

Representation from Stuart Turner.

Milton Keynes. 21st December 2025.

MK CITY PLAN 2050: Regulation 19 Statement

1. Introduction.

1.1. I am writing to formally submit my representations regarding the **Milton Keynes City Plan 2050 Proposed Submission (Regulation 19)**. This is a formal representation made by Stuart Turner in his capacity as an architect and urbanist and a professional with many years' experience in the growth and development of Milton Keynes . Reference is made to a body of mobility work carried out by the author over a 16 year period. This information has been used as an evidence base to support this representation.

1.2. My comments specifically target the **Movement and Access** policies and the proposed **MK Metro Mass Rapid Transit (MRT)** system. While I support the city's ambition to achieve a high-quality, inclusive mobility network, I consider the current draft of the Plan to be **unsound** as it fails the national tests of being **Justified, Effective, and Consistent with National Policy**. I have summarised my objections in Appendix 2. **Summary of objections** and have included a number of specific **Main Modifications** to ensure the Plan is robust enough to meet the city's 2050 objectives.

1.3. My response sets out an urbanist's viewpoint on where the MK City Plan 2050 is unsound and identifies those areas that need to be addressed before Milton Keynes will be able to successfully grow and change over the next 25 years.

These are all areas, supported by the Plan's objectives that need further scrutiny in order to create a resilient and adaptable city capable of responding to the challenges of climate change, deteriorating infrastructure , housing under-provision and shifts in lifestyles and above all an inclusive community.

This response concentrates on the adequacy of the proposed transit system that's considered to be unsound and the policies related to this. The main focus is on MK Metro. The evidence base to justify the adoption of a mass rapid transit in the form of MK Metro is incomplete.

2. Achieving transformational change.

2.1. Under 'Our ambition and objectives' Milton Keynes City Council recognises that the MK City Plan 2050 will need to address 'transformational change' Page 7 and refers to provision of a new Metro system at its Heart' Page 8 ,This is presented as the foundation for of a successful future city. P12.

The **Milton Keynes City Plan 2050** cross refers to a Growth Strategy and the recommendations of the MK Futures 2050 Commission. see page 46. and the Section on 'Smart, shared, sustainable mobility' That report was published in July 2016 in the intervening years the Milton Keynes Council has interpreted that recommendation and arrived at the MK: Metro.

2.2. We agree the analogy of the heart is appropriate. As the heart is critically significant to the functioning of the body and its failure will results in the rapid cessation of life then the proper functioning of the transport and movement system is critical to the effective functioning of the city.

2.3. The Plan claims ref. item 9. that The growth strategy set out in this plan has been tested in several ways through the evidence base. The pathway followed is difficult to establish, Given that the new Metro system is at the Heart of the Plan this response focuses on those policies associated with Movement and access and a publicly accessible transit system.

This response makes comment on access and movement policy and highlights those areas where the failure of the new metro system would have a detrimental impact on the future success of our city. This response questions whether through the proposed approach transformational change will be achieved and specifically that the MK Metro proposals is unsound and its inclusion as a cornerstone of the vision will fail to deliver sustainable development.

3. Five key principles applicable to sustainable transport and the areas of concern.

3.1. The MK City Plan 2050 sets out an ambition for growth through to 2050. One of the key principles P13 advocates 'Aligning growth with the establishment of a new Metro system that allows people to move around the city with ease, alongside maintaining our grid roads as an integral part of the city's unique design and character'. Milton Keynes Council claims it is 'preparing an extensive evidence base, and business case, to secure the necessary investment to deliver this network alongside our growth proposals..

3.2. The adequacy of this approach, the poor evidence base and the specific choice of a Mass Rapid Transit system, MK Metro is the subject of this representation. While provision of a publicly accessible transit system that allows people to move around the city with ease, is supported the proposal does not go far enough to include the widest demographics of our city including families, older people, and particularly the young who will live in and shape our future city.

4. Rapid Transit systems and the UK Context.

4.1. In the UK context, a **Mass Rapid Transit (MRT)** system is defined as a high-capacity urban public transport service engineered for high levels of customer performance, specifically regarding travel times and passenger capacity. Unlike standard bus services, MRT typically operates on segregated or exclusive rights-of-way—at-grade, elevated, or underground—to ensure fast and reliable high-frequency travel.

4.2. Typical Characteristics and UK Implementation

UK MRT systems range from heavy rail metros to specialized bus-based corridors. The suitability of these systems is heavily dependent on city population and density.

System Type	City Examples	Pop. Size (Est.)	Success Indicators
Heavy Metro	London Underground	9M+	Oldest in world; essential for city functionality.
Light Metro	DLR (London), Tyne & Wear Metro	1M - 2.5M	DLR was critical for the regeneration of Docklands.
Underground	Glasgow Subway	600k+	Provides a 10.5km high-frequency inner-city circuit.
Light Rail/Tram	Manchester Metrolink, Sheffield Supertram	500k - 2.8M	Metrolink is the UK's largest light rail system.
Bus Rapid Transit	Gosport (Eclipse), Cambridge Guided Busway	80k - 150k	Reported a £6.94 economic return for every £1 spent.

- **Cost and Funding:** Large rail projects like Crossrail cost billions and take decades to develop. Smaller BRT schemes typically cost between £10m–£100m, funded through matched central government grants and local authority capital.

- **Development Period:** Rail systems often require 10–20 years from business case to operation, while BRT can be implemented within 5–10 years.

4.3. Milton Keynes Scenario Analysis

With a population of approximately **305,000–306,000 in 2024**, Milton Keynes (MK) falls into a challenging middle ground. While its projected population is comparable to cities implementing light rail, its unique medium to low-density grid layout creates distinct operational opportunities.

4.4. Appropriateness of Systems:

- **Bus Rapid Transit (BRT):** Currently the only reasonable contender for traditional mass transit in MK. MK City Council is actively developing an electric-tram-based MRT proposal targeting over 2 million annual passengers.

- **Light Rail/Tram:** Generally considered unsuitable due to high capital costs (often £2bn+) and MK's dispersed population, which makes generating the necessary passenger density difficult without extreme urban densification.

- **Flexible/Autonomous Transit:** A flexible/ autonomous transit system would be appropriate. MK's strategy for 2050 envisages an MRT network that would be flexible enough to accommodate smaller, connected, and autonomous vehicles (CAV) alongside mass transit.

4.5. The Potential of the Grid Road System

The Milton Keynes grid road network, far from being a liability, is an asset perfectly poised for advanced transit systems.

- **A Visionary Design:** The grid was based on the thinking of Melvin Webber, who imagined the city as a "giant switchboard" bound by linkages rather than dense physical places. This anticipated the modern network society and advancements in information technology.

- **Digital and Autonomous Readiness:** The regular geometry of the 1km grid is ideally suited for **Connected and Autonomous Vehicles (CAV)** and next generation **Demand Responsive Transit (DRT)**.

- **Network-Based Movement:** Unlike radial cities that struggle with single-point congestion, the MK grid supports a multi-directional network. This allows for a 'switchboard' approach to movement where individual trips can be direct and efficient.

- **Adaptability:** The original 1960's Plan for Milton Keynes intentionally included generous landscape reservations along grid road corridors (between 80m and 120m wide) to permit the future introduction of new transport infrastructure and evolving technologies.

4.6. Reservations and Risks

- **Ridership and Revenue Risk:** Traditional BRT viability typically requires 5,000 to 10,000 passengers per hour. Achieving this requires significant land-use densification along corridors to avoid perpetual public subsidies.

- **Induced Demand:** Improving road capacity for MRT vehicles risks inadvertently encouraging further private car use, neutralizing carbon reduction goals.

- **Technological Redundancy:** Relying on articulated buses might face obsolescence as personal autonomous "pod" technologies evolve, which better suit MK's dispersed layout and can utilise the grid more effectively than linear bus routes.

4.7. Vehicle Form and Passenger Capacity

Vehicle choice is dictated by required "peak capacity" per direction.

- **Heavy Rail/Metro:** Multi-car electrically powered trains. Capacity: **60,000+** per hour.

- **Light Rail/Trams:** Articulated cars. Capacity: **5,000 to 20,000** per hour.

- **Bus Rapid Transit (BRT):** Articulated or double-decker zero-emission buses. Capacity: **5,000 to 10,000** per hour.

