether they feel they need more or less support in their homes. It is important to note that Lilli sensors will only be installed in homes of residents that could benefit from the use of technology providing individuals give their consent to this. Lilli sensors will not be installed in the homes of individuals who would not benefit from Lilli. Furthermore, it would be difficult to process the information we record for other purposes aside from establishing whether resident care needs are being met.

In order to minimize the data we use privacy enhancing technical and organisational controls such as data minimisation

(removal or manipulation of any data fields or items which are not required for the particular processing activity) will be applied as part of reporting functionality to support reporting for recipients that do not require access to identifiable data. This will further protect confidentiality and privacy and reduce any potential risk to individuals

b) How are you ensuring the data used is reliable? (**Data quality**)

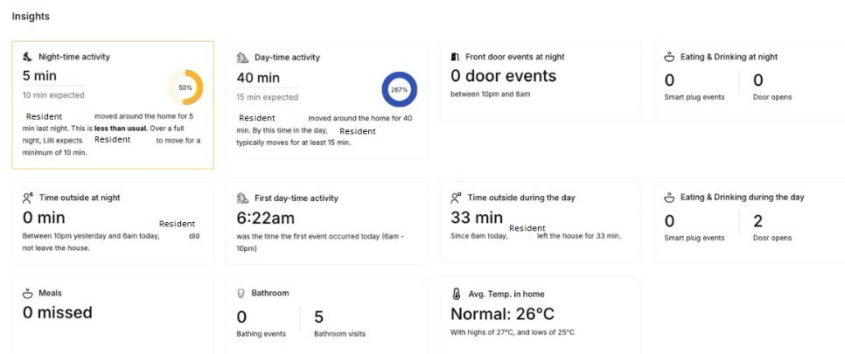
What processes do you have in place to ensure maintenance of data accuracy? (**Data integrity**)

i) How have you clearly marked origins and destinations of data used to trace source of errors? (**Data lineage**) (Are all metadata and field names clearly understood)

Lilli sensors will be placed in areas where reliable data can be generated. Once data is collected, it will be reviewed by ASC practitioners and used to support conversations around how care provisions could be amended to better support individuals. By taking this approach, health and care professionals will be able to identify errors or anomalies in the results produced by the Lilli sensors (e.g. detected changes in behaviour that are due to external factors such as holidays, or people visiting the home). Furthermore, data from sensors is collected and transmitted continuously, usually between 10 and 100 data points per hour. In the event of a telecoms or power outage, data can be stored in hubs before it is

transmitted. This will help ensure the accuracy of the data collected, meaning only relevant and accurate data is being used to inform these conversations.

Origins and destinations of data are clearly established. The Lilli app will show what activity occurred, how this was detected, and at what specific time the (un)expected event occurred. Activity is recorded and presented in a dashboard that clearly displays high-level data for review. The insight categories are clearly displayed and align to the domains set out in the Care Act (2014), so practitioners who review this information will be understand what information has been recorded and whether it is significant. An anonymised screenshot of what the dashboard looks like is shown below:



c) How could the objectives of this project be completed without processing the data?

It would not be possible to achieve the objectives of this project without processing this data. The purpose of this project is to pilot the use of Lilli assistive technology. By installing sensors in homes and reviewing the behaviour data recorded, ASC will be able to assess the outcomes and benefits for residents and whether savings have been realised. This will inform decisions as to whether the use of Lilli technology should be continued beyond this pilot project. Therefore, to achieve project objectives, this resident activity data needs to be processed.