

N. Block Welfare Assn. Regd. and Anr. Vs. DMRC and Ors.: 30.05.2008

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IN THE HIGH COURT OF DELHI

W.P. (C) 8516/2007

Appellants: **N. Block Welfare Assn. Regd. and Anr. Vs.** Respondent: **DMRC and Ors.**
[Alongwith W.P. (C) 8517/2007] :Decided On: 30.05.2008

Hon'ble Judges:

T.S. Thakur and Siddharth Mridul, JJ.

Acts/Rules/Orders:

Constitution of India - Articles 14, 21 and 226; Air (Prevention and Control of Pollution) Act, 1981 - Section 2; Environment Protection Act - Sections 3, 6 and 7; Air (Prevention and Control of Pollution) Rules; Environment Protection Rules, 1986 - Rules 3, 4 and 5

JUDGMENT

T.S. Thakur, J.

1. These two petitions under Article 226 of the Constitution have been filed in public interest. They call in question the correctness of a decision taken by the respondents for construction of an 'elevated corridor' for the proposed DMRC project from Central Secretariat to Badarpur in Delhi. The challenge is primarily founded on the following five pleas:

- i. That the elevated corridor from Defence Colony to Nehru Place violates the fundamental right of the petitioners guaranteed under Article 21 of the Constitution of India to have clean and pollution free environment as the proposed elevated corridor would not only destroy the greenery, aesthetics and the general landscape of the area but also violate the privacy of the owners/occupants of property situate on either side of the corridor.
- ii. That the elevated corridor from Defence Colony to Badarpur would create noise pollution and violate Section 2 of Air (Prevention and Control of Pollution) Act, 1981 and the rules framed thereunder.

iii. That the elevated corridor would pass through areas which will be less than 100 mts. from hospitals, educational institutions and religious places en route thereby causing disturbance to patients admitted to the hospitals and students and devotees of the religious place.

iv. That the construction of the pillars for supporting the elevated corridor on the existing roads would multiply sound manifold and emit vibrations and echoes which will not only have deleterious effect on the health of the citizens living in the houses nearby, but would also cause damage to their properties by weakening their structures.

v. That residents of high density residential colonies like Kalkaji, CR Park and Nehru Place cannot be discriminated vis-a-vis those who reside in low density areas like Lutyens, Delhi. The discrimination resulting from the construction of an elevated corridor would violate the fundamental rights of those living in these areas.

2. In the counter affidavits filed by the respondents, the allegations made by the petitioners have been emphatically refuted and the maintainability of the petitions questioned. In addition, the affidavit filed by the respondent DMRC sets out the factual backdrop in which construction of a mass rapid transport system was found to be essential to ease vehicular traffic on the roads and to provide efficient, cheap and timely transport to the commuters in the capital city. The new system was to be rail based with underground and elevated service corridors to be implemented by the DMRC with equal participation of the Central Government and the Government of Delhi. The affidavit goes on to state that in Phase-I of the metro system which was finalised pursuant to the above decisions, the DMRC was to cover 65.10 Kms. with an estimated cost of 105.7 billion, sufficient to carry about 2.2 million commuters on three lines, namely, i. Shahdara to Rithala, ii. Vishwavidhyalaya to Central Secretariat; and iii. Indraprastha to Bara Khamba Road. The successful implementation and completion of the first phase of the system was according to the affidavit, hailed by one and all providing to the DMRC and the Government the confidence and the challenge to take the second phase of the system which comprises a total of 128.06 Kms. of corridor, both underground and elevated including the Central Secretariat-Sushant Lok (Gurgaon) corridor stretching over a length of 12.53 Kms. with 10 DMRC stations and Central Secretariat-Badarpur corridor over a length of 20.01 Kms. with 16 DMRC stations to be completed by June, 2010. The affidavit lays considerable emphasis on the limited scope of judicial review and attempts to justify the decision for constructing an elevated corridor over a part of the corridor between Defence Colony and Nehru Place. It points out that density of population in an area in which the project is being constructed is just one of the considerations for deciding whether the DMRC corridor should be underground or elevated. Capital cost component is an equally important consideration especially in a capital intensive project like the one taken up by the respondent in which nearly 60% of the capital has been raised as a loan from a Japanese Bank. The affidavit alleges that if the entire stretch between Defence Colony to Nehru Place were to be