Operational and Revenue Model

- **Frequency:** Turn-up-and-go services (minimum 6 per hour/every 10 mins).
 - **Ridership:** Radial routes carrying tens of millions annually in large cities.
 - **Revenue:** Farebox revenue rarely covers total costs. Viability is maintained through Public-Private Partnerships (PPP), Value Capture (using land value increases near stops), and government subsidies for "social good".
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5. The Vision Led Plan, MK Metro and Movement and Access.

5.1. Movement and Access Concept and Strategy (MK City Plan 2050)

The MK City Plan 2050 strategy is a fundamental shift toward "Mobility as a Service," aiming to disconnect economic and population growth from private car dependency.

- **Integrated Mobility Network:** The strategy moves away from conventional fixed-linear public transport toward a joined-up 'Mobility Network' where transport, parking, and land-use policies operate in unison.
- **Active Travel Prioritization:** A "15-minute walkable neighbourhood" concept is introduced, placing essential facilities within a short walk or cycle.
- **Transit-Oriented Development:** Growth is focused around "Metro Corridors"—high-density development along Mass Rapid Transit (MRT) routes—to ensure new residents have immediate access to high-quality public transport.
- **Infrastructure Repurposing:** The plan commits to protecting the unique grid roads while repurposing these corridors to accommodate advanced network-based transport systems.

5.2. MK Metro: Mass Rapid Transit (MRT) Outline

The **MK Metro** is the centrepiece of the mass rapid transit vision for Milton Keynes, designed to bridge the gap between traditional buses and light rail.

- Vehicle Form and Capacity:

- **Proposed Form:** A road-based, rubber-tyred vehicle system.
- **Vehicle Type:** The plan favours zero-emission, high-specification "advanced" vehicles, likely articulated or specialized electric/hydrogen buses.
- **Capacity:** While typical MRT systems carry 5,000–10,000 passengers per direction per hour, the specific MK Metro vehicle-level capacity is not explicitly capped in the high-level topic papers, though it is modelled to support a city growing towards 500,000 people.

- Operational Model:

Frequency: Targets a "turn-up-and-go" frequency (e.g., at least 6 services per hour or every 10 minutes).

- **Ridership and Directionality:** The current proposal indicates five main linear routes known as Metro corridors. With the introduction of smaller autonomous vehicles, the system could utilize a **ladder array configuration**—up and down routes on alternate grid roads—to double the passenger catchment area compared to traditional radial lines.

- **Revenue Model:** The system is designed to be commercially viable by eliminating driver costs through eventual autonomous integration and using 'Value Capture' from increased land values along the corridors.

5.3. Lacking Information: The Regulation 19 documents do not yet provide a granular breakdown of daily farebox revenue vs. operational subsidies or the final technical specification (level of autonomy) for the 2027 initial rollout.

- **Population Reach and Modal Shift Potential**

The strategy is presented as a transformational mechanism to achieve a "significant and high percentage modal shift".

Population Coverage: By concentrating 16,000 homes in CMK and 11,000 in Bletchley near transport hubs, the plan ensures a significant number of new and existing urban residents are within 400m of an MK Metro station.

Modal Shift Certainty: The "Transport and Movement Topic Paper" and model forecasts (Nov 2025) suggest the system is the only viable alternative to a 57% rise in peak-hour car journeys, which the existing grid cannot accommodate.

- **Doubt Factor:** While the plan targets high modal shift, the success is contingent on 'disincentivizing' car use through city-centre zoning restrictions and parking policy changes, which remain subject to separate implementation.

5.4. Soundness and Consistency with Research

Aspects of the Regulation 19 approach is consistent with ST's 'Transitional Grid' research (2009–2021).

Consistent Principles: The use of the grid as a digital foundation, the "Points of Connection" concept, and the "ladder array" are part of ST's research and evidence base and are all concepts that need to be embedded in the City Plan.

Evolutionary Fit: The plan aligns with the **UK Automated Vehicles Act 2024**, which provides the legal pathway for the NUIc (No User in Charge) services ST advocated for in earlier years.

Soundness: At a concept level, the approach is sound because it recognizes that Milton Keynes' medium density is incompatible with traditional light rail/trams (£2bn+ cost). The detailed proposal utilizes the existing "Strategic Assets" (grid road reserves) for a flexible, rubber-tyred 'Metro'. This aspect is criticized.

6. An evidence based assessment and soundness test.

6.1. Reference is made to the National Planning Policy Framework (NPPF) and the 4 criteria that represent a test of soundness namely '**Positively Prepared**', '**Justified**', '**Effective**', and '**Consistent with national policy**', which if applied effectively means the plan meets needs, is evidence-based, deliverable, and aligns with broader government goals, ensuring it's a robust framework for development. These criteria of soundness and the five key principles are used in this assessment of the proposed MK Metro transport system. As part of this the assessment will consider:

- The movement concept and one that suits both the existing city form and the proposed growth areas.

- The transport mode proposed and where a conclusion has been arrived at through a process of comparative analysis and the use of a number of options that are consistent with and support the principles and concept.

6.2. Ambitions and the 14 Objectives

The overarching **Ambition** for the MK City Plan and the **Objectives** for the period 2022-2050 are clearly set out as 14 specific objectives, (See Appendix 1). These are grouped under 4 main heading addressing **People-Friendly and Healthy Places, Climate and Environmental Action, Economic and Cultural Prosperity, High-Quality Homes, and Central Milton Keynes**. These overarching objectives are generally sound.

7.The impact of a failed implementation of MK Metro

7.1. To argue that the **MK City Plan 2050 (Regulation 19)** movement strategy is **Inadequately Prepared** regarding its 'Effectiveness,' we must assess whether the proposed **MK Metro** can realistically deliver the transformational change required to meet the city's 2050 growth targets. The following assessment identifies the specific **MK City Plan 2050 Policies** that would be directly and detrimentally impacted by a failure of the Metro system, along with the required modifications to mitigate these risks.

7.2. Policies Impacted by System Failure

Policy GS9 & GS10: MK Metro and Mass Rapid Transit

Direct Impact: This is a core policy establishing the Metro as the 'primary or top-level' transport service. Failure here would leave a strategic void at the top of the transport hierarchy, forcing a reliance on lower-tier bus services that are historically poorly structured for MK's dispersed form and have declining patronage.

Policy GS5: Growth Strategy and Infrastructure Delivery

Direct Impact: The delivery of 38,000+ new homes is predicated on an 'Infrastructure First' approach. Failure of the Metro system would remove the primary mitigation for the projected **166,000 additional daily vehicle trips by 2045**, potentially leading to 'severe' gridlock that could legally halt further housing completions.

Policy G10: Reducing the Need to Travel and Car Dependency

Direct Impact: This policy targets a significant modal shift. Without a high-quality, 'turn-up-and-go' alternative, car dependency—already at 72% for work journeys—will remain entrenched, making it impossible to meet the plan's goal of achieving a 50% commuter trip shift.

Policy CMK1: Central Milton Keynes Development Strategy

Direct Impact: CMK intensification (16,000 new homes) assumes the conversion of surface car parking into housing and 'greenways' (like Midsummer Boulevard). If the mass transit system is ineffective, CMK will require *more* parking, not less, to remain economically competitive, effectively collapsing the CMK masterplan.

A range of policies targeted at Carbon Reduction and Net Zero.

Such as Policy CEA1 Sustainable buildings, Policy CEA6 Low and zero carbon energy provision.

Direct Impact.

The **Climate and Environmental Action Topic Paper** and those **Policies associated with this** rely on the zero-emission MK Metro to meet the city's statutory Net Zero 2050 goal. Failure would leave transport-related CO2 emissions at unsustainable levels in one of the top 10 most carbon-intensive cities in the UK.

7.3. General Assessment of Failure Consequences

The evidence suggests that a failure of the current MK Metro proposal would result in a technological "lock-in" to a redundant road-based bus system that cannot compete with the convenience of the private car. This would likely lead to:

- **Economic Stagnation:** Increased congestion and travel times (projected 14% increase by 2031) would diminish the city's attractiveness for inward investment.

- **Social Inequity:** The failure to provide a city-wide seamless network would continue the 'two-speed city' trend, where households without a car are increasingly isolated from employment and healthcare.

7.4. Mitigation Measures to Address Soundness and Failure Risk

To mitigate these risks and ensure the Plan meets the 'Effective' test of soundness, the following measures should be embedded in the delivery strategy:

- Technological.

Autonomous Transition: Redefine Policies GS9 & GS10 to require that Phase 1 infrastructure acts as a digital platform for Connected and Autonomous Vehicles (CAV) to match the AV Act 2024.

- Catchment.

