

Impact of Regional Infrastructure Projects on Land Use Patterns in Peripheral Faridabad: A Study of the KMP Expressway, Delhi–Mumbai Expressway, FNG Corridor, and Greenfield Expressway

Dr. Rajender Kumar

Asso. Prof., Dept of Geography
Pt. J.L.N. Govt. College Faridabad (Haryana)

Abstract

Faridabad, one of the oldest industrial satellite towns of the National Capital Region (NCR), is undergoing rapid land use transformation driven by a cluster of regional infrastructure projects converging on its periphery. This paper examines the impact of four major transport corridors, the Kundli–Manesar–Palwal (KMP) Expressway, the Delhi–Mumbai Expressway (DME) and its Faridabad spurs, the proposed Faridabad–Noida–Ghaziabad (FNG) Corridor, and the Greenfield Expressway linking Faridabad to the Noida International Airport at Jewar, on the conversion of agricultural and fallow land into urban, industrial, and commercial uses in the city's peripheral sectors. Drawing on secondary data, planning documents, and existing peri-urban studies, the paper traces how accessibility gains along these corridors have triggered land price appreciation, unplanned colonisation, brick-kiln clearance, and large-scale rezoning under the Faridabad Master Plan 2031. The study finds that infrastructure-led growth in peripheral Faridabad is proceeding ahead of, and often in conflict with, statutory land use plans, producing a fragmented mix of formal townships, informal colonies, and residual agrarian pockets. The paper concludes by outlining the planning and governance challenges this corridor-driven urbanisation poses and suggests directions for more coordinated land management.

Keywords: Peri-urban land use, Faridabad, KMP Expressway, Delhi–Mumbai Expressway, FNG Corridor, Greenfield Expressway, urban sprawl, National Capital Region

Introduction

Urban peripheries in India's metropolitan regions are among the most dynamic and contested spaces in the country's land economy. As core cities reach the limits of their buildable area, growth spills outward into adjoining agricultural tracts, a process that is rarely organic and is, in most cases, actively steered by the placement of new transport infrastructure. Faridabad, located immediately south of Delhi in the state of Haryana, exemplifies this pattern. Historically an industrial township built around heavy manufacturing, Faridabad has in the past two decades been drawn into the wider real estate and logistics economy of the NCR through a series of expressway and corridor projects that ring and traverse its periphery. Each of these projects was conceived primarily to solve a transport problem, decongesting Delhi, shortening the journey to Mumbai, or connecting the city to the upcoming Noida

International Airport, yet each has had the secondary and arguably more consequential effect of reshaping how land at Faridabad's edge is used, valued, and contested.

This paper focuses on four such projects: the Kundli–Manesar–Palwal (KMP) Expressway, also called the Western Peripheral Expressway, which brushes Faridabad's western and southern edges; the Delhi–Mumbai Expressway (DME) together with its DND–Faridabad–KMP spur and the Sohna-linked corridor; the long-delayed Faridabad–Noida–Ghaziabad (FNG) corridor, which is intended to give Faridabad a direct crossing of the Yamuna into Uttar Pradesh; and the newly sanctioned Greenfield Expressway connecting Sector 65, Ballabgarh, to the Jewar airport. Individually, each corridor has been the subject of extensive real estate commentary. Collectively, however, their overlapping influence on land use in Faridabad's periphery has received

comparatively little systematic treatment. This paper attempts that synthesis.

The Study Area: Peripheral Faridabad

Faridabad district, covering roughly 638 square kilometres under the jurisdiction of the Faridabad Metropolitan Development Authority (FMDA), sits at the southern edge of Delhi along the historic Delhi–Mathura road (NH-2/NH-19) and the Agra Canal. Its periphery can be understood as the ring of villages and semi-developed sectors lying beyond the older municipal core, areas such as Greater Faridabad or Neharpar, Sector 65 and the Ballabgarh belt, the villages along the Aravalli foothills to the west, and the tracts adjoining the Yamuna floodplain to the east. These are precisely the zones through which the four infrastructure corridors examined here either pass directly or exert their strongest gravitational pull. The Faridabad Master Plan 2031, notified by the Department of Town and Country Planning, Haryana in January 2018, envisages 67 new sectors across roughly 34,368 hectares of urbanisable land to accommodate a projected population of about 38.86 lakh, and treats the entire district as a controlled area in which any change of land use requires statutory clearance. The periphery is therefore not an unplanned frontier in a legal sense; it is a zone where a formal plan and an informal, infrastructure-driven land market are operating simultaneously, and often at cross purposes.