constructed underground, the same would involve an additional burden of nearly Rs. 750 crores which is a huge expenditure that is avoidable if the corridor is elevated. Maintenance of an underground stretch is also, according to the respondents, one and a half times more than the elevated stretch apart from the underground metro being more susceptible to security concerns and damage and threat to the life of the passengers in the event of a mishap in comparison to the elevated stretch. A detailed project report was, according to the respondents, prepared in which all these aspects were examined and a policy decision approving the elevated corridor taken at the highest level by the Union Cabinet. The affidavit also refers to the need for acquisition and demolition of built-up properties if the corridor were to be constructed underground. There was, according to the respondent, an anticipated delay of more than two years in the construction of the Central Secretariat-Badarpur corridor if the same was constructed underground because of the hard rocky area which forms a part of the erstwhile Aravalli range being encountered by any such corridor. A preliminary survey conducted by the DMRC is said to have disclosed the need for demolition of structures over 32 plots with two or three storeyed high buildings standing on the same and involving about 100 households/commercial buildings for construction of the East of Kailash station. Acquisition of such huge and valuable properties in the area would have not only enhanced the cost of underground stretch but also given rise to huge public protests. The affidavit also states that if East of Kailash station is to be constructed underground, the Lajpat Rai road would have to be totally and substantially blocked for the construction of the said station for a period of nearly two years which would have greatly inconvenienced the public. The affidavit also refers to the need for approval of the Japan Bank of Industrial Corporation, who is financing the project and who has already approved the elevated corridor for the stretch in question. Any change at this stage in the project design would not find favour with the said bank and would therefore either result in closure of the stretch itself or cause inordinate delay in the execution of the work, thereby entailing further increase in the outlay of the entire project. Suffice it to say that the affidavits filed by the respondents stoutly support the decision to keep the corridor elevated over the Defence Colony-Badarpur stretch and deny that the said decision suffers from any perversity or violates any fundamental, statutory or legal right of the petitioners.

3. We have heard learned Counsel for the parties at considerable length and perused the record. Whether or not a rail based mass rapid transport system should be constructed and if so whether the system should be underground or elevated or a mix of the two are matters that fall in the realm of policy making. So also the extent of financial commitments needed for the implementation of any such project and the extent which the exchequer can afford are matters that primarily rest with the policy makers. Issues that are directly or incidentally related to the above would require inputs not only from Town Planning specialists but also experts from various other fields including those concerned with determining the financial feasibility of such ventures. In the very nature of the questions that would fall for consideration in the process of

formulation of a policy especially one that involves techno economic aspects, a writ court would be at a great disadvantage in either finding fault with the policy or issuing directions for modification of the same. The multiple dimensions of the problem would not therefore be judicially manageable particularly where the policy does not suffer from any perversity, capable of correction without affecting the vital assumptions on which it is based. There is, in such situations, a difference between the quest for truth in the court room and the truth of the inputs that go into the formulation of the policy making it wiser for the court to avoid uncertainty resulting from inadequacy of data and the hazards underlying a challenge to the opinion of experts by a non-expert forum like the Court. Judicial restraint is therefore the only mantra that helps the court in resisting the temptation to tread on unfamiliar ground. The legal position as regards the need for such restraint while examining a policy decision remains undiluted by the plethora of decisions which learned Counsel for the petitioners have cited at the bar in support of their contention that courts have and must interfere in public interest wherever the issues raised concern clean environment. The apex court has while upholding the right to clean environment as a part of the right to life guaranteed under Article 21 of the Constitution observed that when Government or the authorities concerned after due consideration of all viewpoints and full application of mind, take decisions, it is not appropriate for the courts to interfere. Such matters should then be left to the mature wisdom of the Government or the implementing agency for it is their forte. The court should only take a detached view in such cases based on the pattern of the well settled principles of administrative law and getting in the way only if the decision is based on any irrelevant consideration or non- consideration of what is material or if the decision is otherwise arbitrary. Reference may in this regard be made to the decision of the Supreme Court in *N.D. Jayal v. Union of India*, where the Court observed:

This Court cannot sit in judgment over the cutting edge of scientific analysis relating to the safety of any project. Experts in science may themselves differ in their opinions while taking decisions on matters related to safety and allied aspects. The opposing viewpoints of the experts will also have to be given due consideration after full application of mind. When the Government or the authorities concerned after due consideration of all viewpoints and full application of mind took a decision, then it is not appropriate for the court to interfere. Such matters must be left to the mature wisdom of the Government or the implementing agency. It is their forte. In such cases, if the situation demands, the courts should take only a detached decision based on the pattern of the well-settled principles of administrative law. If any such decision is based on irrelevant consideration or non-consideration of material or is thoroughly arbitrary, then the court will get in the way. Here the only point to consider is whether the decision-making agency took a well-informed decision or not. If the answer is "yes", then there is no need to interfere. The consideration in such cases is in the process of decision and not in its merits. (para 20)

4. Reference may also be made to *Rustom Cavasjee Cooper v. Union of India*, where the Court was examining the validity of the Banking Companies (Acquisition and Transfer of Undertaking) Ordinance, 1969. Repelling the contention that the Court could examine the merits of political theories and economic policies, their Lordships declared that while the Court can strike down a law on the ground of want of authority, it will not sit in appeal over the policy of Parliament in enacting a law. The same principle was then extended to a policy decision taken by the Government to sell certain plants and equipments of Sidri Fertilizer factory which was owned by a public sector undertaking. In *Fertilizer Corporation Kamgar Union (Regd.) v. Union of India*, the Supreme Court observed:

We certainly agree that judicial interference with the administration cannot be meticulous in our Montesquien system of separation of powers. The Court cannot usurp or abdicate, and the parameters of judicial review must be clearly defined and never exceeded. If the directorate of a government company has acted fairly, even if it has faltered in its wisdom, the court cannot, as a superauditor, take the board of directors to task. This function is limited to testing whether the administrative action has been fair and free from the taint of unreasonableness and has substantially complied with the norms of procedure set for it by rules of public administration.

5. To the same effect is the decision of the Supreme Court in *State of Madhya Pradesh v. Nandlal Jaiswal*, where their Lordships reiterated the view taken in an earlier decision rendered in *R.K. Garg v. Union of India* to the effect that the State policies in relation to its economic activities should be viewed with greater latitude than laws touching civil lives of the citizens. In *G.B. Mahajan v. Jalgaon Municipal Council*, the apex court was examining a policy decision relating to a contract entered into by Municipal Council with a private developer for construction of a commercial complex. Their Lordships held that matters relating to economic policies of the State lack adjudicative disposition unless they are shown to be violative of the provisions of the Constitution or demonstrably involving environmental implications. The court would be therefore slow in interfering with such matters of policy in exercise of its writ jurisdiction. The Court observed:

With the expansion of the State's presence in the field of trade and commerce and of the range of economic and commercial enterprises of Government and its instrumentalities there is an increasing dimension to governmental concern for stimulating efficiency, keeping costs down, improved management methods, prevention of time and cost overruns in projects, balancing of costs against timescales, quality control, cost-benefit ratios etc. In search of these values it might become necessary to adopt appropriate techniques of management of projects with concomitant economic expediencies. These are essentially matters of economic policy which lack adjudicative disposition, unless they violate constitutional or legal limits on power or have demonstrable pre-judicial environmental implications or amount to clear abuse of power. This

again is the judicial recognition of administrator's right to trial and error, as long as both trial and error are bona fide and within the limits of authority.

6. Reference may also be made to *Peerless General Finance and Investment Co. Ltd. v. Reserve Bank of India* and *Premium Granites v. State of Tamilnadu*, where the Supreme Court struck a note of caution against a writ court embarking upon uncharted ocean of public policy in an exercise to consider whether a particular policy was wise or a better policy could be evolved. In *Premium Granites* case (supra), the Court observed:

54. It is not the domain of the Court to embark upon uncharted ocean of public policy in an exercise to consider as to whether a particular public policy is wise or a better public policy can be evolved. Such exercise must be left to the discretion of the executive and legislative authorities as the case may be.

