

पर्यावरणीय अहवालाचा सारांश
नियोजित पुर्ननिर्माण रहिवासी
प्रकल्प

प्रकल्प स्थान

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प्रकल्प आयोजक

मे. श्री चामुंडा रिएल्टर्स

प्रकल्प ओळख :

मे. श्री चामुंडा रिएल्टर्स या विकासाकांनी सी. एस. क्र. १७३०, माहिम विभाग, केळुस्कर रोड, दादर (प.), मुंबई येथे रहिवास पुर्ननिर्माण निर्मातीचा प्रस्ताव ठेवला आहे. सध्या येथे मोडकळीस आलेली व धोकादायक असलेली तळ मजला + तीन मजले असलेली एक इमारत आहे. या जमीनीचा वापर विकास आराखडयानुसार रहिवासी वापरासाठी असुन ही इमारत तोडुन येथे तळमाळा + तळ मजला + १ ते २१ मजल्याची इमारत बांधण्याचा प्रस्ताव आहे. या इमारतीतील तळमाळा, तळ मजला व एक ते चार मजले हे वाहन तळासाठी राखुन ठेवले आहेत तर पाचवा मजला ते एकवीसावा मजला हे मजले रहिवाशी असुन यात पाचवा मजला हा स्टिल्ट असेल, सहाव्या मजल्यावर एक १ बीएचके व सोसायटी कार्यालय असेल. सातव्या ते नवव्या मजल्यावर प्रत्येकी १ असे २ बीएचक रूम असतील. दहाव्या ते सोळाव्या मजल्यावर प्रत्येकी १ असे ३ बीएचक रूम असतील. सतराव्या ते वीसाव्या मजल्यावर मिळुन एकच फ्लॅट असेल. सदर ईमारतीस रेफ्युज एरिया फायर नॉर्मप्रमाणे दिलेले आहेत.

सद्य स्थितीतील क्षेत्र हे सागरतटीय निर्बंधीत क्षेत्र—II विभागात असुन हि जागा स्वातंत्र्य वीर सावरकर मार्गाच्या जमीनीच्या दिशेकडे आहे. वरील उल्लेखीत रोड हे सागर तटीय व्यवस्थापन आराखडयात व १९६७ च्या विकास आराखडयात स्पष्टपणे दिसतात. म्हणुन या प्रकल्प निर्माती अगोदर सागर तटीय निर्बंध कायदयानुसार महाराष्ट्र कोस्टल झोन मॅनेजमेंट ऑथॅरीटी कडुन परवाना घेणे गरजेचे आहे. सदर जागा ही पर्यावरणीय संवेदिनशील क्षेत्रात मोडत नसुन फक्त सागरतटीय निर्बंधीत क्षेत्रात मोडते. वरील प्रकल्पाचा एकुण खर्च रजिस्टर मुल्यांकना नुसार रू. १६,३०,००,०००/- इतकी आहे.

प्रकल्पाचे महत्व :

केळुस्कर रोड येथील तळ मजला + तीन मजले असलेली एक इमारत अत्यंत धोकादायक झालेली आहे. या मोडकळीस आलेल्या इमारतीचा विकास करणे गरजेचे असुन त्यासाठी हया जमीनीचा विकास मे. श्री चामुंडा रिएल्टर्स करत आहेत. ही जमीन विकासीत करताना विकासक येथील राहाणा—या लोकांना स्थायी रहिवास देणार असुन हा रहिवास त्यांच्यासाठी सुरक्षित असेल.

प्रकल्पाची माहिती :