Ladder Array Routing: Build in a strategy to replace linear routes with "Ladder Arrays" on alternate grid roads to double the passenger catchment and ensure a 90% city-wide reach.

- Viability.

DRT Pioneer Network: Use an enhanced and more extensive MK Connect (DRT) service to build and test demand prior to the heavy capital investment in fixed MRT corridors.

- Infrastructure.

Grid Road Repurposing: Fully utilize the 80m-120m strategic road reserves for dedicated transit pathways, ensuring total segregation from general traffic to maintain journey speed.

Conclusion: Without these mitigations, the **MK City Plan 2050** movement strategy is at high risk of failure. The plan must evolve from a "bus-first" MRT to a "CAV-ready" **Mobility Network** that leverages the unique social prescience of the original grid design.

8. MK City Plan 2050 Policies under scrutiny.

8.1. The response specifically addresses the following policies presented in the MK City Plan 2050 Regulation 19. document :-

- Policy GS4 Strategy for people-friendly and healthy places.

Policy type: Strategic

Objectives: 1, 2, 3, 5, 8, 9, 11

- Policy GS9 Supporting transit-oriented development and estate regeneration.

Policy type: Strategic

Objectives: 1, 2, 3, 4, 7, 8, 9, 10

Site/sub-area: Metro corridors and regeneration estates

- Policy GS10 Movement and access

Policy type: Strategic

Objectives: 9, 10, 11

Site/sub-area: n/a

8.2. Objectives.

Each of the policies refers to a specific grouping of objectives. Of these Objectives 1,2,3,5,8,9,10 and 11 are seen to be most relevant to the policies under examination and will be used as part of the assessment of a specific policy proposal like the MK Metro Mass Rapid Transit proposal. While these 3 policies above have been selected for detailed scrutiny any shortfall or failure of the MK Metro proposal will have far wider consequences. The wider impact of a failed implementation of MK Metro has been addressed earlier. A full list of the Objectives is provided in **Appendix 1. The Objectives.**

8.3. Policy GS4 Strategy for people-friendly and healthy places

8.3.1. Soundness.

This Policy when considered in its entirety seen to be unsound due to the dependency on a proposal for a publicly accessible mass transit system that has been inadequately evidenced and researched at the early stages of its development and thus has a high probability of failure.

8.3.2. While this policy is primarily about People-Friendly and Healthy Places and Objectives 1,2, and 3, a principle that is supported, the inclusion and reliance on a movement hierarchy that applies to developments of 10 or more dwellings and includes at its upper level a mass public transit like MK: Metro is likely to fail without a future proofed and transitional strategy. This service is needed to draw people away from the private car and achieve the objectives of the two lower level of the movement hierarchy. A transformational modal shift will not be achieved and as a result the objectives of the policy are significantly compromised.

8.4. Policy GS9 Supporting transit-oriented development and estate regeneration.

8.4.1. Soundness.

This Policy when considered in its entirety is seen to be unsound due to the dependency on a proposal for a publicly accessible mass transit system that has been inadequately evidenced and researched at the early stages of its development and has a high probability of failure.

8.4.2. While this policy is primarily about Climate and Environmental Action Objective 5 and the delivery of High - quality Homes. Objectives 9,10 and 11. These objectives are to be delivered through transit orientated growth TOG in the existing MK areas. TOG will take the form of a limited number of Metro corridors. This approach is a prerequisite to support the regeneration of existing built up areas within Milton Keynes, The estates located along these corridors include **Bradville, New Bradwell, Stantonbury, Conniburrow, Eaglestone, Coffee Hall, Netherfield and Beanhill.**

8.4.3.The policy proposed the development of designated Metro corridors with interchange hubs and will 'support the wider public transport offer in Milton Keynes' The policy relies on delivering a high quality accessible public transport service within Milton Keynes and relies on the MK: Metro proposal to deliver a high quality public transport service. A service that is needed to draw people away from the private car and a transformation modal shift. The wider public transport offer is unlikely to be realised and as a result the objective will be significantly compromised.

8.4.4. The interchange hubs and Metro stops are presented as a key component of the MK Metro concept within the existing built-up area of the city and referred to in **Policy GS9 Supporting transit-oriented development and estate regeneration** and **Policy GS10 Movement and access.** Their description is covered in principle in the glossary. While they provide ancillary services for transient passengers moving from a local to a city wide scale and vice versa no consideration is given to the safe movement of pedestrian and cyclists over or under the Metro Corridors.

8.5. Policy GS10 Movement and access

8.5.1. Soundness.

This Policy when considered in its entirety is seen to be unsound. There is a concern that the policy statement is too compliant to the private car and fails to place greater emphasis and prioritise the need and provision for a publicly accessible transit system in new development areas, that is a provision for a service that is needed to draw people away from the private car and achieve a transformation modal shift. In this case the delivery of a publicly accessible transit system has been inadequately evidenced and researched and whether the proposal can achieve this objective remains to be addressed.

8.5.2. This policy is primarily about the principles of development including parking and the delivery of High - quality Homes. Objectives 9,10 and 11. and further reinforces the **GS4 Movement hierarchy** and the need to reduce travel by car by promoting active travel and public transit. Item 85 cites the following 'To that end, Policy GS10 further defines expectations for the delivery of movement and access corridors, which prioritise active travel and public transit that is accessible to all'. But underplays the role of public transit in new developments. The policy supports the integration of transport and movement corridors and requires road layouts to incorporate road layouts that incorporate public transport infrastructure that integrates facilities for interchange hubs.

8.5.3. The policy addresses the extension of the grid road network and refers to an 'enhanced grid road network within a designated Transport Corridor' This statement appears to be supporting a dual modal approach to the gridded movement network and fails to promote a transit only gridded system that should be considered. While the grid system is discussed there is a failure to recognise that the introduction of the Metro corridors in their limited form is undermining the integrity of the gridded system and through the current three tier movement hierarchy and raises questions of inclusion and equality.

8.6. The main areas of objections.

In summary there are 4 main areas of objection.

8.6.1. Objection: The plan fails to objectively address the **mobility needs of the borough's diverse population, Lack of Proportionate Evidence & Alternatives, the funding challenge and over future proofing voids**. Further Details of these objections are provided in **Appendix 2. Summary of objections** and in **Appendix 4. Reviews undertaken following the March 2020 Covid - 19 Pandemic**.

9. The Evidence base.

9.1. In the above response reference has been made to **MK: Metro**, the proposed mass rapid transit system being inadequately evidenced and researched. This section looks at the evidence base provided by Milton Keynes City Council to justify the decision to proceed with MK Metro.

Polices Policy GS4 Strategy for people-friendly and healthy places, Policy GS9 Supporting transit-oriented development and estate regeneration, and Policy GS10 Movement and access are considered using the **4 criteria of soundness** namely '**Consistent with national policy**', '**Positively Prepared**', '**Justified**', and '**Effective**'

9.2. 'Consistent with national policy'.

9.2.1. Based on the Regulation 19 MK City Plan 2050 evidence base and National Planning Policy Framework (NPPF) transport principles, the argument for whether the **Movement and Access policy** and the **MK Metro** are '**consistent with national policy**' is analysed below.

9.2.2. Assessment Against NPPF Principles

The MK City Plan 2050 aligns with the NPPF's shift from '**predict and provide**' to a '**vision-led**' approach, setting long-term sustainability outcomes and providing the transport solutions to deliver them.

- **Early Integration:** The plan demonstrates this by making Mass Rapid Transit (MRT) a core component of the growth strategy from the outset, rather than an add-on to housing developments.

- **Vision-Led Approach:** The strategy creates a bold vision for a '**globally leading green city**' by 2050, directly linking population growth (up to 410,000 residents) to high-quality transport infrastructure.

- **Promote Active Travel:** Consistent with national policy, the plan places '**active travel**' as the top priority in the MK transport hierarchy, utilizing the existing **Redway** network as a foundation for safe, traffic-free walking and cycling.

- **Supports Public Transport:** Facilitates high-quality transit by proposing a **90% segregated** MRT network designed to provide "turn-up-and-go" reliability similar to heavy and light rail but using more adaptable, road-based technology.

- **Reduce Car Dependency:** Directly addresses this by proposing 16,000 new homes in Central Milton Keynes (CMK) and 11,000 in Central Bletchley, focusing high-density development around transport hubs to minimize the need for car travel.

9.2.3. Consistency vs. Success in Interpretation

While the plan is structurally consistent with the NPPF, its '**success in interpretation**' remains a point of critical debate:

- **Support Public Transport (MK Metro):** There is a perceived risk that the MK Metro's reliance on **Rubber-Tyred Vehicle (RTV)** technology could face redundancy if not carefully integrated with emerging **autonomous vehicle (CAV) systems**.