7. In *M.P. Oil Extraction v. State of M.P.*, the Court was again considering the validity of an industrial policy and whether the power of judicial review is extended to examining the wisdom behind the policy. The Court observed:

Unless the policy framed is absolutely capricious and, not being informed by any reason whatsoever, can be clearly held to be arbitrary and founded on mere ipse dixit of the executive functionaries thereby offending Article 14 of the Constitution or such policy offends other constitutional provisions or comes into conflict with any statutory provision, the Court cannot and should not outstep its limit and tinker with the policy decision of the executive functionary of the State.

8. To the same effect are the decisions of the Supreme Court in *State of Punjab v. Ram Lubhaya Bagga*, *Bhavesh D. Parish v. Union of India* and *Narmada Bachao Andolan v. Union of India*.

9. It is in our view unnecessary to burden this judgment with any further reference to decided cases on the subject. We would therefore rest content with the extraction of the following passage from the decision of the Supreme Court in *Tata Iron and Steel Company Limited v. Union of India* and *Anr.*

This is a case of the type where legal issues are intertwined with those involving determination of policy and a plethora of technical issues. In such a situation, courts of law have to be very wary and must exercise their jurisdiction with circumspection for they must not transgress into the realm of policy making, unless the policy is inconsistent with the Constitution and the laws. In the present matter, in its impugned judgment, the High Court had directed the Central Government to set a Committee to analyse the entire gamut, of issues thrown up by the present controversy. The Central Government had consequently constituted a Committee

comprising high level functionaries drawn from various Governmental/institutional agencies who were equipped to deal with the entire range of technical and long-term considerations involved. This Committee, in reaching its decision, consulted a number of policy documents and approached the issue from a holistic perspective. We have sought to give our opinion on the legal issues that arise for our consideration. From the scheme of the Act it is clear that the Central Government is vested with discretion to determine the policy regarding the grant or renewal of leases. On matters affecting policy and those that require technical expertise, we have shown deference to, and followed the recommendations of, the Committee which is more qualified to address these issues.

10. There is in the light of the above authoritative pronouncements, no gainsaying that interference by a writ court especially while exercising jurisdiction in public interest in cases involving a challenge to policy matters is permissible only in case the policy is contrary to any constitutional provision, contrary to any statutory provision or so outrageously perverse that no court would countenance the same. The petitioners have not, in the instant case, been able to demonstrate how the decision to build an elevated metro corridor violates any constitutional mandate. The argument that the decision to build the project underground in the Lutyens Delhi and elevated at other places constitutes discrimination, offensive to Article 14 of the Constitution needs notice only to be rejected. The respondents have given cogent reasons why a part of the Central Secretariat - Badarpur corridor was built underground. They have pointed out that Lutyens Delhi is a regulated zone having heritage value in which no construction activity is permitted without the sanction of the competent authority. A policy decision to build the metro underground over the length that fell within Lutyens Delhi was, therefore, taken by the Government. That apart a large number of VVIP residences and Government offices are scattered all over in Lutyens Delhi. An elevated corridor would have not only marred the beauty of the city but may have endangered the security of the VVIPs residing in the area. The respondents have stated that even while going underground, it has been ensured that the Metro does not pass under important offices so that there is not even a remote threat to the security of those occupying the building. Similarly, the corridor between Central Secretariat to Mehrauli has been taken underground on the suggestions made by the Archaeological Survey of India and keeping in view the ancient monuments of heritage value standing around that corridor. There is, in our opinion, no irrationality in the classification made by the respondents while deciding to keep the metro corridor underground in specified areas mentioned above and constructing it on an elevated corridor over the rest. The considerations that went into the taking of the decision were not irrelevant so as to vitiate either the classification or the decision. The fact that an underground corridor would have cost the respondents an additional expenditure of nearly Rs. 750 Crores was itself a sufficient reason to justify the construction of an overhead corridor. Additional financial burden apart, the fact that the recurring cost of maintenance of an underground stretch would have been more than an elevated stretch was

also a relevant factor to be taken into account. Similarly, the security concerns and a possible damage and threat to life of passengers in the event of a mishap was a consideration which has gone into the taking of the decision. The likelihood of extensive acquisition of developed properties at considerable cost if the Metro was taken underground was also a relevant feature which could not be ignored by the respondents. Superadded to all this is the fact that construction of an elevated Metro corridor does not appear to be unpopular in the rest of the world. As a matter of fact, the respondents have on affidavit stated that metros of other cities in Asia or Middle East are elevated. In Bangkok, more than 50% of the metro system is elevated while in Singapore, 70% of the commissioned section is elevated. Even in Dubai, which is meant to be a rich country, 80% of the planned metro is elevated. In the totality of these circumstances, therefore, there was no irrationality or perversity in the decision taken by the respondents for building the Metro underground so as to be dubbed as unconstitutional or discriminatory in nature and offensive to Article 14 of the Constitution. We can also not overlook the fact that substantial work has already been executed on the elevated corridor of the Metro project which means that any interference at this stage would lead to infructuous expenditure amounting to crores of rupees.