प्रकल्पाचे नाव व ठिकाण	:	रहवास पुर्ननिर्माण निर्माती प्रकल्प : सी. एस. क्र. १७३० माहिम विभाग, केळुस्कर रोड, दादर (प.), मुंबई, महाराष्ट्र
प्रकल्प विकासकाचे नाव	:	मे. श्री चामुंडा रिएल्टर्स
सध्य स्थितीतील प्रकल्प	:	मोडकळीस आलेली तळ मजला + तीन मजले असलेली एक इमारत.
आयोजित प्रकल्प	:	तळ माळा + तळ मजला + १ ते २१ मजल्याची इमारत
प्रकल्प क्षेत्र	:	५६२.७१ स्क्वेअर मीटर
रस्ता रूंदीकरणासाठी गेलेले क्षेत्र	:	०.०० स्क्वेअर मीटर
उर्वरीत क्षेत्र	:	५६२.७१ स्क्वेअर मीटर
एफ.एस.आय. (प्रमाणीत)	:	२.५०
एफ.एस.आय. (नविन विकासनामध्ये आयोजलेला)	:	२.५०
एकुण क्षेत्रफळ	:	१४०६.७८ स्क्वेअर मीटर
एकुण बांधकाम क्षेत्रफळ	:	५२८७.०० स्क्वेअर मीटर
प्रकल्प खर्च	:	रु. १६,३०,००,०००/-
पार्किंग व्यवस्था	:	आवश्यक पार्किंग १३ (स्थानिय मानदंडानुसार) दिलेले पार्किंग १७
पाण्याची गरज व स्रोत	:	<u>बांधकामा दरम्यान</u> - महानगरपालीकेकडून (कामगारांसाठी) : ५ घन लिटर प्रती दिवस टॅकर (बांधकामासाठी) : ३० घन लिटर प्रती दिवस <u>प्रकल्पासाठी</u> : एकुण पाण्याची आवश्यकता: १४.३१

		<p>घन लिटर प्रती दिवस घरकामासाठी : ९.०६ घन लिटर प्रती दिवस फलशिंगसाठी : ५.२५ घन लिटर प्रती दिवस गाडी धुण्यासाठी : ०.०९ घन लिटर प्रती दिवस</p>
सांडपाणी निर्मीती	:	१२.४९८ घन लिटर प्रती दिवस
विद्युत गरज	:	<p>बांधकामादरम्यान — स्थानिक प्राधिकरणाकडून — ०.३ मे.वॅ. बांधकामानंतर प्रकल्पासाठी — स्थानिक प्राधिकरणाकडून लागणारी अधिकतम विद्युत — ०.२३४ मे.वॅ. डिजेल जनरेटरचा वापर फक्त आवश्यक गरजेसाठी केला जाईल उदा: आगीसाठी वापरात येणारे उद्वाहन, पाण्याचे पंप इ. यासाठी एक डिजेल जनरेटर ३५ के.व्ही.ए क्षमतेचा वापरला जाईल.</p>
गॅस उत्सर्जन	:	<p>डिजेल जनरेटरच्या वापरामुळे निर्माण होणा—या तरंग धुलीकण व सल्फरडाय ऑक्साईडचा त्रास कमी करण्यासाठी डिजेल जनरेटरला आवश्यकत्या उंचीची चिमणी बसवण्यात येईल जेणे करून हवेतील गॅस उत्सर्जन निर्धारित मानकांप्रमाणे राहिल.</p>
<p>घन कचरा १) ओला कचरा २) सुका कचरा ३) एकुण कचरा</p>	:	<p>२१.२५ कि.ग्रॅ. प्रती दिवस ४७.७५ कि.ग्रॅ. प्रती दिवस ६९.०० कि.ग्रॅ. प्रती दिवस</p>

परिसराची माहिती :

संबंधित क्षेत्र हे आजुबाजुच्या परिसरापेक्षा उंच स्तरावर असुन सागरतटीय निर्बंधन क्षेत्र-II विभागांत आहे. या क्षेत्राचे अक्षांश 19°01'43.96"N रेखांश 72°50'19.65"E असे असुन हे क्षेत्र मुंबई विभागातील माहिम विभाग क्षेत्रात मोडते. येथे अस्तित्वात असलेल्या व मोडकळीस आलेली जुनी इमारत तोडून रहिवासी वापरासाठी पुर्ननिर्माण करण्याचा प्रस्ताव आहे. त्यासाठी आवश्यक असणा-या विकास गरजा येथे सहज उपलब्ध आहेत. स्थानिय विकास आराखडयानुसा हे क्षेत्र रहिवासी विभागात मोडत असुन येथे राहाणा-या लोकांना पुर्ननिर्वासीत करण्याचा प्रस्ताव आहे. यामुळे त्यांचे राहाते ठिकाण बदलण्याची संभावना नाही. हा विकास करताना इमारतीचा वापर राहण्यासाठी करण्यात येणार आहे. म्हणुन या ठिकाणी आवश्यक सुविधांचा उदा: जवळ असलेली वहातुक यंत्रणा व दळणवळणाची साधने (जल, वायु, रोड, रेल्वे), हॉस्पिटल, बँका, आवश्यक खरेदीसाठीची दुकाने इत्यादी. माहिम हा विभाग आधीच उत्तमरित्या विकासीत असल्याने वरील सर्व सुविधा या प्रकल्पा पासुन ३ कि.मी अंतरातच आहेत. या प्रकल्पामुळे नैसर्गिक साधनांवर परिणाम होणार आहे. ज्याचा विचार करून व होणा-या परिणामांचे विश्लेषण करून त्यावरती वेळीच उपाययोजना करणे आवश्यक आहे.