National policy requires infrastructure to be **'future-proofed'**; however, if the RTV model does not evolve into a fully autonomous, flexible network, it could fail to deliver the convenience necessary to compete with private car ownership.

- **Reduce Car Dependency**: National policy advocates for managing car parking as a key tool for modal shift. Critics argue that the City Plan is less successful here because an agreed-upon, city-wide parking management strategy for CMK—critical for disincentivizing car use—remains outstanding.

9.2.4. Early Integration and Adaptation Strategy

To be truly effective and consistent with national objectives, the **'Early Integration'** principle must be paired with a clear **adaptation strategy**:

- **Adaptive Infrastructure**: The MK Metro system should be designed to be flexible, utilizing grid road reserves as "digital pathways" that can transition from high-capacity electric buses to autonomous modular pods over time.

- **Delivery Agency Role**: Establishing an independent **Transit Commission** (as proposed in the research) would ensure that the integration of transport is not just a planning phase but an ongoing management process that adjusts to technological shifts, such as the **AV Act 2024**.

9.2.5. Conclusion on Consistency

The **MK City Plan 2050** is generally **consistent with national policy** in its ambition and vision-led structure. However, the **'soundness'** of the **Movement and Access policy** depends on whether the **MK Metro** can successfully bridge the gap between today's electric bus technology and tomorrow's autonomous mobility systems to avoid becoming a technologically "retrograde" step.

This transformation of a transport system from a current conventional approach within Milton Keynes to an advanced connected and autonomous system CAV cannot be achieved or delivered overnight and hence a transitional and adaptive strategy must be seen to represent part of a delivery approach. This is important as the pressure for change will be significant now that the UK's Automated Vehicles (AV) Act 2024 has received royal assent and will be fully implemented through secondary legislation that targets full implementation in the second half of 2027.

The Council seems to have been poorly advised on how best to interpret the adoption of the most suitable and appropriate transport mode. The MK Metro proposal as presented is unlikely to achieve a transformative modal shift in itself and could directly attribute to the failure of the city's future success where significant levels of resourcing and funds are being used to deliver a redundant transport system.

On further examination it's very difficult to unravel the rationale behind the adoption of the proposed MK Metro, the approach seems confused and muddled. In considering this rationale the search for a consistent evidence base has been undertaken, this did not uncover any detailed analysis at an early stage.

9.3. 'Positively Prepared'

9.3.1. This section addresses the second of the 4 tests of **Soundness**. Has the **MK City Plan 2050** been '**Positively Prepared**'

To argue that the **MK City Plan 2050** and the **MK Metro** Mass Rapid Transit (MRT) system supporting this have been '**Positively Prepared**' we must evaluate them against the '**test of soundness**' defined in the National Planning Policy Framework (NPPF). The following evidence-based argument assesses the plan according to the criteria provided:

9.3.2. Objective Needs Assessment

The MK City Plan 2050 is based on a strategy that objectively identifies and addresses the city's future requirements through 2050.

- **Evidence Base:** The plan is informed by the **Milton Keynes Infrastructure Study and Strategy (MKISS)**, which includes baseline reports (Feb 2024) and further assessment reports (Oct 2025) to evaluate infrastructure needs as the population grows toward 410,000.

- **MRT Justification:** The **Strategic Outline Business Case (SOBC)** for the MK Metro (Mar 2023) identifies that without a high-capacity intervention, car journeys would rise by 57% at peak hours, exceeding grid capacity.

9.3.3. Comprehensive Data & Evidence

The conclusions regarding the MK Metro and wider movement strategy are supported by proportionate technical data.

- **Modelling:** The **MK Multi-Modal Transport Model Forecast Report (Nov 2025)** provides high-resolution data on trip generation, projecting the MRT will carry over 2 million passengers annually and remove 20,000 car kilometres from city roads daily.

- **Housing Alignment:** The **High Quality Homes Topic Paper** provides the statistical link between transit corridors and the delivery of 16,000 new homes in CMK and 11,000 in Bletchley, ensuring high-density growth aligns with transit infrastructure.

- Inclusive & Collaborative Planning

Preparation involved joint working to address cross-boundary matters and integrate diverse perspectives.

- **Stakeholder Engagement:** The **Economic and Cultural Prosperity Topic Paper** highlights collaboration with neighbouring authorities and regional bodies like **England's Economic Heartland** to ensure the MK Metro feeds seamlessly into regional rail and bus networks.

- **Community Focus:** The **People Friendly and Healthy Places Topic Paper** incorporates community feedback on 'active travel', leading to the prioritization of safe Redway crossings and 15-minute walkable neighbourhoods.

9.3.4. Clear and Deliverable Strategy

The plan provides a clear roadmap with manageable implementation steps.

- **Phased Implementation:** The **Milton Keynes Infrastructure Delivery Plan (Nov 2025)** breaks the MK Metro into defined phases: Phase 1 (by 2031) and Phase 2 (2031–2050), with specific infrastructure triggers and funding milestones.

- **Monitoring:** The strategy is linked to an **Annual Monitoring Report (AMR)** framework to ensure targets for modal shift and carbon reduction are met as the city expands.

9.3.5. Consistency with Overarching Goals

The MK Metro is consistent with both local "big picture" goals and national sustainability mandates.

- **National Policy:** The plan aligns with the **NPPF's Vision-Led Approach**, moving away from "predict and provide" to actively reducing car dependency.

- **Net Zero:** The **Climate and Environmental Action Topic Paper** demonstrates how the zero-emission electric MRT system is a prerequisite for MK reaching its statutory Net Zero 2050 goal.

9.3.6. Contingency Planning (Adaptation)

The plan acknowledges potential obstacles and builds in some flexible, alternative approaches but not to a sufficient level.

- **Technological Flexibility:** The strategy does not fully recognize the risk of vehicle technology redundancy. The grid roads should be utilised as '**digital pathways**' rather than solely as a mass transit route, the **Transitional Grid** concept introduced by ST would allow the system to adapt from traditional buses to autonomous modular pods as Level 4 autonomy becomes commercialized under the **AV Act 2024**.

- **Addressing Gaps:** The **Infrastructure Study (Oct 2025)** identifies current funding gaps and proposes backup revenue models, such as "Value Capture" or a local transport levy, to reduce reliance on central government grants.

Based on these criteria, the **MK City Plan 2050** and the **MK Metro** have been "**Positively Prepared but demonstrates some significant weaknesses.**" The plan moves beyond an aspirational vision and sets out to provide a justified, deliverable, and evidenced-led framework that seeks to meet objectively assessed needs although inflexible to rapid technological change.

9.3.7. The Argument Against "Positive Preparation" (Inadequate Preparation)

Based on the Stuart Turner (ST) exploratory documents, the **UK Automated Vehicles (AV) Act 2024**, and Regulation 19 MK City Plan 2050 technical reports, the argument for why the **Mass Rapid Transit (MK Metro)** and wider movement strategy have been "**Inadequately Prepared**" is structured below.

To demonstrate inadequate preparation, the plan must be shown to fail the "tests of soundness" regarding proportionality, deliverability, and policy consistency.

9.3.8. Lack of Proportional Evidence and Robust Data

The evidence base provided by MKCC relies heavily on secondary projections and aspirational modelling rather than primary feasibility for a mass rapid transit rubber-tyred system.

- **Burden of Proof on Redundancy:** There is no high-quality primary research in the plan proving that a rubber-tyred MK Metro will not be technologically redundant before its 2050 completion date. The plan lacks a technical '**Obsolescence Analysis**' comparing fixed-route RTVs against the rapidly emerging free-roaming **Connected and Autonomous Vehicles (CAVs)** supported by the **AV Act 2024**.

- **Model Moderate Reliability:** The 'MK Multi-Modal Transport Model Forecast Report (Nov 2025)' admits accuracy limitations on smaller roads and junctions, yet these are critical to the success of "first-and-last-mile" transit strategy.

9.3.9. Failure to Meet Assessed Needs

The strategy prioritizes high-density city-centre growth but may fail to address the objective mobility needs of the existing dispersed population.

- **Peripheral Isolation:** Modelling confirms that even with the MRT, car journey times will increase by 35% by 2045 due to an additional 166,000 trips daily. The "hub-and-spoke" MK Metro fails to provide a changeless, seamless solution for residents in the 70% of the borough that is rural or low-density, potentially entrenching rather than reducing their car dependency.