11. Learned Counsel for the petitioners, however, argued that the construction of the Metro project on an elevated corridor was bound to not only affect the privacy of the owners of properties adjacent to the elevated corridor but also result in noise pollution. Relying upon the provisions of Sections 3, 6 and 7 of the Environment Protection Act, it was contended that the noise levels resulting from the operation of the metro system would go beyond the maximum permitted by Rules 3, 4 and 5 of the Environment Protection Rules, 1986. It was submitted that Defence Colony, which is one of the areas through which the elevated corridor would run is permitted mixed land use for which the day time noise level cannot go beyond 65 decibels while at night, the said level must remain below 55 decibels. As against this, the average noise level to which the residents in the area would be subjected would be in the range of 75 decibels. It was argued that the Environment Impact Assessment Report prepared by the respondents clearly made out a case for intervention of this Court with the ongoing project, although the report was not scientific according to the learned Counsel for the petitioners. Considerable reliance was placed by learned Counsel for the petitioners upon the decision of the Supreme Court in *In Re : Noise Pollution* AIR 2005 SC 3136.

12. On behalf of the respondents, it was argued by Mr. Saran, learned ASG that the petitioners have not placed any scientific data on record in support of their contention that the noise level will go up. Alternatively, it was submitted that DMRC was taking several measures to reduce noise and had, in principle, decided to engage the services of CRRRI as a consultant to suggest ways and means to reduce noise pollution. One of the measures that was under consideration was a provision for umbrella acoustics for reducing noise levels.

13. In *In Re : Noise Pollution case* (supra), their lordships of the Supreme Court had, at great length, examined the deleterious effect which noise can have on the quality of human lives and declared that nobody can claim a fundamental right to create noise, nor can the citizens be compelled to suffer the same without any legal redress. The Court observed:

21. Noise is more than just a nuisance. It constitutes a real and present danger to people's health. Day and night, at home, at work, and at play, noise can produce serious physical and psychological stress. No one is immune to this stress. Though we seem to adjust to noise by ignoring it, the ear, in fact, never closes and the body still responds-sometimes with extreme tension, as to a strange sound in the night.

22. Noise is a type of atmospheric pollution. It is a shadowy public enemy whose growing menace has increased in the modern age of industrialization and technological advancement. Although a soft rhythmic sound in the form of music and dance stimulates brain activities, removes boredom and fatigue, but its excessiveness may prove detrimental to living things. Researches have proved that a loud noise during peak marketing hours creates tiredness, irritation and impairs brain activities so as to reduce thinking and working abilities. Noise pollution was previously confined to a few special areas like factory or mill, but today it engulfs every nook and corner of the globe, reaching its peak in urban areas. Industries, automobiles, rail engines, aeroplanes, radios, loudspeakers, tape recorders, lottery ticket sellers, hawkers, pop singers, etc., are the main ear contaminators of the city area and its market place. The regular rattling of engines and intermittent blowing of horns emanating from the caravan of automobiles do not allow us to have any respite from irritant noise even in suburban zones.

23. In the modern days noise has become one of the major pollutants and it has serious effects on human health. Effects of noise depend upon sound's pitch, its frequency and time pattern and length of exposure. Noise has both auditory and non-auditory effects depending upon the intensity and the duration of the noise level. It affects sleep, hearing, communication, mental and physical health. It may even lead to the madness of people.

14. The Court also noted that noise can result in hearing loss, disturbance of sleep, annoyance, affect performance and adversely affect even unborn humans. Several directions were issued by their Lordships not only regarding use of firecrackers, loudspeakers and for prevention of vehicular noise but also towards spreading awareness among the general public regarding the menace of noise pollution. To the same effect is the decision of the Supreme Court in *Sheikh Ikram Sheikh Israil v. State of Maharashtra*.