१) पाण्याची आवश्यकता :

अ) बांधकामा दरम्यान : बांधकामा दरम्यान पाण्याची आवश्यकता एकतर बांधकामासाठी व दुसरी कडे प्रकल्पात काम करणा-या कामगारांसाठी आहे. यातील पिण्याच्या पाण्याची सुविधा बृहन्मुंबई कडून करण्यात येईल तर बांधकामासाठी लागणारे ३० घन लिटर प्रती दिवस पाणी हे पाण्याच्या टँकरद्वारे पुरविण्यात येईल.

ब) प्रकल्प पुर्ततेनंतर :

क्रमांक	माहिती	निर्मीती नंतर एकुण
१	एकुण लोकसंख्या	१३८ माणसे
२	घरगुती वापरासाठी लागणारे पाणी (एकक : घन लिटर प्रती दिवस)	९.०६

	(१० लीटर प्रती व्यक्ती)	
३	फलशिंगसाठी लागणारे पाणी (एकक : घन लिटर प्रती दिवस) (४५ लीटर प्रती व्यक्ती)	५.२५
४	एकुण पाण्याची आवश्यकता (घन लिटर प्रती दिवस)	१४.३१
५	गाडी धुण्यासाठी लागणारे पाणी (घन लिटर प्रती दिवस)	०.०९
७	एकुण सांडपाणी निर्माती	१२.४९८
८	एकुण स्वयंपाकघर व नहाणीघर वापरानंतरचे पाणी	७.२४८
९	आयोजित सांडपाणी प्रक्रिया	या प्रकल्पात फक्त स्वयंपाकघर व नहाणीघर वापरानंतरचे जमा होणारे पाणी एकत्र करून त्यावर प्रक्रिया करण्यात येईल परंतु फलशिंगचे पाणी हे वेगळे गोळा करून येथे उपलब्ध असलेल्या गटाराला जोडण्यात येईल. या ग्रे पाणी प्रक्रिया नंतर मिळणारे पाणी हे बागकामासाठी व प्रकल्पातील फलशिंगच्या पाण्याची गरज भागवण्यासाठी वापरण्यात येईल.
१०	पुर्नवापर केलेले पाणी (घन लिटर प्रती दिवस)	५.२५
११	उपलब्ध असलेल्या गटारात टाकण्यात येणारे पाणी (घन लिटर प्रती दिवस)	९.०४

सांडपाणी निर्मीती व त्याची विल्हेवाट :

या प्रकल्पात एकुण १२.४९८ घन लिटर प्रती दिवस सांडपाणी निर्माण होईल पण जागेच्या अभावी व एकुण निर्माण होणारे सांडपाणी हे १५.०० घन लिटर प्रती दिवस पेक्षाही कमी असल्या कारणाने केवळ किचन व बाथरूम वापरानंतरचे येणारे पाणी प्रकल्पात असलेल्या ग्रे वॉटर ट्रीटमेंट द्वारे दिलेल्या मानकांनुसार करण्याचा प्रयत्न केला जाईल. यातुन निर्माण होणारे स्वच्छ पाणी गाडी धुण्यासाठी किंवा प्रकल्पातील फ्लशिंग पाण्याची कमतरता कमी करण्यासाठी वापरण्यात येईल. म्हणजेच या प्रकल्पात फक्त ७.०४ घन लिटर प्रती दिवस पाण्यावर प्रक्रीया करण्यात येईल व उर्वरित पाणी हे वेगळ्या पाईप लाईन द्वारे अस्तित्वात असलेल्या गटाराला जोडण्यात येईल. अशा वेळी दिलेला सांडपाणी प्रक्रीया केंद्र चालवणे कठिण होईल म्हणुन फक्त स्वयंपाकघर व नहाणीघर सांडपाणी प्रक्रीयेकरीता वापरण्यात येईल.

