

MAYOR OF LONDON

City Resilience Strategy

Analysis of how existing policy contributes to resilience

March 2020

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1. Introduction

A City Resilience Strategy for London

London published a City Resilience Strategy as part of its participation in the 100 Resilient Cities (100RC) Network. Our work on urban resilience aims to strengthen London and its communities, businesses, institutions and systems to better withstand both acute shocks and chronic stresses. The City Resilience Strategy gives us the opportunity to extend our thinking beyond emergency planning and civil contingencies and address long-term resilience for the capital. Membership of 100RC brings many benefits to London, including grant funding for appointing staff and access to a global network of city resilience practitioners.

The aim of the Strategy is to take a long-term look at the resilience of London by reviewing acute shocks and long-term stresses. It will build on existing policy work and Mayoral strategies, highlighting good practice and filling any gaps not covered by existing strategies.

Understanding how existing policy contributes to resilience

Resilience to shocks and stresses is built through policy action. The GLA has produced a number of strategies across London's core policy areas. Whether they are aimed at Planning, Health, Cyber or the Environment, they all have an impact on improving resilience. The City Resilience Strategy aims to build on this existing work. To help understand how existing policy contributes to resilience in London we have analysed a number of core Mayoral Strategies as well as the main work programmes of the London Resilience Partnership (LRP) using the Actions Inventory tool, developed by 100 Resilient Cities.

We have applied the tool to the following strategies/workstreams:

- The Draft London Plan
- Mayor's Environment Strategy
- Mayor's Transport Strategy
- Skills for Londoners Strategy
- *All of Us* – The Mayor's Strategy for Social Integration
- *Inclusive London* – The Mayor's Equalities, Diversity and Inclusion Strategy
- The London Food Strategy
- *A Safer City for All Londoners* – London's Police and Crime Plan
- Policies and workstreams of the London Resilience Partnership

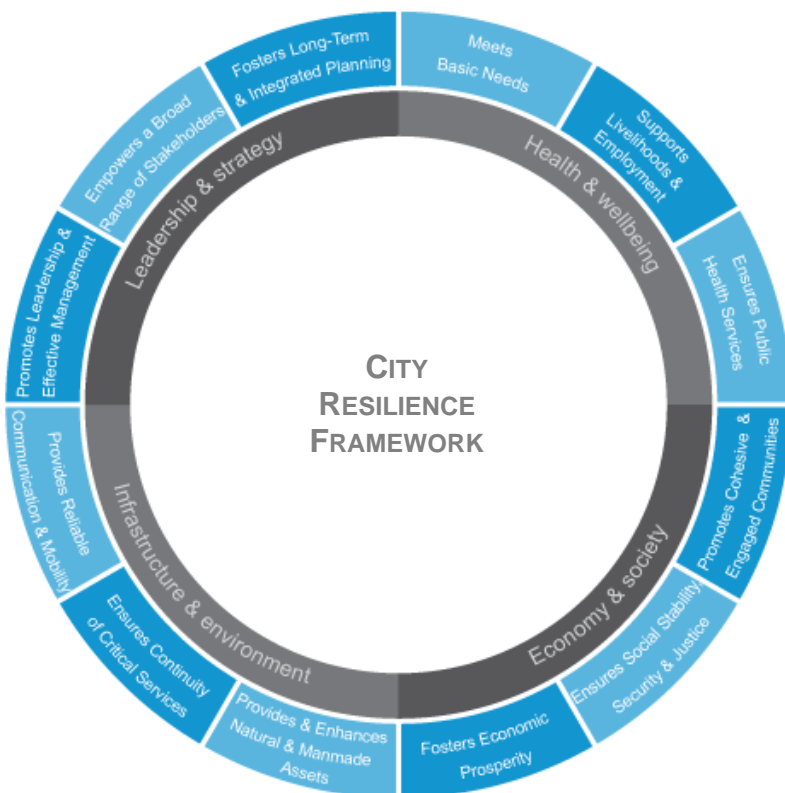
This report summarises the results of this analysis, providing an overview of how existing GLA and LRP policy is already contributing to make London a more resilient city. This analysis is part of the evidence work which informed the development of the London City Resilience Strategy.

City Resilience Framework and tool

The 100 Resilient Cities’ City Resilience Framework (CRF) summarises the multi-disciplinary nature of resilience, through a set of factors that enhance a city’s ability to survive, adapt, and grow in the face of adversity. Developed from extensive research and evaluation of cities’ experiences around the world, the CRF provides a lens through which the complexity of cities and the numerous factors that contribute to a city’s resilience can be understood.