- **Mismatch of Form and Mode:** Historically, MRT works best in high-density linear corridors. By applying a linear transit mode to MK's dispersed, gridded urban form, the plan ignores 40 years of evidence showing that fixed-route systems in Milton Keynes struggle for commercial viability without extreme densification that conflicts with the city's original "Green City" intent.

9.3.10. Unrealistic and Undeliverable Infrastructure

A plan is inadequately prepared if it relies on infrastructure triggers and funding that are not yet secured.

- **The Funding Gap:** The **Infrastructure Study (Oct 2025)** identifies that a dedicated, long-term funding stream for the full-scale network is not secured. Estimates for Phase 1 alone are - £200m, but full city coverage could exceed £700m.

- **Regulatory and Technical Barriers:** The requirement for the network to be **90% segregated** from general traffic poses an 'unrealistic' engineering challenge for the existing grid roads. Converting major roundabouts to signalized 'at-grade' junctions to accommodate the Metro is modelled to cause significant 're-routing' congestion elsewhere, a risk that is currently 'caveated' rather than resolved.

9.3.11. Inconsistency with National Policy (AV Act 2024)

The preparation conflicts with the fast-evolving national regulatory reality.

- **Failure to Future-Proof:** National policy and the **AV Act 2024** prioritize a transition to NUiC (No User in Charge) services by 2027. The City Plan's focus on a conventional MRT service appears "retrograde" because it does not provide an integrated delivery strategy for how these vehicles will transition from driven buses to fully autonomous modular pods within the plan's early phases.

- **Parking Policy Void:** NPPF requires plans to reduce car dependency through parking management. However, there is **no agreed new strategy** for parking supply in CMK, which transport models identify as a critical dependency for the MK Metro's ridership revenue.

9.3.12. Lack of Alternatives Assessment

There is no evidence that the council effectively evaluated a '**CAV-First**' **decentralized network** (as proposed in ST's research) as a primary alternative to the traditional '**Metro-First**' **linear approach**. The plan appears to have defaulted to a rubber-tyred tram system simply as an accepted convention, without assessing if it truly provides the transformational modal shift required by the city's 2050 population goals.

There is concern that there only a very general description of the MK Metro proposal, for example the Plan on page 5 refers to 'a high-quality tram-like system using rubber tyred vehicles on conventional roads, or in the MK MRT SOBC Strategic Outline Business Case (SOBC) – Executive Summary refers to a 'modern electric vehicles that will be tram-like in appearance. (e.g. 'trackless tram'). This is a very general, non-specific descriptions that negates a reasonable level of analysis.

Nowhere does there appear to be a clear, concise and detailed description of the 'MK Metro' proposal, a feasibility study, a full costing analysis and an operational model that relates to an exact vehicle type, that includes a rationale for adopting what appears to be high capacity, articulated vehicles against other options for example electric bus or a demand responsive transit DRT or utilising connected and autonomous vehicles for a public system. Exactly what transport mode is MK Metro? Is it a mass rapid transit MRT tram system like the Belfast Glider or is MK Metro in fact a Bus Rapid Transit (BRT) system. This needs to be clearly stated.

While The MK Multi Modal Transport evidence base provides a considerable amount of capacity analysis and compares two forecasting scenarios one based on MRT and one without the analysis excludes any alternative modal options, for example electric bus, demand responsive transit (DRT) like MK Connect or the use of connected and autonomous vehicles as part of a public service. Where introduced the use of MK Connect is only considered in a secondary role.

Where is the evidence base that justifies the adoption of an MRT system as introduced in general terms in the MK City Plan 2050, and the comparative analysis that supports this system in lieu of other legitimate approaches cited above. There appears to be no evidence that addresses a comparison of different systems at an early stage that led to a justification to adopt Mass Rapid Transit system known as MK Metro. This is seen to be a significant omission and on these grounds makes **MK City Plan 2050** and those policies associated with the **MRT MK Metro system** unsound.

9.4. 'Justified'

9.4.1. This section addresses the third of the 4 tests of **Soundness**. That asks the question is the **MK City Plan 2050 'Justified'**

The argument regarding whether the **MK City Plan 2050** and the **MK Metro** system are '**justified**' centres on whether the evidence base provides a robust, comparative, and specific rationale for the chosen path over legitimate alternatives. Based on the provided criteria and evidence base, the case for a lack of justification is structured below.

9.4.2. Lack of Specificity and Thorough Understanding

A proposal is only justified if its core objectives and specific form are clearly defined. The evidence base provides only a general description of the MK Metro:

- **Vague Vehicle Definitions:** The Plan and the **MK Mass Rapid Transit Strategic Outline Business Case (SOBC)** use non-specific terms such as "high-quality tram-like system using rubber tyred vehicles" and "trackless tram".

- **Operational Voids:** Nowhere in the core evidence base—including the Transport and Movement Topic Paper or the MKISS Further Assessment Report—is there a detailed operational model for a specific vehicle type. This absence of a clear vehicle specification negates a reasonable level of technical and financial analysis, as the requirements for an articulated high-capacity vehicle differ significantly from those of standard electric buses.

9.4.3. Flawed Framework for Evaluation: Absence of Alternatives

The justification for any major public project requires a comparative assessment of merits against reasonable alternatives. The current evidence base appears to fail this requirement:

- **Excluded Modal Options:** The **MK Multi-Modal Transport Model (Nov 2025)** compares forecasting scenarios "with MRT" and "without MRT," effectively creating a binary choice.

- **Ignoring Legitimate Competitors:** There is no documented comparative analysis that evaluates the MK Metro against legitimate, flexible alternatives such as:

- **Demand Responsive Transport (DRT):** Enhancing the existing MK Connect model.

- **Connected and Autonomous Vehicles (CAVs):** Utilizing the gridded urban form for a decentralized autonomous public system.

- **High-Frequency Electric Bus Networks:** Which may offer lower capital costs than a dedicated MRT.

- **Historical Conflict:** The plan ignores earlier research suggesting that fixed-route MRT may be less effective for Milton Keynes' dispersed urban form than network-based autonomous solutions.

9.4.4. Weak Evidence Base for Feasibility and Practicality

A 'justified' proposal must be realistic to implement with the resources available.

- **Costing and Revenue Uncertainties:** While a Phase 1 capital cost of **£200m** is estimated, the full-scale city-wide operational and revenue model remains speculative.

- **Infrastructure Assumptions:** The **MKISS Further Assessment Report (Oct 2025)** indicates that the system depends on a **90% segregated network**, yet the specific feasibility of achieving this on existing grid roads without causing severe displacement of essential vehicle traffic is not fully detailed.

9.4.5. Alignment with Goals: Redundancy Risk

NPPF policy requires that transport systems support established community objectives and represent an efficient use of resources.

- **Risk of Retrograde Technology:** There is a risk that the MK Metro is a retrograde step, adopting a high-capacity, articulated bus model that may become technologically redundant as autonomous modular technologies mature.

- **Policy Inconsistency:**

Without a comparative study showing why a 'Mass Transit' model is superior to an 'Autonomous Network' model for a city of MK's specific density, the adoption of the Metro remains an assumption rather than a justified conclusion.

9.4.6. Missing Information and Revenue Model Uncertainties

While the **MK Mass Rapid Transit Strategic Outline Business Case (SOBC)** and **Infrastructure Delivery Plan (Nov 2025)** establish a strong economic benefit-cost ratio (£4 return for every £1 invested), granular detail in some areas remains restricted to high-level projections.

- **Farebox vs. Subsidy Balance:** The Regulation 19 documents do not yet provide a specific year-by-year operational budget detailing how much daytime 'farebox' revenue is expected to offset operational costs compared to public subsidies.

- **Logistics Revenue Modelling:** Although there is the potential for night-time use for goods and waste of the mass transit system, no specific commercial agreements and fee structures for private logistics firms to utilize the 'shared digital platform' have been detailed or included in the public Proposed Submission.

- **Funding Gaps:** The **Infrastructure Study (October 2025)** identifies a risk that a dedicated, long-term funding stream for full-scale delivery is not yet fully secured, necessitating potential amendments to national legislation or the introduction of a local "transport levy" similar to models used in London or France.

- **Car Parking Disincentives:** A critical component of the revenue model is the 'dis-incentivization' of private car use; however, a finalized city-wide parking management and supply strategy for Central Milton Keynes remains 'not yet agreed'.