ड) पावसाच्या पाण्याचे निर्गमन :

पावसाचे पाणी वाहून जाण्यासाठी दिलेल्या मानकांनुसार उपाययोजना करण्यात येईल. तसेच रिचार्ज पीट व पेवर ब्लॉक्स वापरून पावसाचे पाणी जास्तीत जास्त जमीनित मुरवण्याचा प्रयत्न केला जाईल. जेणे करून पावसाचे पाणी वाहून जाण्यासाठी बांधलेल्या नाल्यावर ताण पडणार नाही.

२) घन कचरा निर्मीती :

१) बांधकामादरम्यान :

बांधकामादरम्यान येथे दोन प्रकारचा कचरा निर्माण होईल. एकतर मोडकळीस आलेल्या इमारतीची व्हिलेवाट लावल्याने निर्माण होणारा कचरा व दुसरी कडे बांधकामा दरम्यान निर्माण होणारा कचरा.

२) प्रकल्प सुरू झाल्यानंतर :

हा प्रकल्प पुर्नबांधणी प्रकल्प असुन येथे निर्माण होणारा कचरा ओला व सुका या पध्दतीने वेगळा करण्यात येईल. त्यातील ओला कचरा खत निर्मीती साठी

वापरण्यात येईल तर सुका कचरा उदा : पेपर, प्लॅस्टिक, ग्लास इत्यादी पुनर्विनिकरण केले जाईल.

क्रमांक	माहिती	लोकसंख्या	सुका (कि.ग्रॅ प्रती दिन)	ओला (कि.ग्रॅ प्रती दिन)	एकुण (कि.ग्रॅ प्रती दिन)
१	भविष्यातील रहिवाशी	१३८	४७.७५	२१.२५	६९.००

विजेची गरज :

१) बांधकामादरम्यान :

बांधकामादरम्यान बांधकामासाठी लागणारी विजेची गरज येथील स्थानीक प्राधिकरणाकडून भागवली जाईल ही गरज जवळ जवळ ०.३० मे.वॅ. पर्यंत असेल.

२) प्रकल्प सुरू झाल्यानंतर :

प्रकल्प सुरू झाल्यानंतर या प्रकल्पासाठी लागणारी विजेची गरज अधिकतम ०.२३४ मे.वॅ. असून ती स्थानीक प्राधिकरणाकडून भागवण्यात येईल. विजेचा पुरवठा खंडीत झाल्यानंतर लागणा-या विजेची गरज ३५ के.व्ही.ए. क्षमतेच्या डिझेल जनरेटर ने भागवली जाईल. डिझेल जनरेटर फक्त गजरजेच्या वीज निर्माती साठी असेल. आगीच्या वेळेस वापरण्यात येणारे उद्वाहन, पाण्याचे पंप, इमारतीतील सर्वांसाठी वापरात असणारे विद्युत बल्ब इत्यादी. मुंबईत फारशी वीज जात नसल्या कारणाने फक्त आवश्यक वापरासाठीच डिझेल जनरेटरचे प्रयोजन केले आहे. सदर प्रकल्पात विज बचतीचे बरेचसे उपास अंमलात आणण्यात येतील.

१) उद्वाहन व पंप वेरीयेबल फ्रिक्वेन्सी ड्राईव्ह वर चालवण्यात येतील. यामुळे ३० टक्के वीज बचत होईल.

२) सर्व ठिकाणी सी.एफ.एल. दिव्यांचा प्रस्ताव आहे.

३) इमारतीबाहेरील दिवे सुर्यप्रकाशावर चालवण्यात येतील.

- ४) रहिवास व्यवस्थेंत सुर्यप्रकाशावर चालवण्यात येणारे गरम पाणी पुरविण्यात येईल.
- ५) सर्व ठिकाणचे दिवे हे स्वयंचलीत टायमर आधारीत असतील.

प्रकल्पाचा कालावधी व येणार खर्च :

हा प्रकल्प पुर्नबांधणी प्रकल्प समुद्रतटीय निर्बंध क्षेत्रात मोडतो. म्हणुन या प्रकल्पाचे बांधकाम आवश्यकते परवाने मिळाल्यानंतरच सुरूवात करण्यात येईल. या प्रकल्पाची बांधकाम बांधणी जानेवारी २०१३ मध्ये करण्याचा प्रस्ताव आहे. जर ठरवलेल्या दिनांकानुसार सुरूवात झाली तर हा प्रकल्प पुर्ण होण्यास जानेवारी २०१६ पर्यंतचा कालावधी अपेक्षीत आहे. या प्रकल्पाचा खर्च प्रमाणीत मुल्यांकना नुसार काढण्यात आला आहे.