Objectives of the Study

This paper has three principal objectives: first, to describe the physical and functional characteristics of the KMP Expressway, the Delhi–Mumbai Expressway, the FNG Corridor, and the Greenfield Expressway as they relate to Faridabad; second, to examine the land use consequences of these projects in Faridabad's peripheral sectors, including agricultural land conversion, residential colonisation, industrial and logistics development, and land price escalation; and third, to identify the planning and governance tensions that arise when corridor-led growth outpaces or diverges from the statutory master plan.

Methodology

The study adopts a descriptive, secondary-data-based approach appropriate to a policy-oriented land use inquiry of this kind. Information has been drawn from official planning documents,

including the Faridabad Master Plan 2031 and associated notifications of the Department of Town and Country Planning, Haryana; project documentation and press releases from the National Highways Authority of India (NHAI) and the Haryana State Industrial and Infrastructure Development Corporation (HSIIDC); and published peri-urban land use research on Faridabad, notably transect-based mapping studies that compare zoning regulations with observed ground conditions. These sources have been triangulated with contemporary news reporting on project status, land acquisition, and real estate response, in order to build a composite and current picture of how each corridor is altering peripheral land use. Given the absence of a single authoritative land use survey covering all four projects simultaneously, the paper's findings should be read as an evidence-based synthesis rather than a primary-survey result.

Overview of the Regional Infrastructure Projects

The Kundli–Manesar–Palwal (KMP)

Expressway

The KMP Expressway, also known as the Western Peripheral Expressway, is a 135.6-kilometre, six-lane, access-controlled highway forming a semicircular bypass around Delhi, linking Kundli in Sonipat district to Palwal via Manesar and Gurugram. Conceived in 2003 and completed in phases between 2016 and 2018, the expressway was designed to divert long-distance and heavy-vehicle traffic away from central Delhi. Its construction required the acquisition of approximately 3,846 acres of land, overwhelmingly agricultural, across the districts it traverses, including Faridabad, converting farmland and scattered forest patches into a linear transport corridor. A notified two-kilometre controlled belt on either side of the expressway was earmarked for five contiguous greenfield townships under the Delhi–Sonipat–Rohtak–Gurugram–Faridabad agglomeration, though this Panchagram vision has since been superseded by a revised state proposal for ten smaller industrial townships called Dashagram. For Faridabad specifically, the more immediate effect has come through the DND–Faridabad–KMP spur, a 59-kilometre extension that connects the Ring Road in Delhi to the KMP Expressway near Sohna and has cut

travel time from South Delhi to Faridabad from roughly two and a half hours to about twenty to twenty-five minutes.

The Delhi–Mumbai Expressway and the Sohna–Faridabad Corridor

The Delhi–Mumbai Expressway is an under-construction, 1,350-kilometre, eight-lane (expandable to twelve) greenfield expressway that will eventually connect Delhi to the Jawaharlal Nehru Port near Mumbai, cutting travel time between the two cities from roughly 24 hours to 12. Its northern terminus incorporates the DND–Faridabad–KMP spur and the Sohna Elevated Corridor, placing Faridabad and its southern periphery directly on the expressway's Delhi-facing edge. The Sohna–Dausa–Lalsot section, inaugurated in February 2023, was the first major stretch to open, and its downstream effect has already been felt in southern Faridabad, where improved access toward Gurugram, Sohna, and onward toward Jaipur has begun to draw real estate and logistics interest that previously bypassed the area. By mid-2026, more than 80 per cent of the expressway's overall length was reported complete, with the Delhi–Vadodara stretch itself around 96 per cent finished, reinforcing Faridabad's position as a northern anchor of the corridor rather than a peripheral appendage to it.