9.4.7. Technical Barriers and Infrastructure Challenges

The **Milton Keynes Infrastructure Study and Strategy (MKISS)** and **Multi-Modal Testing (2025)** reports highlight several technical barriers to the 'MK Metro' vision:

- **Segregation Requirements:** To achieve high-speed, reliable transit, the SOBC notes that the eventual network must be **90% segregated** from general traffic. Implementing this segregation on the existing grid without causing excessive congestion for remaining essential vehicles is a primary design challenge.

- **Junction Overload:** Current transport modelling indicates that existing roundabouts do not work effectively with the heavy traffic flows or single-axis flows required by an MRT system. Technical solutions like **roundabout enlargement** or conversion to **signalized "at-grade" junctions** may be required, which could face public resistance.

- **Grid Capacity Limitations:** Model forecasts show that without the transformational shift to the MK Metro, car journey times will increase by **14% by 2031**, and the number of daily trips will rise by **166,000 by 2045**—a volume the original grid infrastructure cannot physically support without total gridlock.

- **Technological Transition:** A significant barrier is ensuring **interoperability** across a 'shared digital platform'. The infrastructure must be flexible enough to accommodate various manufacturers' autonomous vehicles while maintaining safety standards that match or exceed a human driver.

9.4.10. Conclusion of the 'Not Justified' Argument

The **MK City Plan 2050** fails the test of being '**justified**' because it provides a **non-specific proposal** based on a **binary model assessment**. The absence of a robust comparative analysis of alternative modes—specifically DRT and CAVs—leaves the plan without the necessary evidence to prove that the MK Metro is the most appropriate or efficient strategy for Milton Keynes' future.

This absence of a robust comparative analysis of alternative modes issue has been addressed in **Appendix 3. Request for Comparative Evidence Base**. **A request is made** for the missing comparative data for the DRT and CAV alternatives.

9.5. 'Effective'

9.5.1. This section addresses the last of the 4 tests of **Soundness**. Will the **MK City Plan 2050** be '**Effective**' Using the above information and the following criteria an argument is made that **MK City Plan 2050** and specifically the **Mass Rapid Transit system** known as **MK Metro** is '**ineffective**'

There is some concern that the catchment area covered by the MK Metro is limited and will only cover approximately 50% of the population living in Milton Keynes. The exact % needs to be verified. A further concern is that the ridership levels, i.e. the number of passengers using MK Metro on a daily basis is unrealistically high to justify its adoption and no analysis has been made on the impact of the Covid on changing lifestyle patterns and particularly working practices that will undermine the effective of MK Metro.

The argument that the **MK City Plan 2050** and the **MK Metro** are 'ineffective' rests on whether they are **deliverable** over the plan period and if the proposed transport interventions can truly achieve the desired modal shift from private cars to public transit. Based on the evidence from technical documents and National Planning Policy Framework (NPPF) soundness criteria, the following points challenge the 'effectiveness' of the current strategy.

9.5.2. Unrealistic Ridership and Modal Shift Assumptions

The effectiveness of the MK Metro depends on achieving a massive shift from private car use to public transit, but the evidence base for this is highly ambitious.

- **Catchment Limitation:** There is significant concern that the MK Metro's fixed linear corridors cover only a **limited % of the population**, leaving the remaining population with potentially inadequate links to the "rapid" part of the network.

- **Behavioural Barriers:** National research suggests that massive car-reduction is difficult in medium-density cities without significant disincentives for driving. The plan lacks a finalized city-centre zoning or parking management strategy, which behavioural science indicates is essential for forcing a shift away from habitual car use.

- **Induced Demand:** Improvements to the grid network to accommodate 'Metro' traffic may temporarily clear road space, leading to 'induced demand' where other residents start driving more, ultimately neutralizing the benefit of the transit system.

9.5.3. Failure to Account for Post-Pandemic Reality

A primary challenge to the plan's effectiveness is the lack of up-to-date analysis on **post-Covid lifestyle changes**.

- **Working Practices:** The strategy relies on high-capacity trips to city centres. However, the acceleration of flexible and home-working practices may permanently reduce peak-hour demand, making high-capacity, articulated vehicles (MK Metro) less efficient than a smaller, more nimble **Demand Responsive Transport (DRT)** network.

- **Sustainability of Demand:** If retail and office demand in Central Milton Keynes does not return to pre-pandemic levels, the commercial revenue model for a high-frequency MRT becomes unsustainable.

9.5.4. Scrutiny of Technical and Operational Feasibility

If the system is not truly 'rapid,' it fails to compete with the private car.

- **Dedicated Lanes vs. Bus Lanes:** To be effective, the MK Metro must be **90% segregated** from general traffic. If infrastructure limitations prevent this total exclusivity on existing grid roads, the system effectively becomes a traditional bus service prone to the same congestion it seeks to avoid.

- **Operational Subsidy:** The plan lacks a clear long-term budget detailing how operational costs will be met. Without guaranteed revenue from high ridership, there is a risk of a significant and permanent subsidy burden on local taxpayers.

9.5.5. Benchmarking Against Established Failures

Comparative analysis highlights the risk of high-capital transport projects.

- **Cost Overruns:** Major UK transit projects often face massive cost inflation during development. The current **£200m capital estimate** for Phase 1 may be unrealistic given the complexity of converting major MK roundabouts into signalized "at-grade" junctions.

- **Sparse Network Performance:** Research from organizations like the National Association of City Transportation Officials indicates that sparse networks discourage usage regardless of frequency. A system that only serves half the population may never reach the "critical mass" needed for effectiveness.

9.5.6. Conclusion on Effectiveness

The **MK Metro** risks being found '**ineffective**' during statutory examination because its deliverability is based on **unsecured funding**, a **limited catchment area**, and **outdated demand assumptions** that ignore post-pandemic behavioural shifts. This post-Covid "Sensitivity issue has been addressed in **Appendix 4. Reviews undertaken following the March 2020 Covid - 19 Pandemic.**

10. Summary and Further request for information and scrutiny.

10.1. Based on the above analysis a request is made to Milton Keynes City Council to include a number of missing areas of information to complete the Regulation 19 submission. The detailed information that's lacking is summarised in the Appendix Section under.

Appendix 2. Summary of objections.

Appendix 3. Request for Comparative Evidence Base

Appendix 4. Reviews undertaken following the March 2020 Covid - 19 Pandemic.

10.2. From the conclusion drawn from the analysis of the **City Plan MK 2050** when considered in its entirety is seen to be **unsound** in significant parts as it stands and before proceeding to the Regulations 20 stage the Milton Keynes Council should reconsider the document. This response highlights a number of fundamental issues that need to be further evidenced to justify the access, movement and transport proposals.

11. Appendix Section.

Appendix 1. The Objectives.

People-Friendly and Healthy Places

Objective 1: Create inclusive and safe places that encourage greater physical activity, social interaction and healthier lifestyles.

Objective 2: Create streets and neighbourhoods that prioritise walking, cycling and wheeling for access to shops, services, community facilities, and parks and open space.

Objective 3: Provide a suitable range of facilities and infrastructure in the right places at the right time to promote walkable neighbourhoods and good physical and mental health.

Climate and Environmental Action

Objective 4: New homes and commercial buildings to be net zero-carbon by 2030 and carbon negative by 2050.

Objective 5: New growth prioritises active travel and public transport to reduce carbon emissions.

Objective 6: Support the efficient use of resources as part of a circular economy.

Objective 7: Create space for nature and deliver significant gains in biodiversity.

Objective 8: Ensure that communities and nature can cope with and bounce back from negative climate impacts and environmental change.

High-Quality Homes

Objective 9: Provide a range of homes for those most in need including affordable homes, and to meet the wider market demand for housing.

Objective 10: Support renewal and regeneration within neighbourhoods and communities that would benefit from it.

Objective 11: Support delivery of social infrastructure to enable people to prosper and have a high quality of life.

Economic and Cultural Prosperity

Objective 12: Enable better access to education, skills and training, and economic opportunities to strengthen our regional and national economic role, with Central Milton Keynes at the heart of a diverse and resilient economy.

Objective 13: Conserve our unique heritage and provide a greater diversity of places where culture can be produced and enjoyed, strengthening our role as a national and international centre of cultural and creative significance.

Objective 14: Support the maintenance and creation of thriving high streets and centres for leisure.

Central Milton Keynes

Objective 15: A thriving centre for innovation, learning and culture, with all the things you'd expect to find in a city: shops, businesses, restaurants, cafés, bars and entertainment.

Objective 16: Bringing nature, streets, and buildings into harmonious balance, providing a new townscape setting for public life, play, health, and wellbeing.