बांधकामा दरम्यान घ्यावयाची काळजी :

या प्रकल्पात बांधकामामुळे आजुबाजुच्या परिसरावर परिणाम होऊ नये म्हणुन खालील उपाययोजना या प्रस्तावात मांडली आहे.

- १) या प्रकल्पात पुर्वबांधणी केलेले ब्लॉक्स वापरण्यात येतील. जेणे करून पाण्याची आवश्यकता कमी करता येईल व बांधकाम जागेवर निर्माण होणार धुराळा टाळण्यात येईल.
- २) बांधकाम हे पुर्वयोजने नुसार आखण्यात येईल. जेणे करून आजुबाजुच्या रहिवाशी लोकांना त्याचा त्रास होणार नाही.
- ३) ज्या बांधकाम कार्यामुळे आवाज निर्माण होईल अशी कामे रहिवाशी क्षेत्रापासून दुर ठेवण्यात येईल.
- ४) संबंधीत बांधकाम क्षेत्र पुर्णपणे १० ते १५ मीटर उंचीच्या कुंपणाने झाकण्यात येईल.

- ५) हवा, पाणी, ध्वनी, माती, या सर्व घटकांचे ठराविक वेळेत मापन करण्यात येईल व दिलेल्या मानकांप्रमाणे त्यांची पडताळणी करण्यात येईल. या गुणवत्तेत दिलेल्या मानकांनुसार फरक आढळल्यास तो फरक कोणत्या गोष्टींमुळे आला आहे याची पडताळणी करून त्यावर उपाय योजना करण्यात येईल.

सद्य स्थितीतील पर्यावरण स्थिती :

१) भौतिक पर्यावरण :

जागेची स्थलाकृती व भौगोलीक स्थान : हि जागा रहिवासी व वाणिज्य विकासाठी उपयुक्त आहे.

अक्षांश : 19°01'43.96"N
रेखांश : 72°50'19.65"E
तहसील : मुंबई
जिल्हा : मुंबई
राज्य : महाराष्ट्र

जागेभोवतीची सामाजिक संरचना :

- १) हा पुर्नविकास प्रकल्प मुंबईतील माहिम ठिकाणी असून येथे रहिवासी जागेसाठी आवश्यक ती संरचना उपलब्ध आहे.
- २) उत्तम दळणवळण व वाहतूक व्यवस्था आवश्यक आहे. तसेच आगीपासूनची सुरक्षा व इतर सुरक्षा व्यवस्था सुध्दा आवश्यक आहे. त्यासाठी अग्निशामनदल व पोलीस स्टेशन जवळ असणे गरजेचे आहे.
- ३) या सर्व व्यवस्था तसेच हॉस्पिटल, बँका, पोस्ट ऑफिस दुकाने या जागेच्या ३ कि.मी अंतरा दरम्यानच आहे.

- ४) माहिम हे आधीच विकसीत असून या येथील रहिवासीना आवश्यक गरजेसाठी फार लांब जावे लागणार नाही. दादर रेल्वे स्टेशन (सेन्ट्रल व वेस्टर्न) हे प्रकल्पापासून अंदाजे १.४ कि.मी. अंतरावर असून बस स्टॅण्ड जवळ आहे. तसेच सांताक्रुज विमानतळ प्रकल्पापासून अंदाजे १.७ कि.मी. अंतरावर आहे.

तसेच पावसाचे पाणी वाहून जाण्यासाठी व सांडपाणी वाहून जाण्यासाठी गटारे या जागेच्या बाजूला उपलब्ध आहेत.

प्रकल्प संपर्क सुविधा :

- हा प्रकल्प रोड, रेल्वे व जल वाहतूकीने जोडला गेला आहे.
- रोड – केळुस्कर रोड.
- जवळचे रेल्वे स्टेशन – दादर रेल्वे स्टेशन (सेन्ट्रल व वेस्टर्न) व माटुंगा रोड रेल्वे स्टेशन (वेस्टर्न) .
- हि जागा बस, टॅक्सी या दळणवळण साधनांनी सुध्दा जोडलेली आहे.