The CRF (illustrated below) comprises 12 key drivers required for a city to be resilient, across four dimensions:

- **Health & Wellbeing:** the essential city services that safeguard human health and diverse and secure livelihoods, economy and society
- **Economy & Society:** systems that enable urban populations to live peacefully, and act collectively
- **Infrastructure & Environment:** the way in which built and natural assets provide critical services and protect residents
- **Leadership & Strategy:** effective leadership and management, empowered stakeholders and integrated planning



Resilience drivers:

1. Meets Basic Needs
2. Supports Livelihoods and Employment
3. Ensures Public Health Services
4. Promotes Cohesive and Engaged Communities
5. Ensures Social Stability, Security and Justice
6. Fosters Economic Prosperity
7. Enhances and Provides Protective Natural & Man-Made Assets
8. Ensures Continuity of Critical Services
9. Provides Reliable Communication and Mobility
10. Promotes Leadership and Effective Management
11. Empowers a Broad Range of Stakeholders
12. Fosters Long-Term and Integrated Planning

Figure 1 – City Resilience Framework, showing 12 drivers of resilience

The diagrams in the following pages illustrate the extent to which different GLA strategies and LRP workstreams already address the 12 drivers of urban resilience in the City Resilience Framework. The diagrams also identify policies whose 'Primary' aim relates to the respective resilience driver (in darker blue) and policies which might have a different focus but still contribute to resilience as a 'Secondary' goal (light blue).

In addition to the 12 drivers, the CRF includes a number of sub-drivers of resilience, which are used to assist the mapping exercise of policies against the CRF by focusing on more detailed thematic areas. A full list of all drivers and sub-drivers in the CRF is provided in Appendix.

It is important to note that the tool considers the scope of policies, i.e. the aims of the policy and the thematic area it covers. It does not consider how effective or feasible the policy is expected to be. The results should be interpreted as an indication of how the scopes of different strategies align with drivers of urban resilience – not as an assessment of policy performance.

The method to define what elements of each strategy ('objectives', 'policies', 'proposals', etc.) would be listed as actions to be mapped was developed together with the respective GLA teams, who also validated the results after application of the strategy. We followed a consistent methodology to code all policies against sub-drivers of resilience across the different strategies and workstreams. However, there is a degree of discretion and subjectivity in this exercise, which is part of the nature of the tool – this should be taken into account when interpreting the results, particularly when comparing different strategies. It is also important to note that the diagrams show the relative importance of the different resilience drivers in each strategy – the scaled in the diagrams are not directly comparable between strategies.

2. Analysis results

Draft London Plan

To understand how the Draft London Plan¹ can contribute to building a more resilient London, we have used the Actions Inventory tool to map the extent to which the 115 policies proposed in the Plan address urban resilience objectives. As the diagram below shows, policies in the Draft London Plan (LP) contribute to all 12 drivers of resilience in the City Resilience Framework. This is quite significant and supports the idea that the GLA is already doing substantial work on urban resilience across different teams and policy areas, even if many of these policies are not badged as ‘resilience’.

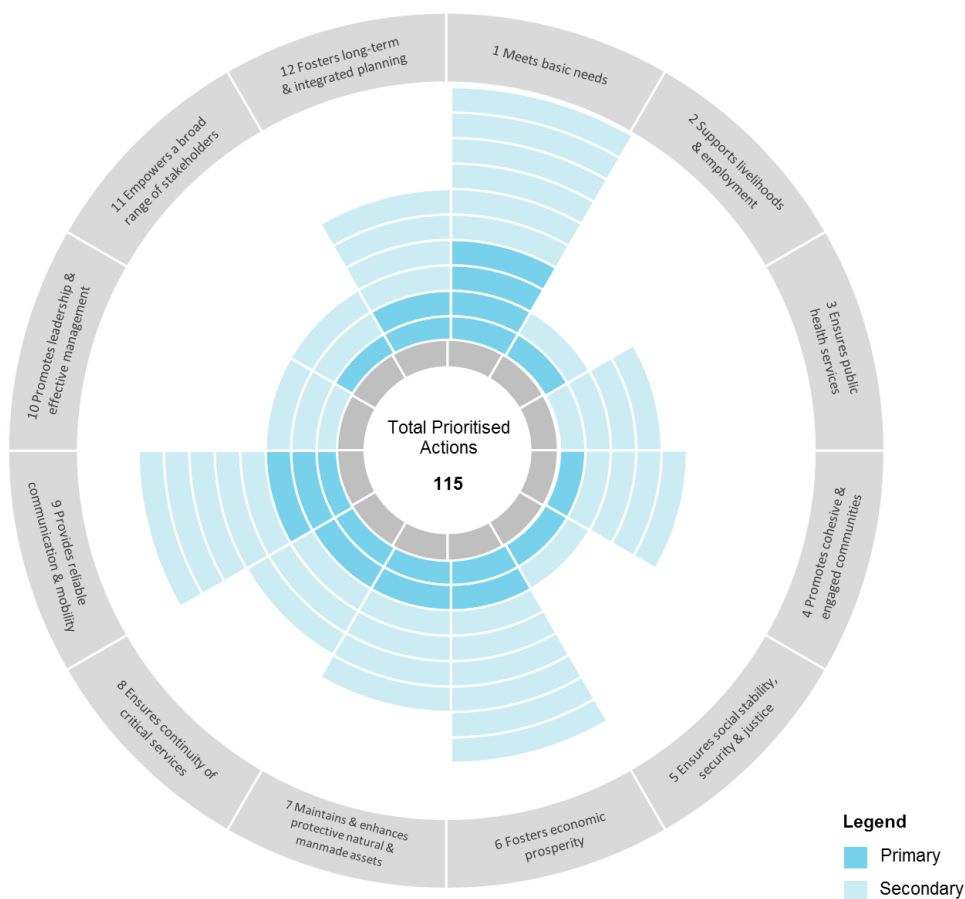


Figure 2 - the London Plan mapped against the City Resilience Framework

¹ The analysis was based on the July 2019 version of the Draft London Plan, with consolidated suggested changes from the Examination in Public.