The Faridabad–Noida–Ghaziabad (FNG) Corridor

The FNG Expressway is a 56-kilometre, six-lane (expandable to eight) corridor intended to directly link Faridabad in Haryana with Noida and Ghaziabad in Uttar Pradesh, bypassing central Delhi altogether. First proposed in 1989, the project has been repeatedly stalled by interstate land acquisition disputes, unresolved questions over the executing agency, and disagreements between the Haryana Public Works Department, the Faridabad Metropolitan Development Authority, and the National Highways Authority of India. As of the most recent updates, the Noida segment is roughly 70 per cent complete, a short stretch between NH-24 and Sector 117 is already operational, and the Ghaziabad segment is targeted for completion around 2026, while the 28.1-kilometre Faridabad stretch, running from Greater Faridabad through Lalpur village and Sectors 89, 88, 84, and 75, is now targeted for

2027. A critical missing link is a Yamuna river bridge connecting Chak Mangroli in Noida to Faridabad, the cost of which is being shared between the Haryana and Uttar Pradesh sides. Once complete, the FNG corridor is expected to cut the Faridabad–Ghaziabad journey from roughly two to three hours to under 45 minutes, and its alignment runs directly through sectors that the Faridabad Master Plan 2031 has already zoned for residential, industrial, and business-park development.

The Greenfield Expressway (Faridabad–Jewar Corridor)

The most recently formalised of the four projects is the Greenfield Expressway connecting Sector 65 in Ballabgarh to Dayanatpur village near the Noida International Airport at Jewar. Approved under the Bharatmala Pariyojana and awarded to a construction contractor in 2022, the roughly 31-kilometre, six-lane corridor will cut the road distance between Faridabad and the airport from about 90 kilometres to 31, and travel time from nearly two hours to about twenty to thirty minutes. In March 2026, the Cabinet Committee on Economic Affairs approved a revised outlay of ₹3,630.77 crore for the project, which includes an 11-kilometre elevated stretch designed specifically to avoid consuming land already acquired for residential sectors planned by the Haryana Shahari Vikas Pradhikaran. The corridor intersects the Eastern Peripheral Expressway, the Yamuna Expressway, and the Dedicated Freight Corridor, and connects directly to the Delhi–Faridabad–Ballabgarh–Sohna spur of the Delhi–Mumbai Expressway, making it, in effect, the missing link between Faridabad's industrial periphery and two of North India's largest logistics networks. The alignment passes through some eighteen to twenty-two villages in Haryana and Uttar Pradesh, including Chandawali, Sotai, Bahbalpur, Phaphunda, and Chhainsa, placing a substantial stretch of Faridabad's eastern agricultural periphery directly within the corridor's zone of influence.

Land Use Impacts in Peripheral Faridabad Agricultural Land Conversion and Rezoning

The single most consistent effect documented across all four corridors is the conversion of

agricultural and fallow land into transport right-of-way and, subsequently, into urbanisable land under Change of Land Use (CLU) approvals. Existing transect-based research comparing peri-urban Faridabad's land use in 2008 and 2016 identifies seven recurring categories along the city's growth edge, villages, planned societies, unplanned colonies, land under active development, barren land, brick kilns, and residual agriculture, and finds that these categories shift measurably toward built-up uses over time, often in ways that do not conform to the zoning set out in the statutory development plans of 2011 and 2031. The corridors examined in this paper accelerate that shift by fixing points of high accessibility, expressway interchanges, spur junctions, and multimodal transit centres, around which land is disproportionately drawn into non-agricultural use even where the master plan designates it for other purposes.

Residential Colonisation and Real Estate Expansion

Each of the four corridors has been accompanied by a measurable real estate response in its immediate catchment. Along the KMP Expressway, towns such as Manesar, Sonipat, Bahadurgarh, and Palwal have seen rapid growth in townships, group housing, and commercial development, a pattern replicated in Faridabad's own southern and eastern sectors as the DND–Faridabad–KMP spur has made the city commutable from South Delhi in under half an hour. Along the Delhi–Mumbai Expressway and its Sohna-linked spur, property prices on Sohna Road have appreciated by roughly 74 per cent since 2021, with the ripple effect extending into southern Faridabad. The Greenfield Expressway corridor has had a comparable effect on Faridabad's eastern sectors, with Sectors 64, 65, 98, and 110, all lying along or near the alignment, registering stronger demand as the project has progressed, and industry estimates suggesting that the combined effect of the Delhi–Mumbai Expressway, the FNG corridor, and metro connectivity could support property value growth of 35 to 50 per cent in Faridabad over the coming years. The FNG corridor's Faridabad stretch, though the least advanced of the four projects, already passes through Sectors 89, 88, 84, and 75, which planning

documents and real estate reporting alike describe as areas of rapid residential and industrial growth even in advance of the road's completion, a pattern consistent with anticipatory land speculation along announced but unbuilt alignments.