Objective 17: Inviting new communities to make their home in CMK, with all the services and facilities they need within easy walking distance.
Objective 18: Safeguarding CMK's unique public art, its modern design, and its classic infrastructure for future generations to appreciate.
Objective 19: Attracting people to live and work in the city with high-quality jobs and inward investment and making it easier for people to get in and

Appendix 2. Summary of objections and suggested Main modifications.

The 4 main areas of objections and failures.

The following list of **Statutory Objections** highlights specific areas where the transport and movement policy may fail to meet these legal requirements.

- Failure of "Positively Prepared": Inadequate Need Assessment

- **Argument:** While the strategy targets high-density city-centre growth, the **Infrastructure Further Assessment Report (Oct 2025)** reveals that car journey times across the city will still increase by **14% by 2031** even with the MK Metro.

- **Connection:** By focusing on a "hub-and-spoke" linear model, the plan fails to serve the 70% of the borough that is low-density or rural, potentially increasing social exclusion rather than reducing it.

- Failure of 'Justified': Lack of Proportionate Evidence & Alternatives

Objection: The selection of a rubber-tyred vehicle (RTV) MK Metro is not the most appropriate strategy when compared to reasonable alternatives.

- **Argument:** The plan lacks high-quality primary research proving that a fixed-route RTV system will not be technologically redundant before 2050.

- **Connection:** There is no evidence in the **Regulation 19 Topic Papers** that a decentralized, "CAV-First" (Connected and Autonomous Vehicle) network—which would better fit MK's unique gridded form - was effectively evaluated as a primary alternative.

- Failure of 'Effective': Infrastructure and Funding Barriers

Objection: The plan is undeliverable due to critical infrastructure bottlenecks and unsecured funding.

- **Argument:** The **Infrastructure Delivery Plan (Nov 2025)** identifies that a dedicated, long-term funding stream for the full network is not secured, leaving a multi-million pound gap.

- **Connection:** The technical requirement for the network to be **90% segregated** on existing grid roads is an unrealistic engineering challenge that transport modelling shows will cause 'severe' displacement congestion on secondary routes.

- **Failure of 'Consistent with National Policy': Future-Proofing Voids**

Objection: The movement policy conflicts with the national legislative push for autonomous commercial services.

- **Argument:** The **UK Automated Vehicles (AV) Act 2024** mandates a transition to commercial autonomous services by 2027. The City Plan's focus on a conventional, driven MRT appears retrograde as it lacks a clear "NUiC" (No-User-in-Charge) delivery strategy for the early implementation phases.

- **Parking Void:** The plan fails to include an agreed city-wide parking management strategy for CMK, which the NPPF identifies as a critical tool for reducing car dependency.

- **Proposed Main Modifications: Suggested Wording**

- Modification for Futureproofing (Addressing 'Justified' & 'Effective')

Target Part: Movement and Access Policy (Transport Section).

Issue: Potential technological redundancy of fixed-route Rubber-Tyred Vehicles (RTV).

- **Proposed New Text:**

"The MK Metro Mass Rapid Transit system shall be developed as an **interoperable digital platform**, where computer systems or software are able to exchange and make use of information (as also the vehicle type) To ensure the system is justified and effective over its 30-year implementation period, Phase 1 (2027–2031) must include a mandatory **Autonomous Transition Strategy**. This strategy will specify technical triggers for the phased replacement of driven electric buses with **modular, autonomous NUiC (No-User-in-Charge) vehicles** to match evolving national regulatory standards under the Automated Vehicles Act 2024."

- Modification for Catchment and Network Form (Addressing 'Positively Prepared')

Target Part: Mass Rapid Transit Routing Strategy.

Issue: Failure to serve the dispersed population outside the 'hub-and-spoke' corridors.

- **Proposed New Text:**

"Mass Rapid Transit routes will be configured using **'Ladder Arrays'** on alternate grid roads to effectively double the passenger catchment area. The city council will prioritize the creation of **'Points of Connection'** (an upgraded version of the metro interchange hubs) on **the Metro Corridor** and primary grid where extended into new development areas to ensure 90% city-wide coverage and seamless integration between local neighbourhood hubs and the cross-city transit network."

- Modification for Parking and Car Dependency (Addressing "Consistency with National Policy")

Target Part: Central Milton Keynes (CMK) Movement and Access Policy.

Issue: Lack of a defined strategy to disincentivize car use.

- Proposed New Text:

"To reduce car dependency in line with the NPPF, the adoption of the MK Metro is explicitly linked to a **City-Wide Parking Management and Supply Strategy**. This strategy must be agreed upon and adopted prior to the commencement of Phase 1 operations. It will include dynamic zoning restrictions and a managed reprioritization of city-centre parking to incentivize a modal shift toward the mass rapid transit system."

Appendix 3. Request for Comparative Evidence Base

To: Milton Keynes City Council – Planning Policy Team

Subject: Technical Query regarding the Evidence Base for the MK City Plan 2050 (Regulation 19) – Movement and Access Policy

Reference: Movement and Transport Topic Paper; MK Mass Rapid Transit Strategic Outline Business Case (SOBC)

Upon a detailed examination of the evidence base supporting the Proposed Submission (Regulation 19) MK City Plan there is found to be a significant lack of specific, comparative data that is required to justify the adoption of the high capacity, articulated 'MK Metro' over legitimate technological alternatives. Information that is needed to satisfy the national planning requirement for a 'Justified' plan. A formal request is made to the council to provide or identify the following missing evidence:

- Comparative Modal Analysis

The **MK Multi-Modal Transport Model (Nov 2025)** presents a binary forecast: 'with MRT' or 'without MRT'. I request the comparative technical analysis that justifies the choice of a high-capacity, rubber-tyred system over:

- **Decentralized CAV Network:** An autonomous vehicle system utilizing the existing 1.0km grid as 'digital pathways,' as proposed in earlier pioneering research.

- **Enhanced DRT:** A city-wide expansion of the existing **MK Connect** model to address the needs of dispersed and rural populations not served by a linear 'hub-and-spoke' Metro.

- Technical Specification and Operational Feasibility

The current descriptions of the MK Metro as 'tram-like' or a 'trackless tram' are non-specific and negate a reasonable level of technical analysis. Please provide:

- **Exact Vehicle Type:** A definitive technical specification and passenger capacity for the proposed Phase 1 vehicles.

- **Costing Analysis:** A full breakdown of capital costs (estimated at £200m for Phase 1) compared to the projected costs of an automated modular pod network.

- **Infrastructure Impact:** Feasibility data on achieving the required **90% segregation** on grid roads without causing severe displacement of essential traffic as noted in the **MKISS Further Assessment Report**.

- Operational Model and Revenue Sustainability

The plan lacks a deliverable operational strategy for a road-based MRT in a medium-density city. Please provide:

- **Detailed Frequency & Ridership:** Specific daily trip frequencies and passenger volume targets required to reach commercial viability without permanent public subsidy.

-Autonomous Transition Strategy:

A roadmap detailing how the MK Metro will transition from driven buses to autonomous services in line with the **AV Act 2024** by 2027.

Without this detailed information, the current Movement and Access policy appears to be based on a 'retrograde' technological step rather than a vision-led, evidenced-based strategy. I look forward to your response to ensure an informed representation can be made as part of the Regulation 19 process.

Appendix 4. Reviews following the March 2020 Covid - 19 Pandemic.

Formal Technical Query: Request for Post-Covid Sensitivity Analysis

The World Health Organization (WHO) upgraded COVID-19 to a pandemic in March 2020. Pandemics are known to cause large-scale social disruption, economic loss, and general hardship, and COVID-19 has been no exception.

To: Milton Keynes City Council – Planning Policy Team

Subject: Technical Query: Request for Post-Covid Ridership Sensitivity Analysis – MK City Plan 2050 (Regulation 19)

Reference: MK Multi-Modal Transport Model (Nov 2025); MRT Strategic Outline Business Case (SOBC)

Following a detailed review of the **MK Multi-Modal Transport Model (Nov 2025)** and the associated **Transport and Movement Topic Paper**, I am submitting a technical query regarding the 'effectiveness' of the MK Metro's ridership projections please note the submission of this technical query.

National planning policy (NPPF) requires that transport solutions are based on a robust evidence base that reflects realistic usage patterns. There is concerned that the current ridership assumptions for the high-capacity, articulated MK Metro do not adequately account for the permanent structural shifts in travel behaviour caused by the Covid-19 pandemic.