The LP is particularly strong on driver 1 ('Meets basic needs'), which reflects the high commitment to delivering sufficient, inclusive and affordable housing for Londoners. The objectives of the Plan also contribute highly to achieving drivers 6 ('Fosters economic prosperity') and 9 ('Provides reliable communication & mobility'). Economic prosperity contributions are mainly on the 'Local economy' sub-driver, with policies also contributing to 'Wider economic linkages', 'City budgets' and 'Inward investment'. Communication and mobility contributions reflect the LP strong focus on delivering transport infrastructure and networks.

The London Plan also contributes significantly to driver 12 ('Fosters long-term & integrated planning'), mainly through policies and guidance on producing different types of plans and strategies (including borough development plans and site or theme-specific strategies) as well as evidence and measurable targets. Driver 7 ('Maintains and enhances protective natural & manmade assets') is also significant, reflecting the strong emphasis on Environmental policy, including protecting and enhancing green spaces, green infrastructure and environmental assets.

The least covered areas of urban resilience relate to drivers 2 ('Supports livelihoods & employment'), 5 ('Ensures social stability, security & justice'), and 10 ('Promotes leadership & effective management'). These areas, including skills and labour policy, law enforcement, city governance and emergency response, are generally outside the scope of the London Plan. These drivers are covered in more by other Mayoral strategies and programmes which consider these areas in more detail (as will be shown below).

Finally, driver 3 ('Ensures Public Health services') is quite prominent in the LP but only by secondary contributions. This reflects both the high importance of tackling public health issues and risks in the LP (e.g. air quality, noise, promoting active travel, and healthy streets), and the fact that direct provision and management of healthcare services generally falls outside the powers for the Mayor of London.

Environment Strategy

Figure 3 below maps 22 actions in the London Environment Strategy (LES) against the 12 drivers of urban resilience in the CRF. Mapped actions correspond to 21 high-level 'Objectives' identified in the strategy plus additional initiatives proposed in Chapter 11 of the document.

The Strategy's contribution to meeting resilience objectives is quite broad, covering all 12 drivers of resilience in the CRF, although to different degrees. Driver 7 ('Maintains and enhances protective natural & manmade assets') is, as expected, the strongest in LES, and mainly through primary aims. Although this is mainly due to sub-driver 7.1 ('Environmental policy') – which is represented across 16 different objectives in the Strategy – there are also contributions to sub-drivers 7.2 ('Safeguards critical infrastructure') and 7.3 ('Redundant, diverse infrastructure').