१) पाण्याचे पर्यावरण :

महानगर पालिकेकडचे पाणी :

महानगरपालिकेकडून होणा-या पाणी पुरवठ्याची तपासणी केली असता ते पिण्यायोग्य असून बांधकामा दरम्यान तसेच प्रकल्प पुर्तीनंतर ते पिण्यासाठी वापरण्यात येईल. बांधकामा दरम्यान हे पाणी गाळण्यासाठी अॅक्वागार्डचा वापर करण्यात येईल तसेच नित्यनेमाने या पाण्याची तपासणी होईल.

२) मातीची गुणवत्ता :

प्रकल्प ठिकाणी गोळा केलेले मातीचे नमुने समाधानकारक आढळले.

३) ध्वनीची तिब्रता :

ध्वनीची तिब्रता चार ठिकाणी मोजण्यात आली. ही तिब्रता बरेचदा वहातुकीच्या वाहनांमुळे काही ठिकाणी दिलेल्या मानकांपेक्षा जास्त आढळली.

४) जमीनीचा वापर :

हि जमीन माहिम स्थित असून जमीनीचा वापर हा रहिवाशी वापरासाठी राखीव आहे.

५) शेती व पशु संपत्ती :

हा प्रकल्प मुंबई सारख्या विकसीत जागेत असल्यामुळे येथे शेती होत नाही. हि जागा मुख्यत्वे कॉरपोरेट कार्यालय शेअरबाजार व बहुराष्ट्रीय कंपन्यांसाठी प्रसिध्द आहे.

६) सामाजिक व आर्थिक पर्यावरण :

अ) भाषा आणि धर्म :

मुंबई हे एक सर्व देशीय नगर असून विभिन्न भाषा, धर्म येथे जोपासले जातात. येथे मराठी, हिंदी, गुजराती, तामील, कन्नडा, तेलगु आणि सिंधी इतक्या भाषा बोलणारे लोक आढळतात. मुळ महाराष्ट्रीय लोकांशिवाय येथे गुजराती, मारवाडी, दक्षिण भारतीय व पंजाबी लोकांची बरीच लोकसंख्या आढळते.

ब) दुरसंचार व इतर सामाजिक सेवा :

राज्य परिवहन मुंबई बस सेवा, पश्चिमी व मध्य रेल्वे या मुंबईतील मुख्य परिवहन सेवा आहेत. आंतरराष्ट्रीय संचारासाठी जलमार्ग व हवाई मार्गाचा वापर येथे होतो. या क्षेत्रात राहाणा-या लोकांना ब-याच सुविधा उपलब्ध असून उत्तम सागरीकिनारा लाभला आहे. म्हणून मुंबई राहाण्यासाठी योग्य ठिकाण आहे.

पर्यावरण प्रभावाची ओळख, आकलन व त्यावरील उपाययोजना :

पर्यावरण प्रभावाची ओळख व आकलन करण्यासाठी वेगवेगळ्या पध्दतींचा वापर केला जातो. जेणे करून नैसर्गिक पर्यावरणावर व सामाजिक पर्यावरणावर पडणारा प्रभाव ओळखून त्याचे नियमन करण्याची उपाययोजना करता येते. यासाठी वेगवेगळ्या पर्यावरणाच्या घटकांची गुणवत्ता वेळोवेळी तपासणे गरजेचे ठरते. गुणवत्तेत होणारा फरक समजून व होणा—या बदलाची स्वीकार्यता ठरवून भविष्यात होणा—या बदलांची आखणी व उपाययोजना प्रकल्प चालू करण्या अगोदरच करता येते.

१) हवेचे पर्यावरण :

बांधकामावेळी उडणा—या धुलीकणांचे व बांधकामा दरम्यान होणा—या वहातुक प्रदुषणाने प्रकल्प ठिकाणाच्या पर्यावरणाची हानी होऊ शकते. तसेच प्रकल्प पुर्तीनंतर विजेअभावी वापरात येणा—या डि.जी.सेट मुळे तसेच प्रकल्प ठिकाणी येणा—या वहानांमुळे हवा प्रदुषण होण्याची संभावना आहे. याकरीता बांधकामादरम्यान धुळ नियंत्रण योजना, उत्तम बांधकाम जागा व्यवस्थापन व येणा—या जाणा—या वहातुकीचे नियंत्रण या सारख्या उपाय योजना या प्रकल्पात योजल्या आहेत. तसेच प्रकल्प पुर्तीनंतर प्रकल्प जागेत उत्तम वहातुक नियमन करण्यात येईल.