Industrial and Logistics Land Use

Beyond residential expansion, the four corridors are collectively repositioning peripheral Faridabad as a logistics and warehousing node. The KMP Expressway alone reroutes more than 50,000 heavy vehicles daily away from central Delhi, and industrial areas along its length, including Manesar, have seen substantial growth in warehousing and logistics facilities. This logic extends directly into the Faridabad–Palwal belt, where the Haryana government has proposed a roughly 9,000-acre integrated industrial hub explicitly justified by its location at the intersection of the Greenfield Expressway, the KMP Expressway, the Haryana Orbital Rail Corridor, and the Dedicated Freight Corridor. The Faridabad Master Plan 2031 itself earmarks a dedicated freight corridor alignment from Mumbai to Dadri passing through the district, flanked by a fifty-metre green belt, reflecting a deliberate planning intent to convert peripheral land along these corridors into organised industrial estates rather than leaving such conversion to informal or speculative processes alone.

Emergence of Multimodal and Mixed-Use Nodes

A further, less-discussed effect is the planned clustering of multimodal transit centres and special development zones at corridor intersections. The Haryana State Industrial and Infrastructure Development Corporation has proposed multimodal transit centres along the KMP Expressway, including one located in Faridabad, intended to combine road, metro, and regional rail access at a single node. The Faridabad Master Plan 2031 similarly proposes special zones, such as one on Haryana Power Generation Corporation Limited land near Mujesar, explicitly to capture the mixed residential and commercial demand generated by improved peripheral accessibility. These nodes represent an attempt by planning authorities to concentrate infrastructure-driven land use change into designated pockets rather than allowing it to diffuse unevenly across the

periphery, though the extent to which this containment is succeeding in practice, given the parallel, less formal colonisation described above, remains an open question.

Discussion: Drivers, Patterns, and Tensions

Taken together, the evidence points to a periphery being reshaped simultaneously from four directions. The KMP Expressway and its DND–Faridabad spur have effectively pulled Faridabad's southern and western edges into the daily commuting orbit of Delhi and Gurugram; the Delhi–Mumbai Expressway has extended that pull along a much longer, national-scale axis; the Greenfield Expressway is reorienting the city's eastern periphery toward the emerging Jewar airport economy; and the FNG corridor, although still incomplete, is already generating anticipatory development pressure along its planned Faridabad alignment. The land use consequence of this convergence is not a single, uniform pattern of sprawl but a corridor-specific mosaic: dense, largely formal residential and commercial growth near completed or near-complete interchanges; speculative and often informal plotting along announced but unbuilt alignments such as the FNG corridor; and planned industrial and logistics zoning at the intersections of multiple corridors, as seen in the proposed Faridabad–Palwal industrial hub.

This pattern raises a central governance tension. The Faridabad Master Plan 2031 was notified as a comprehensive, zone-based document, yet the pace and location of actual land use change is being set substantially by the sequencing of externally funded, multi-agency infrastructure projects, several of which, notably the FNG corridor, have themselves been delayed for years by exactly the same land acquisition and inter-agency coordination problems that they are meant to resolve for others. The result, as peri-urban land use research on Faridabad has documented for an earlier period, is a periphery where planned and actual land uses frequently diverge: master plan zoning and ground-level conversion respond to different logics and different timeframes, with infrastructure completion dates and interchange locations often proving a stronger predictor of where colonisation and industrial development actually occur than the statutory land use designation itself.

A second tension concerns the treatment of the periphery's ecological and agricultural base. The KMP Expressway's original construction consumed land that was overwhelmingly agricultural in character, and though compensatory afforestation measures were undertaken along its buffer zones, the broader pattern across all four corridors is one of net conversion away from cultivation and toward hard infrastructure and built form. The Faridabad Master Plan 2031 does reserve a Natural Conservation Zone along the Aravalli foothills and a 500-metre belt along the Yamuna, but the alignment of the Greenfield Expressway and the FNG corridor, both of which pass close to or through the Yamuna floodplain and adjoining village lands, illustrates how infrastructure routing decisions can place pressure on precisely the zones that planning documents intend to protect.