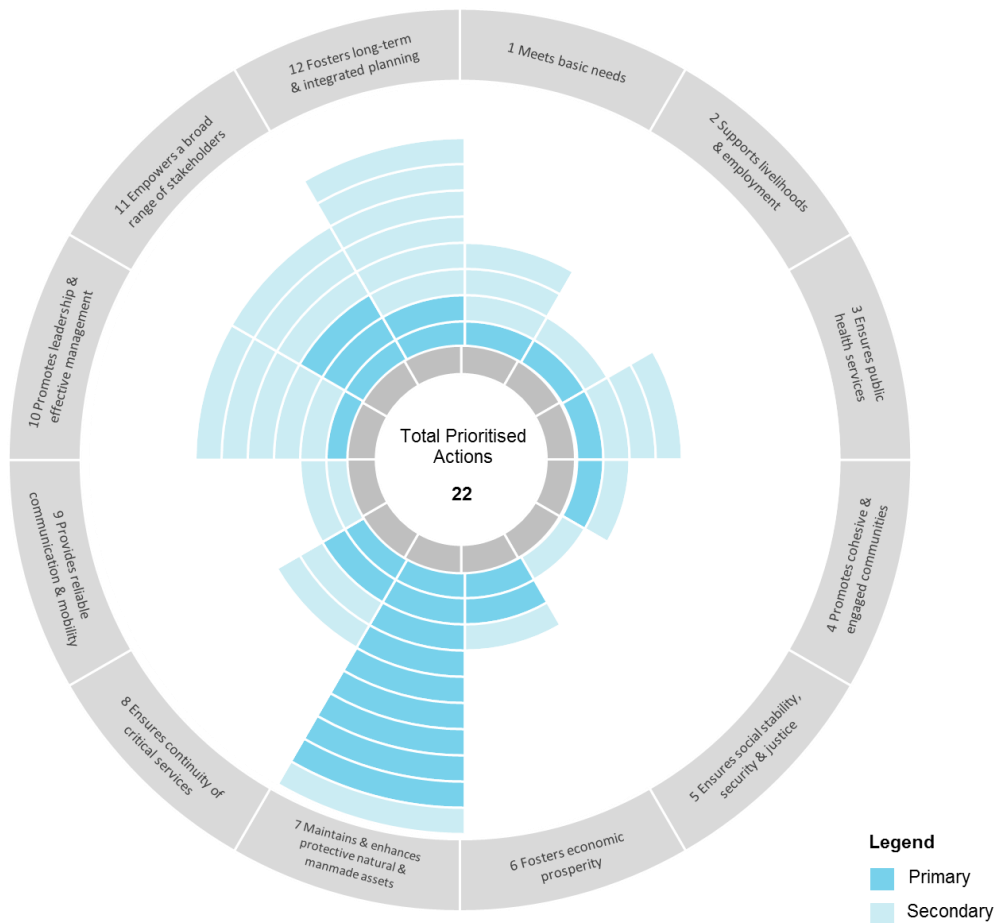


Figure 3 - London Environment Strategy mapped against the CRF

Driver 12 (‘Fosters long-term & integrated planning’) is also very strong, mainly through secondary aims, including objectives related to ‘City monitoring and data management’ (sub-driver 12.1), ‘Building codes, standards and enforcement’ (sub-driver 12.4), and ‘Strategies & plans’ (sub-driver 12.2). The LES also contributes significantly to driver 11 (‘Empowers a broad range of stakeholders’), mainly due to objectives related to ‘Public risk awareness’ (sub-driver 11.2), ‘Risk monitoring and alerts’ (sub-driver 11.3) and ‘Knowledge transfer/best practice sharing’ (sub-driver 11.4).

Other drivers significantly addressed by the LES include 10 (‘Promotes leadership & effective management’) – mainly related to Multi-stakeholder alignment (10.1), Government alignment (10.2) and ‘Decision making and leadership’ (10.3) – as well as driver 8 (‘Ensures continuity of critical services’), with provisions for ‘Ecosystem management’ (8.5) and ‘Flood risk management’ (8.4). Driver 1 (‘Meets basic needs’), due to contributions to ‘Housing’ (1.1), ‘Energy’ (1.2), ‘Water’ (1.3) and ‘Food’ (1.4), driver 3 (‘Ensures Public Health services’), related to (mainly secondary) provisions concerning public health issues (sub-driver 3.3), and driver 6 (‘Fosters economic prosperity’) and are also well covered.

Transport Strategy

Figure 4 illustrates how the Mayor’s Transport Strategy contributes to building resilience in London, by mapping its 26 Policies against the CRF.

Unsurprisingly, the Strategy is very strong in driver 9 (‘Provides reliable communication & mobility’), through policies addressing transport networks (sub-driver 9.1), public transport (sub-driver 9.2) and freight/logistics (sub-driver 9.3). However, the Transport Strategy also puts a very strong emphasis on aspects related to driver 7 (‘Maintains and enhances protective natural & manmade assets’), mainly through policies focusing on improving the environment by promoting the transition to sustainable modes of transport and reducing emissions



Figure 4 - London’s Transport Strategy mapped against the CRF

Drivers 3 (‘Ensures Public Health services’) and 12 (‘Fosters long term and integrated planning’) are also significant. The former is covered through policies aiming to improve public health (sub-driver 3.3) – mainly related to physical and mental health benefits of walking and cycling and to improved air quality – while the latter includes policies on producing policies and

plans (sub-driver 12.2) and on data and monitoring (sub-driver 12.1). Drivers 6 ('Fosters economic prosperity') and 10 ('Promotes leadership & effective management') – related to promoting alignment with stakeholder and different levels of government – are also covered, mainly by secondary actions. Finally, the Transport Strategy also contributes to driver 5 ('Ensures social stability, security and justice', linked to provisions for deterring crime (5.1).

Skills Strategy

Figure 5 shows the 9 objectives set out in the Mayor's Skills strategy mapped against the 12 drivers of urban resilience in the CRF.



Figure 5 – London's Skills Strategy mapped against the CRF

The diagram quite clearly highlights the strong contribution of Strategy to driver 2 of the CRF ('Supports livelihood & employment'). This is achieved mainly through objectives focusing on improving 'Skills and training' (sub-driver 2.2), although important contributions can also be found in sub-drivers 2.1 ('Labour policy') and 2.4 ('Local business development and innovation').

Drivers 11 ('Empowers a broad range of stakeholders') and 10 ('Promotes leadership & effective management') and also very strong. The former is mainly due to 'Education' objectives (sub-driver 11.1), while the latter mainly comprises contributions to 'Multi-stakeholder alignment' (sub-driver 10.1). Other significant contributions to meeting resilience objectives can also be found in driver 12 ('Fosters long-term & integrated planning') – through 'City monitoring and data management' (sub-driver 12.1) – and driver 4 ('Promotes cohesive and engaged communities'), through objectives concerning public participation.

The remaining drivers of resilience are not directly addressed by objectives in the Skills strategy. These correspond to policy areas outside the scope of the strategy, such as infrastructure, housing and environment policies, or risk management and economic growth. But the results of this analysis emphasise how the Skills strategy complements policies in the London Plan, particularly concerning, skills & training, labour policy, education and multi-stakeholder alignment (related to drivers 2, 10 and 11).

Social Integration Strategy

Figure 6 maps the London Social Integration Strategy's 16 'Policies' against the 12 drivers of urban resilience in the CRF.