२) ध्वनीचे पर्यावरण :

बांधकामादरम्यान वापरात येणा—या यंत्र सामुग्रीमुळे ध्वनी प्रदुषण होऊ शकते. तसेच बांधकाम सामुग्री वाहून नेणा—या वहातुकीमुळे ध्वनी प्रदुषण होण्याची संभावना आहे. तर प्रकल्प पुर्तीनंतर वहातुकीमुळे ध्वनी प्रदुषण होऊ शकते. यासाठी बांधकामा दरम्यान पुर्ण प्रकल्प मोठे पत्रे लावून सीमीत करण्यात येईल. तसेच बांधकामासाठी वापरात येणा—या यंत्र सामुग्रीची योग्य ती देखभाल करण्यात येईल. तर प्रकल्प पुर्तीनंतर संपुर्ण कुपणाभोवती मोठी झाडे लावण्याचा प्रस्ताव आहे. जेणे करून झाडांमुळे बाहेरील वाहनांच्या आवाजाचा त्रास होणार नाही.

३) पाण्याचे पर्यावरण :

बांधकामादरम्यान होणा—या खोदकामामुळे जमीनी खालील भुगर्भपाणी तसेच पाण्याच्या वहनामुळे मातीची होणारी झिज या संभावना आढळून येतात. त्यामुळे झिज झालेली माती प्रकल्पा जवळील पावसाचे पाणी वाहून नेण्याकरीता बांधलेल्या गटारामध्ये साचुन आजुबाजुच्या परीसरत पुर सदृष्य परिस्थिती निर्माण करू शकतो. यासाठी बांधकामादरम्यान साठवण टाक्या बांधण्यात येतील. तसेच मातीची झिज होऊ नये म्हणुन उपाययोजना करण्यात येतील. प्रकल्प पुर्तीनंतर निर्माण होणा—या रहिवास व्यवस्थेमुळे एकुण १२.४९८ घन लिटर सांडपाणी तयार होईल. त्यातील केवळ स्वयंपाकघर व नहाणीघराचे पाणी वेगळे करून त्यावर प्रक्रिया करून ते पाणी शौचालयासाठी वापरण्या योग्य करण्यात येईल. त्यासाठी ग्रे पाणी प्रक्रिया प्रकल्पाचा प्रस्ताव आहे.

४) सामाजिक व आर्थिक पर्यावरण :

प्रस्तावित प्रकल्प हा गजबजलेल्या शहरात असुन या प्रकल्पामुळे मोडकळीस व धोकादायक असलेली इमारत उत्तम पध्दतीने बांधण्यात येईल. त्यामुळे येथील रहिवाशांचे जीवन सुरक्षित होईल. तसेच अशा मोडकळीस आलेल्या बांधकामामुळे शहराला आलेले गबाळे स्वरूप सुधारता येईल. या प्रकल्पामुळे सामाजिक व आर्थिक पर्यावरण सुधारण्यास मदत होईल.

या प्रकल्पाचे सामाजिक व आर्थिक फायदे :

- अ) या प्रकल्पामुळे येथे राहाणा—या रहिवाशांना उत्तम व सुरक्षित घर मिळु शकेल तसेच येथील राहाणा—या रहिवाशांचे विस्थापन होणार नाही.
- ब) या प्रकल्पामुळे बांधकामादरम्यान व बांधकाम पुर्तीनंतर व्यावसायिक संधी उपलब्ध होतील. ज्यामुळे कुशल व अकुशल लोकांना प्रत्यक्ष व अप्रत्यक्ष रित्या रोजगार उपलब्ध होईल.
- क) या प्रकल्पामुळे या संपुर्ण जागेचा विकास होऊन शहराचा विकास होईल.

सारांश :