15. The question however is whether there is any basis for holding that the noise levels will go up with the commissioning of the DMRC project. As rightly pointed out on behalf of the respondents, there is no scientific study conducted nor any material produced before us to

show that the existing noise levels in the colonies that fall en route the Central Secretariat and Badarpur corridor would go beyond the permissible limits with the construction of the project. The Environment Impact Assessment Report placed on record has taken note of the impact of the project operation from the noise levels and concluded that on account of a reduction of vehicular traffic, the road traffic noise as compared to the existing levels would come down by about 7 to 9 decibels, no matter the total noise level would be about 75 decibels. The following passage from the said report is in this regard relevant:

1.1.7 NOISE

Any developmental activity (particularly related to civil engineering construction projects) will have significant impact on the existing or baseline noise levels. The existing noise levels are particularly likely to increase during pre-construction and construction phase of the activities, involving side clearing and construction operations. In view of the above, a study to evaluate the existing noise levels was carried out along the corridor. The measurements were carried out with the help of calibrated Sound level Meters for the 24- hour duration at each sampling site. The summary of noise pollution survey has been given in Tables 12.5.

Table 12.5 Noise Levels along the Central Secretariat-Badarpur Corridor

Table 12.5 Noise Levels along the Central Secretariat-Badarpur Corridor

S. No.	Location	Day Time					Night Time			
		Lmax	Lmin	Leq	L10	L90	Lmax	Lmin	Leq	L10
1	Central Secretariat	81.10	50.60	69.52	72.95	56.27	74.80	51.20	62.14	64.81
2	Khan Mkt.	80.30	53.20	70.99	74.95	57.23	74.49	52.60	62.94	65.08
3	Lodhi Colony	84.40	52.40	69.90	73.33	56.29	70.10	52.80	60.01	62.81
4	J.L.N. Stadium	76.90	51.10	64.50	67.97	55.39	78.40	51.10	60.31	61.57
5	Lajpat Ngr.	98.00	58.50	83.48	86.10	63.08	85.10	57.20	78.78	82.76
6	Moolchand	95.20	55.20	79.06	81.82	6.62	81.00	52.10	72.84	76.41
7	Kailash Colony	95.60	60.10	82.56	85.69	69.87	82.90	52.10	75.25	79.83
8	Nehru Place	95.60	60.10	82.56	85.69	69.87	82.90	52.10	75.25	79.83

9	Kalkaji	89.40	58.20	76.12	79.44	60.06	88.30	57.00	71.98	75.70
		63.38								
10	Okhla	102.20	59.60	84.86	86.10	63.49	95.10	58.50	81.01	82.76
		60.21								
11	Jasola	93.60	61.20	82.35	85.69	69.87	86.00	53.10	75.74	79.89
		58.23								
12	Sarita Vihar	75.90	52.10	64.09	67.97	55.39	70.40	51.50	59.51	61.57
		54.75								
13	Mohan Estate	78.90	65.2	64.15	67.97	55.39	78.40	51.10	60.31	61.57
		54.75								
14	Tughlakabad	98.8	59.6	83.6	86.1	63.22	88.1	58.50	79.1	82.6
		60.14								
15	Badarpur	102.2	60.30	86.78	86.1	63.79	104.6	59.30	86.3	82.78
		60.56								

It could be concluded that the noise level recorded near the project site are higher than prescribed permissible levels of 65-dBA (day) and 55-dBA (night).

The Noise level standards are documented in Table 12.6.

TABLE 12.6

NOISE LEVELS STANDARDS DB(A)

S.	No.	STANDARD	FOR	DAY	NIGHT
1		Industrial	Area	75	70
2		Commercial	area	65	55
3		Residential	area	55	45
4	Silence Zone	50 40			

1.2.1 The Metro rail project being an infrastructural project is designed to promote an efficient and commuter friendly transport sector for the benefit of the urban community. It is expected to bring in a number of positive impacts on the environment and the general public. Depending upon their significance and magnitude, some of them could be considered as tangible while others could be viewed as intangible benefits. There are several positive impacts (both tangible and intangible), which are expected from the proposed metro corridor. Most of the positive

benefits would occur during the operation phase, some of the positive benefits expected from the proposed metro corridors have been given below:

- (i) Reduced travel time resulting in increased accessibility
- (ii) Safe and comfortable mode of transportation
- (iii) Reduced traffic resulting in reduced congestion on roads due to the probable shifting of significant proportion of two and three wheelers to the metro.
- (iv) Reduced fuel consumption from the transport sector resulting in precious foreign exchange.
- (v) Reduction in vehicular emission loads resulting in improved air quality of the region
- (vi) Reduction in road accidents resulting in reduced death and injury during road accidents.
- (vii) Reduced noise pollution along the proposed corridors
- (viii) Improved road conditions and extended life of the roads
- (ix) Increased industrial, business and commercial activities
- (xi) Increased job/employment opportunities (direct and indirect both)
- (xii) Reduced Green House Gas (GHG) emissions from road sector
- (xiii) Better environmental landscape and aesthetics of the surrounding area
- (xiv) Sense of pride to the city and country having a world-class facility.

XXXXX

XXXXX

XXXXX

1.3.4 IMPACTS DUE TO PROJECT OPERATION

a) Oil Pollution

Oil spillage during change of lubricants, cleaning and repair processes, in the maintenance of rolling stock, is very common. The spilled oil should be trapped in grit chamber for settling of

suspended matter. The collected oil should either be auctioned or incinerated, so as to avoid any underground water contamination.

b) Noise

The main sources of noise from the operation of trains include: engine noise, cooling fan noise, wheel-rail interaction, electric generator and miscellaneous noise like passengers chatting. An attempt has been made to predict the rise in ambient noise at different distances. The roughness of the contact surfaces of rail and wheel and train speed is the factors, which influence the magnitude of rail-wheel noise. The vibration of concrete structures also radiates noise. For these sections of the rail, which are underground, there will be no impact on the ambient noise. However, due to reduction of vehicular traffic, the road traffic noise will come down. Hence, total noise level would be about 75-dB (A). However, due to reduction of vehicular traffic, the road traffic noise as compared with existing levels will come down about 7 to 9%.

16. In the light of the above material which by far is the only material available on record, the contention urged on behalf of the petitioners that the noise levels will go up on account of the project operation remains unsubstantiated. That apart, from a report prepared by the National Physical Laboratory on Noise Control Measures for DMRC, it appears that numerous short term and long term measures have been suggested to the Metro for reducing both interior as also exterior noise levels to make the Metro operations in Delhi truly world class. The report takes into consideration interior as also exterior noise levels and proposes the following immediate and long term measures:

A. Immediate measures

I. Acoustic treatment of tunnel side walls in a composite fashion

i) The lower portion of the side wall up to the height of car floor level can be treated with 50 mm thick mineral wool contained in tissue bags and protected by perforated metal facing with 25% open area. Expected Noise Reduction (ENR):3dB

ii) The remaining portion of the side walls and ceiling can be treated with Glassfibre Reinforced Concrete (GRC) mix of 12.5 mm thickness with a rough surface. ENR:3dB

2. The possibility of providing ballast beds in underground and elevated sections may be examined especially in sensitive areas and high speed sectors. ENR:3dB

3. Also ballast mats of 25 mm thick can be placed between the bridge deck and the ballast in problem areas to prevent vibration propagation ENR :2dB

4. The excitation of the body structure by auxiliary equipment installed in the car can be minimized by improving the sound isolation of the elastomeric mounts/pads ENR:2dB

5. Systematic maintenance of wheel and rail surfaces helps to reduce W/R noise in transit system. ENR :3dB

6. Special wheel tread condition monitoring system can be installed in each corridor for recording wheel/rail conditions and subsequent remedial actions like wheel truing and rail grinding.

7. The existing treatment in metro stations can be improved by placing damping materials like 25 mm glasswool sheets covered in tissue bags in the false ceiling above existing boards/panels.

B. Long Term Measures

1. Resilient and damped wheels can be used in transit systems to reduce emitted W/R noise levels.

2. Tuned mechanical damping devices can be attached around the rim of conventional steel wheels to reduce W/R noise.

3. Disc brakes and wheel skirts can be introduced in transit trains in due course.

4. The sound insulation of car body can be improved by using sandwich construction and inserting lead leaf and damping mechanism in between.