Figure 6 – Social Integration Strategy mapped against the CRF

The Strategy has potential to contribute to build resilience in London across a number of different policy areas. Not surprisingly, the Strategy performs particularly well on driver 4 ('Promotes cohesive and engaged communities'), with policies aiming to improve 'Community social connectivity,' (sub-driver 4.1), 'Local identity and culture' (sub-driver 4.2) and 'Community participation (sub-driver 4.3). Driver 10 ('Promotes leadership & effective management') is also very strong, mainly through contributions to 'Multi-stakeholder alignment (sub-driver 10.1) and 'Government alignment' (sub-driver 10.2).

Other significant contributions to meeting resilience objectives can also be found in driver 12 ('Fosters long-term & integrated planning') – mainly through 'City monitoring and data management' (sub-driver 12.1) – and driver 2 ('Supports livelihood & employment') through provisions for 'Skills and training' (sub-driver 2.2), 'Labour policy' (sub-drivers 2.1), and 'Livelihood support following a shock' (2.3), related to integration of refugees.

Driver 5 ('Ensures social stability, security and justice') is also significant, complementing other Mayoral strategies where this driver is less covered.

Equalities, Diversity and Inclusion Strategy

The 39 'Strategic Objectives' set out in the Mayor's Equalities, Diversity and Inclusion (EDI) Strategy are mapped against the CRF in Figure 7.



Figure 7 – Equalities, Diversity and Inclusion Strategy mapped against the CRF

The EDI Strategy is a broad strategy, with potential to contribute to making London more resilient across a large number of policy areas. Only driver 8 ('Ensures continuity of critical services') is not covered, which is expected as it falls outside the Strategy's remit. The strategy is particularly strong on driver 4 ('Promotes cohesive and engaged communities'), followed by driver 1 ('Meets basic needs'). The former comprises objectives concerning 'Community participation' (sub-driver 4.3), 'Community social connectivity' (sub-driver 4.1), and 'Local identity and culture' (sub-driver 4.2). Contributions to driver 1 are mainly related to policies for delivering inclusive and affordable housing for Londoners.

Similarly to the Skills Strategy, The EDI Strategy contributes strongly to driver 2 ('Supports livelihood & employment'), both through 'Skills and training' (sub-driver 2.2) and 'Labour policy' (sub-driver 2.1). Other important contributions include driver 11 ('Empowers a broad range of stakeholders') – mainly concerning 'Education' (sub-driver 11.1) – driver 10 ('Promotes leadership & effective management') – through promoting 'Government alignment' (10.2) and 'Multi-stakeholder alignment' (10.1) – and driver 3 ('Ensures public health services') – mainly through objectives concerning sub-driver 3.3 ('Capacity and measures to manage public health').

Food Strategy

The diagram below (Figure 8) maps how the London Food Strategy contributes to the 12 drivers of urban resilience in the CRF.

The contribution of the Food Strategy to resilience is quite broad, going beyond ensuring sufficient and affordable food and water supply to Londoners. As well as covering driver 1 ('Meets basic needs') well – regarding both food (sub-driver 1.4) and drinkable water (sub-driver 1.3) – the Strategy is equally strong on driver 3 ('Ensures public health services'), through objectives concerning public health (sub-driver 3.3), such as providing and promoting healthy food to prevent illnesses like obesity or diabetes. Policies in the Food Strategy contribute to environmental policy (part of Driver 7) and to driver 6 ('Fosters economic prosperity'), through measures related to business continuity planning (6.1) and improving the local economy (6.4).

Other contributions to resilience include driver 2 ('Supports livelihood & employment'), through 'Skills and training' (sub-driver 2.2) and 'Labour policy' (sub-driver 2.1), and driver 12 ('Fosters long-term & integrated planning') – through 'City monitoring and data management' (sub-driver 12.1) 'Strategies and Plans' (sub-driver 12.2). Driver 10 ('Promotes leadership & effective management') is also significant, mainly through collaboration with boroughs and other stakeholders.