Policy Implications and the Way Forward

Several implications follow from this analysis. First, land use planning for Faridabad's periphery would benefit from being explicitly sequenced with, rather than treated as independent of, the phased completion schedules of the KMP Expressway, the Delhi–Mumbai Expressway, the FNG corridor, and the Greenfield Expressway, so that zoning and infrastructure timelines reinforce rather than contradict one another. Second, the recurring delays in the FNG corridor, driven by unresolved questions of executing agency and inter-state land acquisition, point to a need for a single coordinating authority empowered to align Haryana and Uttar Pradesh planning processes along shared corridors, a role the Faridabad Metropolitan Development Authority is well placed to anchor on the Haryana side. Third, the containment of informal and speculative colonisation along announced-but-unbuilt alignments, of the kind already visible along the FNG corridor's Faridabad stretch, would benefit from stricter and more consistently enforced Change of Land Use procedures, given that the entire district is already legally designated a controlled area. Finally, given the ecological sensitivity of the Aravalli and Yamuna-adjointing tracts through which several of these corridors pass, environmental clearance and buffer-zone planning should be treated as an integral part of

corridor design rather than a compensatory afterthought.

Conclusion

The convergence of the KMP Expressway, the Delhi–Mumbai Expressway, the FNG corridor, and the Greenfield Expressway on Faridabad's periphery represents an unusually concentrated instance of infrastructure-led land use transformation within the NCR. Each project, designed principally to solve a regional connectivity problem, has independently accelerated the conversion of peripheral agricultural land into residential, industrial, and mixed-use development, while collectively their overlapping zones of influence are producing a periphery whose land use pattern is set as much by the sequencing and routing of these transport corridors as by the statutory provisions of the Faridabad Master Plan 2031. The evidence assembled here suggests that this process, left to proceed largely through market response to individual project announcements, tends to produce anticipatory speculation, informal colonisation, and only partial conformity with planned zoning. A more deliberate alignment of infrastructure sequencing with land use planning, backed by stronger inter-agency and inter-state coordination, offers the more sustainable path for managing Faridabad's continuing transformation from an industrial satellite town into a fully integrated node of the National Capital Region.

References

1. Cabinet Committee on Economic Affairs. (2026). Cabinet approves revised cost estimate for the construction of Greenfield connectivity to Jewar International Airport from Delhi-Faridabad-Ballabhgarh-Sohna spur of the Delhi-Mumbai Expressway on Hybrid Annuity Mode in Uttar Pradesh and Haryana. Press Information Bureau, Government of India.
2. Department of Town and Country Planning, Haryana. (2018). Faridabad Master Plan 2031 (Final Development Plan). Government of Haryana.
3. DD News. (2026, June). Cabinet approves Rs 3,630 crore revised cost for connectivity corridor to Jewar International Airport.
4. Ministry of Road Transport and Highways / National Highways Authority of India. (2018). KMP Expressway (Western Peripheral Expressway) project documentation. Press Information Bureau, Government of India.
5. Peri-urban land use transect study. (2018). Multi-temporal transect analysis of peri-urban developments in Faridabad, India. Journal of Maps.
6. Study of land use and master plan of Faridabad, Haryana. (2020). International Journal of Social Science Research.
7. The Tribune. (2025, February). Nod to elevated corridor on Greenfield Expressway, budget likely to rise by 48%.
8. Various infrastructure and real estate industry reports on the KMP Expressway, Delhi–Mumbai Expressway, FNG Expressway, and Greenfield Expressway corridors (2024–2026), including 99acres, Grokipedia, Realty Applications, and Wikipedia project pages, consulted for project status, route alignment, and cost updates.
9. Wikipedia contributors. (2026). Delhi–Mumbai Expressway. Wikipedia, The Free Encyclopedia.
10. Wikipedia contributors. (2026). Western Peripheral Expressway. Wikipedia, The Free Encyclopedia.