A formal request is made to the Council provides or identifies the following evidence to ensure the Plan meets the 'Effective' test of soundness:

- Ridership Sensitivity Analysis (Working Practices)

The current SOBC relies on high-capacity peak-hour trips to justify the articulated "trackless tram" model. Please provide a **Sensitivity Analysis** that models the MK Metro's commercial viability under the following scenarios:

- A permanent **30–40% reduction in peak-hour commuting** due to hybrid and remote working practices.
- A shift from "hub-and-spoke" city-centre demand to more dispersed, local trip patterns as outlined in post-pandemic lifestyle studies.

- Comparative Analysis of Nimble Alternatives

Given the likely reduction in high-capacity demand, please provide the evidence base that justifies a fixed-route MRT over nimbler, demand-responsive alternatives:

- **Autonomy-as-a-Service (CAV):** How would a network of modular autonomous pods (CAVs) perform against the MK Metro in a low-demand, post-Covid office market?
- **DRT Optimization:** Why was a city-wide expansion of the **MK Connect** model rejected in Favour of a fixed-line system that only serves approximately 50% of the population?

- Induced Demand and Parking Contingencies

Modelling suggests car journey times will still increase by 14% by 2031 even with the Metro. Please clarify:

How does the plan addresses the risk of '**Induced Demand,**' where improvements for Metro traffic encourage secondary car use.

The specific **Parking Policy triggers** in CMK required to force a modal shift, and the evidence justifying their effectiveness in a post-Covid retail environment.

Without an updated analysis that accounts for these behavioural shifts, the MK Metro risks being an 'ineffective' and technologically redundant investment that does not serve the borough's actual mobility needs.

Appendix 5. A supporting mobility evidence base.

Reference is made to a body of mobility work carried out by the author over a 25 year period. Stuart Turner worked for the Milton Keynes in the 1970's and 1980's in a Planning, Design and Coordinating Role working on strategic work and particularly the Eastern Expansion area. His experience and background provides an informed and professional expertise on the city's urban design and mobility issues.

He has previously collaborated with the Milton Keynes City Council on the Local Transport Plan 3 - 2011 to 2031. April 2011. A Transport Vision and Strategy for Milton Keynes at which time he worked with Stephen Potter who holds the title of Emeritus Professor of Transport Strategy, at The Open University (OU) and prepared Appendix F of the Local Transport Plan 3: Preparing for New Sustainable Transport Systems – An independent paper analysing the nature of the transport problem and challenge in Milton Keynes.

During this time Stuart Turner (ST) has authored four exploratory documents that reveals a consistent and evolving vision for the future of movement in Milton Keynes. This vision is predicated on the synergy between the city's unique **gridded urban form** and emerging **Connected and Autonomous Vehicle (CAV)** technologies. The synthesis of these documents is presented below.

- Summary of Core Principles from ST Documents

The following table summarizes the primary ideas and evolutionary milestones established across the four exploratory papers:

Document	Key Principles & Focus Areas
2009: Points of Connection (POC)	Defines the 'Point of Connection' as a transition node between city-scale movement and neighbourhood-level activity. Prioritizes direct, safe pedestrian and cycle routes to ensure seamless grid-square integration.
2013: The Transitional Grid	Argues for extending the grid into new growth areas while updating its form. Recommends a primary grid (1.0 km or even greater spacing) for cross-city transit and a secondary grid (500m or greater) for local routes. Focuses on "Personalised Rapid Transit" (PRT) using ladder arrays to maximize catchment.

Document

Key Principles & Focus Areas

**2016: PAATS
(Autonomous
Transit)**

Proposes a **Publicly Accessible Autonomous Transit Strategy**. Highlights the 'modal fit' where CAV technology matches the dispersed MK urban form. Investigates low-speed vehicles for the city centre and medium-speed pods for cross-city trips.

**2021: MK
Mobility for All**

Shifts toward an integrated '**Mobility Network**' combining CAVs, demand-responsive transport (DRT), and active travel. Introduces the "5/15 mobility concept" (5-minute walk to a hub, 15-minute cross-city transit). Projects a 30-year implementation timeline.

- Evidence Base for Local Plan & LTP Scenarios

The principles established by Stuart Turner align closely with modern academic and legislative trends, providing a robust framework for upcoming Local Plans and Local Transport Plans (LTPs).

- The Gridded Form as a Digital Foundation

A gridded, cellular city form acts as a natural **digital twin platform**. Unlike radial cities that suffer from bottleneck congestion, a grid allows for decentralized vehicle coordination and real-time load balancing.

Facilitating Software Operations: The regular geometry of MK's grid simplifies the mapping and localization required for Level 4 and 5 autonomy.

Independent Evidence: Research from **MIT's Transit**

Lab and **Siemens** suggests that "first and last mile" gaps are best bridged by autonomous modular units in a structured grid environment to optimize routing and energy efficiency.

- Technological Redundancy and Emerging Modes

A critical component of a future LTP must be identifying and retiring technologically redundant systems while prioritizing flexible CAV networks.

Redundant Systems: Large-scale fixed-track systems like **trams and monorails** are increasingly seen as "unattainable dreams" for medium-density cities due to high capital costs (£2bn+) and inability to serve dispersed trip patterns.

Emerging Groupings: The future lies in **Autonomous Modular Buses (AMBs)** and **PRT pods** that utilize existing roadways as 'pathways' without needing dedicated rail infrastructure.

Legislative Context: The **Automated Vehicles (AV) Act 2024** provides the legal route for commercial passenger services with no human driver by 2027, making a transition to CAV-based public transport a legal and operational imperative.

- **Integrated Cargo, Waste, and Passenger Networks**

A primary LTP scenario should focus on the **dual-use mobility network** where transit systems operate 24/7.

Daytime: Prioritized passenger movement via CAV-P (Passenger).

Night-time: Repurposing the network for CAV-F (Freight) and autonomous waste recovery to local hubs.

Independent Support: The **Climate Change Committee (CCC)** highlights that a modal shift is most successful when public alternatives (like shared autonomous pools) precede private car restrictions.

- **Seamless Mobility and City Catchment**

To compete with the private car, the transit system must ensure a **90% city area catchment**.

Changeless Travel: LTP objectives should target a 'no-change' policy between local hubs and major city interchanges'

The 15-Minute City: By integrating the 'Point of Connection' concept, neighbourhood facilities are kept within a safe, 400-meter (5-minute) walking distance, ensuring inclusivity for the young, old, and infirm.

- **Proposed Strategic Position:** Milton Keynes should establish an independent **Transit Commission** and a **Transit Delivery Agency**. This body would manage the 'Transitional Grid' as a shared digital platform, ensuring that new vehicle technologies and infrastructure remain interoperable across different manufacturers.

- **Mobility for All CAV Statement of Policy,**

To implement the proposed **Mobility for All CAV Statement of Policy**, Milton Keynes must align its local strategy with the national **Automated Vehicles (AV) Act 2024**. This roadmap outlines the transition from current trialling to a full-scale city-wide autonomous network by 2027.

The plan needs to fully address a phased programme of implementation that addresses publicly accessible automated vehicles. This programme should address:-

- Foundation & Regulatory Alignment (2024–2025)
- Trials (Spring 2026)
- Full Implementation & Expansion (Late 2027)
- Key Performance Metrics for 2027

- **'Interchange hubs' and 'Points of Connection.'**

To deliver a successful **Publicly Accessible Autonomous Transit Strategy (PAATS)** in Milton Keynes, the 2026 pilot phase must focus on these 'interchange hubs' also referred to as 'Points of Connection' in this statement that act as multi-modal interchange nodes.

This concept is similar to the 'Interchange hubs' but address question of safe connections over or under the primary routes as well as the MK Metro corridors and support for active travel including hire facilities and travel support for disadvantaged people. Based on city strategy documents and the transitional grid model, the following locations for Local Centres and interchange Hubs are identified as high priority for development.

- The existing local and District centre (see below), schools and employment areas network.

- Central Milton Keynes (CMK) Gateway Hubs

- Milton Keynes Central Station:
- Unity place and Midsummer Place:
- Eastern end and Hotel La Tour:

- Strategic "Regeneration Corridor" Hubs (V7 Saxon Street)

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- Bletchley Transport Hub: Street layout to improve links between the town centre and rail station.
- Stantonbury and Campus Site.
- Netherfield and Beanhill

- Emerging Urban Growth & District Hubs

- Oakgrove (V10 Brickhill Street):
- Kingston and Westcroft District Centres. .
Shenley Church End, Neath Hill, and Willen.