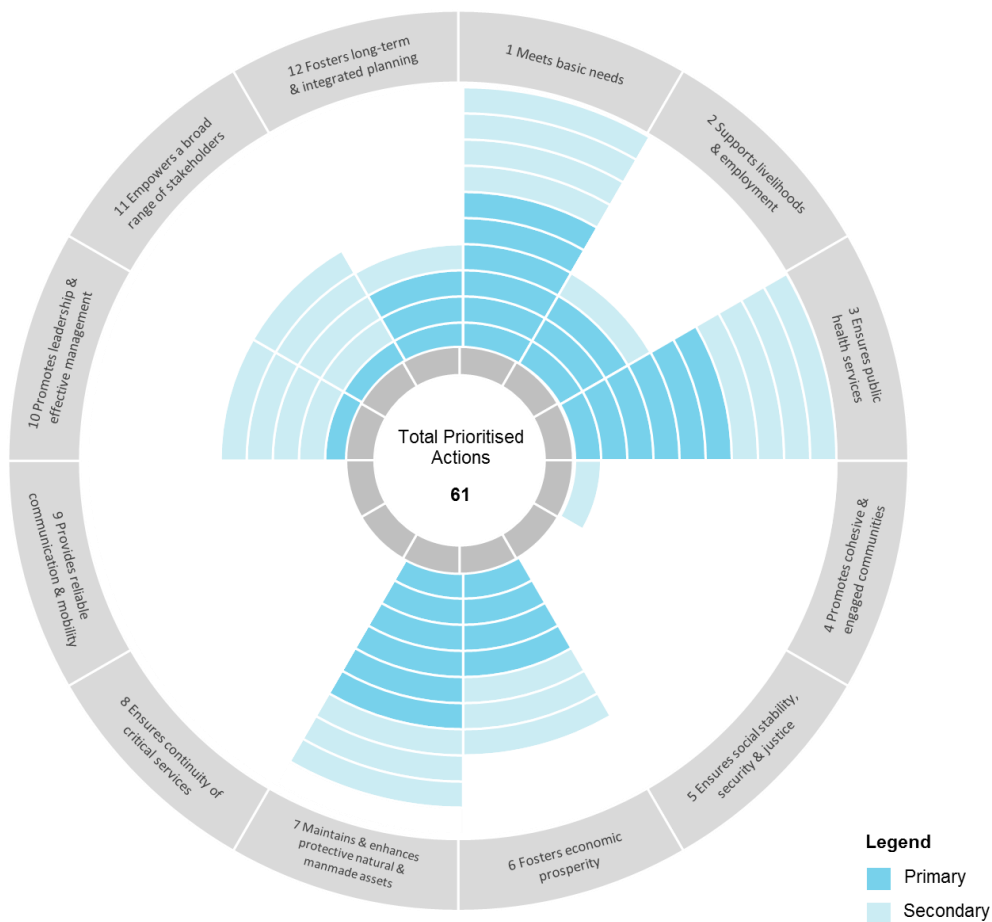


Figure 8 – Food Strategy mapped against the CRF

Police and Crime Plan

The Police and Crime Plan has three main priorities: keeping children and young people safe, tackling violence against women and girls and preventing hatred, intolerance and extremism. The key policy aims under these priorities were mapped against the CRF (Figure 9).

The Plan is very strong in driver 5 ('Ensures social stability, security and justice'), through policing to promote safety and security (sub-driver 5.3) and provision for deterring crime (5.1) and improve law enforcement (5.4). The Plan contributes significantly to improving resilience in London on driver 2 ('Supports livelihoods and employment'), mainly due to its focus on victim support after a shock, and driver 12 ('Fosters long term and integrated planning') – by promoting the collection and analysis of data and development of targeted strategies for crime reduction.



Figure 9 - Police and Crime Plan mapped against the CRF

Other contributions to resilience include drivers 4 (‘Promotes cohesive and engaged communities’) and 10 (‘Promotes leadership & effective management’). The former is achieved through objectives to improve community social integration and resilience, while the latter includes provisions for multi-stakeholder collaboration and government alignment.

London Resilience Partnership

The London Resilience Partnership (LRP) is responsible for ensuring London is prepared to respond to and recover from emergencies. The LRP is made up of over 200 organisations who have a shared responsibility for continually developing London’s resilience through prevention, management and recovery from emergencies. The Partnership carries out a comprehensive work programme and a range of managing and monitoring tasks, in collaboration with the GLA, local authorities and other organisations, to ensure London is prepared and ready to respond to disruption. The diagram in Figure 10 maps the main 54 projects and workstreams of the LRP against the City Resilience Framework.



Figure 10 - LRP projects and workstreams mapped against the City Resilience Framework

The diagram highlights that the LRP work addresses two drivers of resilience: 10 ('Promotes leadership & effective management') and 8 ('Ensures continuity of critical services'). Driver 10 is covered by LRP projects and workstreams across all its sub-drivers, with particular strengths in 'Multi-stakeholder alignment' (sub-driver 10.1) and 'Emergency capacity and coordination' (10.4). Driver 8 reflects the LRP role in developing 'Emergency plans for critical services' (8.1), with additional relevant work on 'Flood risk management' (8.4).

The LRP also contributes to driver 11 ('Empowers a broad range of stakeholders'), through work on 'Knowledge transfer and best practice sharing' (11.5), 'Communication between government and the public' (11.4), 'Risk monitoring and alerts' (11.3) and 'Public risk awareness' (11.2).

These findings stress the crucial role of the London Resilience Partnership in delivering the operational aspects of resilience which are less represented in the London Plan and other Mayoral strategies. This analysis supports the complementary nature of the LRP and the London City Resilience Strategy: the former sets out goals and objectives in relation to risk

management and emergency planning, the London Resilience Strategy focuses on long-term, holistic resilience-building across different areas.

The contribution of LRP to achieving resilience objectives goes beyond drivers 10, 8 and 11. However, this is not apparent in Figure 10 as the high prevalence of drivers 8 and 10 distorts the scale for other sections of the CRF. Figure 11 below shows an adjusted version of the CRF that removes these two drivers in order to allow other contributions to be visible.