5. Special acoustic enclosures should be provided to all auxiliary equipment fitted in metro trains to contain emitted noise levels.

6. Properly designed acoustic mounts and pads should be used while installing these equipment in metro trains.

7. Improved acoustic treatment can be introduced in future metro stations.

8. Installation of special bogies shrouds can be thought in future car designs to contain W/R noise.

9. Installation of low movable noise barriers close to the tracks to contain W/R noise.

10. Possibility of using spiked wheels may be thought instead of existing solid wheels.

17. Apart from the above, the respondents have placed on record the minutes of the meeting of Empowered Group of Ministers on Delhi MRTS Project held on 18th January, 2008 by which DMRC has been directed to take all safeguards to address the concerns of privacy, vibration, noise and aesthetics through various technological measures. While the aesthetic issue has been directed to be handled by DMRC itself, an expert agency has to be engaged to study and address the privacy, vibration and noise issues. The respondents have also placed on record minutes of another meeting held on 8th May, 2008 by which Central Road Research Institute has been authorised to study the on ground situation in the Central Secretariat-Badarpur corridor in detail and to identify locations for carrying out the study apart from other issues relating to collection of noise data. The CRRI has to work out and provide technical measures to mitigate noise impacts, if any, in the affected areas based on the provisions of Central Pollution Control Guidelines. The mitigation measures would include noise barriers also. The CRRI has been directed even to address the concerns of privacy of people residing in the residential areas close to the said corridors and suggest remedial measures at the affected locations. The minutes may, at this stage, be extracted:

As discussed in the meeting on date DMRC wants to conduct a detailed study to address the issues of privacy, vibration and noise because of operation of MRTS trains in elevated portions of Central Secretariat - Badarpur Corridor. General Arrangement Drawings showing existing ground features as well as MRTS layout is also to discuss. Following are the terms of reference agreed by both the parties to address the requirement of the work which is to address the issues stated above:

- (i) M/s CRRI would study the on ground situation in the Central Secretariat - Badarpur Corridor in detail so as to identify locations for carrying out the study.
- (ii) Necessary ground data, building data and traffic data would also be collected as required for the study
- (iii) The structural configuration of elevated portion of Central Secretariat - Badarpur Corridor is similar to that of Line - I (Shahdara - Rithala section) of Delhi MRTS. Baseline noise data of train operation would be collected from Line - I
- (iv) Baseline noise data for silence zone type situation would be acquired in Dwarka portion of Line-3.
- (v) Noise impact of train operations in elevated portion of Central Secretariat - Badarpur Corridor would be worked out by using the latest version "PREDICTOR" and "SAMURAI" software.

18. It was argued by Mr. Saran that although the petitioners have failed to prove any violation of the statute regulating prevention of noise pollution, yet the respondent/DMRC is not insensitive to the requirement of reducing the noise as far as possible by adoption of suitable measures in that regard. He assured the Court that the decisions already taken at the highest level by the Empowered Group of Ministers and by the DMRC would eventually lead to appropriate steps and measures on the ground to ensure that the inconvenience, if any, arising from the noise generated by the operation of the Metro is reduced, if not totally eliminated for those owning residential and commercial properties in the vicinity of the elevated corridor. That assurance should, in our opinion, sufficiently allay the apprehension of the petitioners that the elevated corridor would make their lives miserable by a blatant violation of the law forbidding noise pollution. All that we need to add is that the assurance will not remain confined to paper and shall be carried out in practice by DMRC taking effective measures as suggested by the expert body to prevent any noise pollution, inconvenience or discomfort arising out of any intrusion in the privacy of those living in the vicinity of the elevated corridor.

19. In the result, we dispose of these writ petitions with the following directions:

(i) The challenge to the correctness of the decision to construct an elevated corridor for the proposed DMRC project between Defence Colony to Nehru Place on the Central Secretariat-Badarpur line is repelled and the writ petition dismissed to that extent.

(ii) The respondents shall, pursuant to the directions of the Empowered Group of Ministers and decision of the DMRC referred to in the body of these writ petitions, carry forward the process of identifying and applying all such measures as may be necessary to reduce noise pollution and concerns regarding privacy of those owning properties and residing in the vicinity of the elevated corridor.

(iii) The parties are left to bear their own costs.