Figure 11 - LRP projects and workstreams (excluding drivers 8 and 10)

The adjusted diagram shows the contribution of LRP projects and workstreams to other drivers of resilience, particularly drivers 1 ('Meets basic needs'), 7 ('Maintains and enhances protective natural & manmade assets') and 6 ('Fosters economic prosperity'). Driver 1 is addressed by work on all four sub-drivers: 'Housing' (1.1), Energy (1.2), 'Water' (1.3) and 'Food' (1.4). The value of driver 7 (mainly through secondary impacts) reflects LRP work on safeguards for critical infrastructure. Driver 6 is addressed by work on business continuity planning.

LRP projects and workstreams show significant contribution to driver 3 ('Ensures public health services'), mainly through 'Capacity and measures to manage public health' (3.3) and 'Medical facilities and practitioners in an emergency' (3.1).

3. Conclusion

Resilience is not new to London. Much activity is already taking place that contributes to making London more resilient – from the risk management and emergency preparedness work of the London Resilience Partnership to the numerous Mayoral Strategies which, although not always badged as resilience, have policies and strategic objectives targeting urban resilience drivers across a wide range of policy areas.

The analysis presented in this report provides a systematic and evidence-based assessment of how different existing policy areas are already contributing to resilience, using the City Resilience Framework as reference.

Our analysis indicates that current policy work contributes substantially to building resilience in London across the different resilience drivers that cover health and wellbeing, economy and society, infrastructure and environment, and leadership and strategy. The diagram in Figure 12 illustrates the combined contribution of all workstreams analysed here to the CRF.

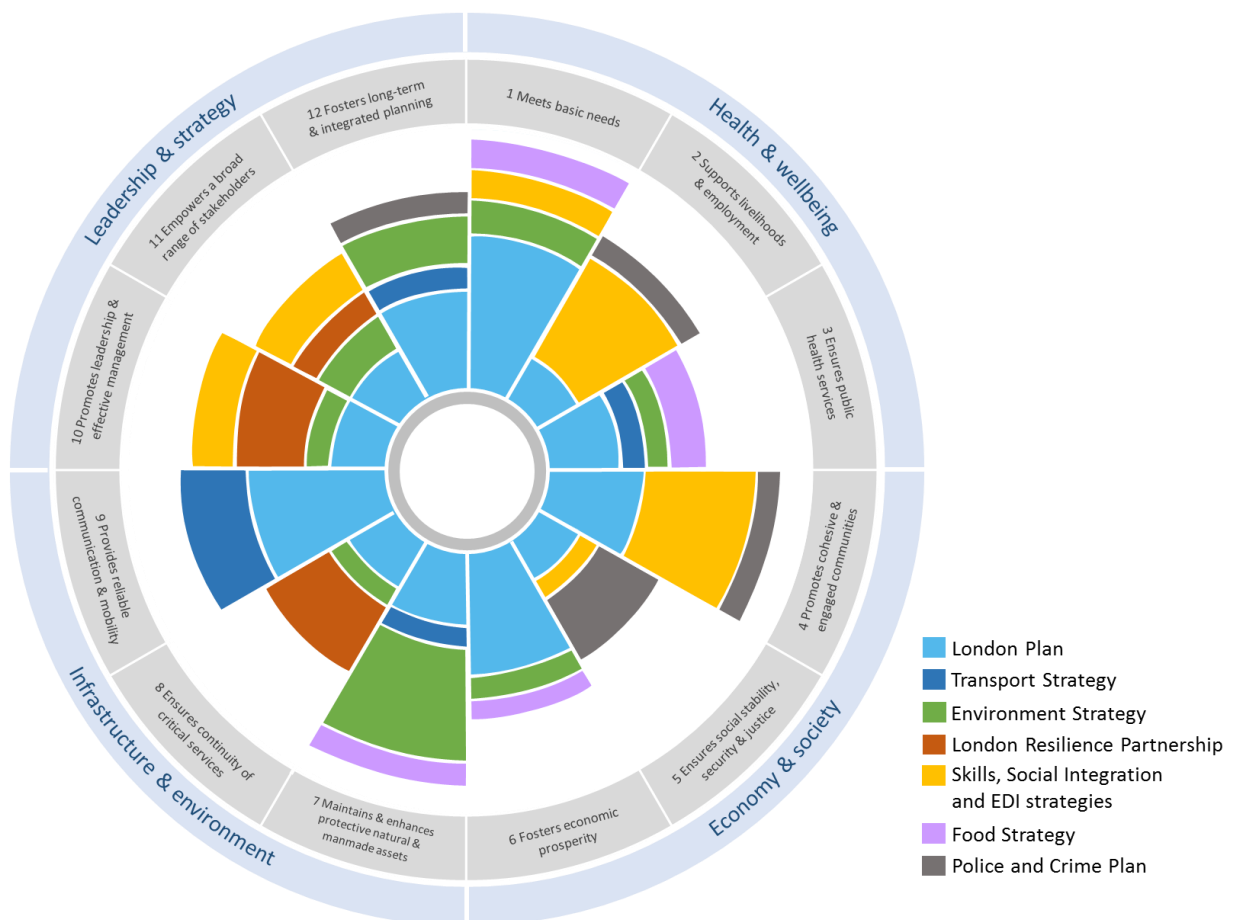


Figure 12 – Schematic summary of how different strategies and workstreams contribute to resilience

London, through the GLA group, is relatively successful in considering urban resilience in strategic policymaking. The Draft London Plan alone provides good coverage of resilience objectives across most drivers. Less well-covered areas – mainly related to aspects outside the Plan’s remit – are addressed through other Mayoral strategies and workstreams. For example, the Skills, Social Integration and EDI strategies complement the London Plan on driver 2 (related to skills, labour policy and supporting livelihoods) and driver 4 (promoting cohesive and engaging communities).

The Environment Strategy extends the Plan’s contribution to other resilience drivers, including driver 7 (protecting natural and man-made assets) and driver 12 (long-term integrated planning), while the Transport Strategy contributes further to driver 9 (communication and mobility). The work of the London Resilience partnership addresses risk management and emergency planning activity critical to effective resilience under driver 10 and ensures continuity of critical services and infrastructure (driver 8). Public health is also an important area of focus in London, with contributions from the London Plan as well as the Environment, Transport and Food strategies. Finally, the Police and Crime Plan – and, to a lesser extent, the Social Integration and EDI strategies – contribute to ensuring security and social stability (driver 5), vital to city resilience.

This review is not exhaustive. There are several other strategies and policy documents produced by the GLA and other functional bodies within the GLA family which have not been included here. The analysis did also not directly consider contributions from policies developed by the 33 London boroughs or the activities of London businesses and voluntary sector organisations – all of which play an important role in achieving the city’s resilience objectives. This exercise captures a snapshot in time of existing activity and its contribution to resilience – and does not provide a measurement over time.

The analysis provides a high-level picture of how London is already working to be more resilient, which is a useful baseline for the City Resilience Strategy. The analysis indicates that the Resilience Strategy can add most value by linking up cross-cutting resilience initiatives, as each sector already makes a strong contribution to London’s resilience.

Appendix – CRF drivers and sub-drivers

The City Resilience Framework

	Driver	Sub-Drivers
Health & Wellbeing	1. Meets Basic Needs Provision of essential resources required to meet a person's basic physiological needs	1.1. Housing 1.2. Energy 1.3. Water 1.4. Food
	2. Supports Livelihoods and Employment Livelihood opportunities & support that enable people to secure their basic needs. Opportunities might include jobs, skills training, or responsible grants & loans	2.1. Labour policy 2.2. Skills and training 2.3. Livelihood support following a shock 2.4. Local business development and innovation 2.5. Access to finance
	3. Ensures Public Health Services Integrated health facilities and services and responsive emergency services. Includes physical and mental health, health monitoring and healthy living	3.1. Medical facilities and practitioners in emergency 3.2. Access to general healthcare 3.3. Capacity and measures to manage public health
Economy & Society	4. Promotes Cohesive and Engaged Communities Community engagement, social networks and integration, encourage civic engagement in decision-making	4.1. Community social connectivity 4.2. Local identity and 4.3. Community participation
	5. Ensures Social Stability, Security and Justice Law enforcement, crime prevention, justice, and emergency management	5.1. Deterrents to crime 5.2. Corruption 5.3. Policing to promote safety and security 5.4. Law enforcement
	6. Fosters Economic Prosperity Contingency planning, sound management of city finances, the ability to attract business investment, a diverse economic profile and wider linkages	6.1. Business continuity planning 6.2. City budgets 6.3. Inward investment 6.4. Local economy 6.5. Wider economic linkages
Infrastructure & Environment	7. Enhances and Provides Protective Natural and Man-Made Assets Environmental stewardship, appropriate infrastructure, effective land use planning and enforcing regulations. Conservation of environmental assets.	7.1. Environmental policy 7.2. Safeguards for critical 7.3. Redundant, diverse infrastructure
	8. Ensures Continuity of Critical Services Diversity of provision, redundancy, active management & maintenance of ecosystems & infrastructure, & contingency planning	8.1. Emergency plans for critical services 8.2. Optimisation of critical infrastructure 8.3. Maintenance of assets 8.4. Flood risk management 8.5. Ecosystem management
	9. Provides Reliable Communication and Mobility Diverse and affordable multi-modal transport networks, ICT and contingency planning	9.1. Transport networks 9.2. Public transport 9.3. Freight / logistics transport 9.4. Communications technology 9.5. Emergency information systems
Leadership & Strategy	10. Promotes Leadership and Effective Management Relating to government, business and civil society. Trusted individuals, multi-stakeholder consultation and evidence-based decision-making	10.1. Multi-stakeholder alignment 10.2. Government alignment 10.3. Decision making and 10.4. Emergency capacity and coordination
	11. Empowers a Broad Range of Stakeholders Education for all, access to up-to-date information and knowledge to enable people and organisations to take appropriate action	11.1. Education 11.2. Public risk awareness 11.3. Risk monitoring and alerts 11.4. Communication between government and public 11.5. Knowledge transfer and best practice sharing
	12. Fosters Long-Term and Integrated Planning Holistic vision, informed by data. Strategies/plans should be integrated across sectors and building codes should create safety and remove negative impacts.	12.1. City monitoring and data management 12.2. Strategies and Plans 12.3. Land-use and development 12.4. Building codes, standards and enforcement