प्रकल्प विकासक मे. श्री चामुंडा रिएल्टर्स हा एक पर्यावरण दक्ष विकासक असून पर्यावरणाची हानी होऊन न देता भविष्यात सर्वाना फायदेशिर होणारा प्रकल्प निर्माण करू इच्छितो. हा प्रकल्प मुंबईच्या माहिम परिसरात असून सी. आर. झेड. -२ नी बाधीत आहे. परंतु हि जागा स्वातंत्र्य वीर सावरकर मार्गाच्या दुस-या बाजुला असून जमीनीकडच्या दिशेने आहे. हा प्रकल्प उत्तम प्रकारे विकसित केला असून यात आगीची सुरक्षितता, पर्यावरणाची सुरक्षितता व महानगर पालिकेने घालून दिलेल्या नियमांची पुर्ततेप्रमाणे योजलेला आहे. येथे पावसाच्या पाण्याचे संचयन, घन कचरा व्यवस्थापन व ग्रे पाणी प्रक्रिया प्रकल्प या आणि अशा अनेक पर्यावरण सुधार कार्यक्रमांनी संयोजित केला आहे. येथे हवा, पाणी, ध्वनी व जमीन या पर्यावरण घटकांचे अध्ययन करून त्यावर होणा-या परिणामांची दखल घेऊन त्यावर उपाययोजना केलेली आहे. यासाठी पर्यावरण व्यवस्थापन योजना व आपात कालीन व्यवस्थापन योजना यांचा समावेश करण्यात आला आहे. या प्रकल्पात सुर्य उर्जेचा वापर पाणी तापवण्यासाठी करण्यात येईल. तसेच संपुर्ण इमारत ही उर्जा बचत करणा-या दिव्यांनी प्रकाशित असेल. प्रकल्पाच्या कॉंक्रीट कामात फ्लाय अॅशचा वापर करण्यात येईल. तसेच सध्याच्या पर्यावरणाची हानी होणार नाही याची काळजी घेण्यात येईल.

EXECUTIVE SUMMARY
REDEVELOPMENT OF RESIDENTIAL
PROJECT

AT

**C. S. No. 1730 OF MAHIM DIVISION AT KELUSKAR
ROAD, DADAR (W), MUMBAI - 400028.**

BY

SHREE CHAMUNDA REALTORS

1. INTRODUCTION

After recognizing the need of development of **Dinanath Guru Bhuvan** having total 8 nos. of tenants/occupants residing at very dangerous building structure is now being developed by Shree Chamunda Realtors, a developer of the plot at C.S. No. 1730 of Mahim Division at Keluskar Road, Dadar (W), Mumbai - 400028 is developing a residential building.

The existing structure is of Ground Floor + 3 upper Floors having one Cessed A and C category structure. The land use of the Existing plot is Residential as per the Development Plan Remarks.

The same is now developed into a residential cum commercial building of **Basements + Ground + 1 - 21 upper Floors**. The site is surrounded by many more authorized structures.

The site under reference is affected by **CRZ-II zone**. It is situated on the landward side of the existing **Veer Savarkar Marg**. Hence the work is permitted subject to the approval of CRZ clearance. Thus property attracts the CRZ legislation, which is reflected in CZMP plan.

The development site does not fall or contain the environmentally sensitive areas as specified in the coastal Regulation zone notification.

The total cost of the project is Rs. 16,30,00,000/- (Sixteen Crores Thirty Lakh only) as per the valuation report.

2. PURPOSE OF THE REPORT

Proposed redevelopment on plot bearing C.S. No. 1730 of Mahim Division at Keluskar Road, Dadar (W), Mumbai-400028 as per clause 33(7) of DCR – 1991 in force as on 6th January 2011 and thereby obtain CRZ-Environmental Clearance as per S.O.19(E) dated 6th Jan 2011. The Plot is occupied by a Cessed A and C category building, which is proposed to be redeveloped. As per MoEF Notification dated 6/1/2011, redevelopment of dilapidated, cessed and unsafe buildings in CRZ areas are permitted with special advantages, in which the project is planned as per DCR's in force as on 6/1/2011 and staircase/ lobby/ lift area is claimed free of FSI, as per clause 35(2)c of DCR 1991. The proposal is submitted for prior CRZ clearance, as per the requirement of amended CRZ notification-2011 and the check list finalised by MCZMA vide Office Memorandum dated 02/07/2011.

Current development thus will help the existing tenant to get permanent, safe structure. At present they are residing in unsafe building. Photos of the same are attached in Annexure XIII.

3. DESCRIPTION OF THE PROJECT

3.1 NATURE OF THE PROJECT

This is a proposal for development of residential building situated at Keluskar Road, Dadar, Mumbai in CRZ-II belt, as the same is situated within 500 mtr. from Arabian Sea. (Approx distance 259 m)

The proposal is for redevelopment of residential building, which is situated near Shivaji Park and is on the landward side of **existing Veer Savarkar Marg; which is in existence much prior to 19th Feb 1991.**

The Plot is situated in Residential zone and not under any reservation as per 1967 DP as well as Revised 1993 DP. The FSI permitted on the plot under reference is 2.5, as per DCRs in force as on 6th Jan 2011. However, the FSI proposed to be consumed is 2.5 only.

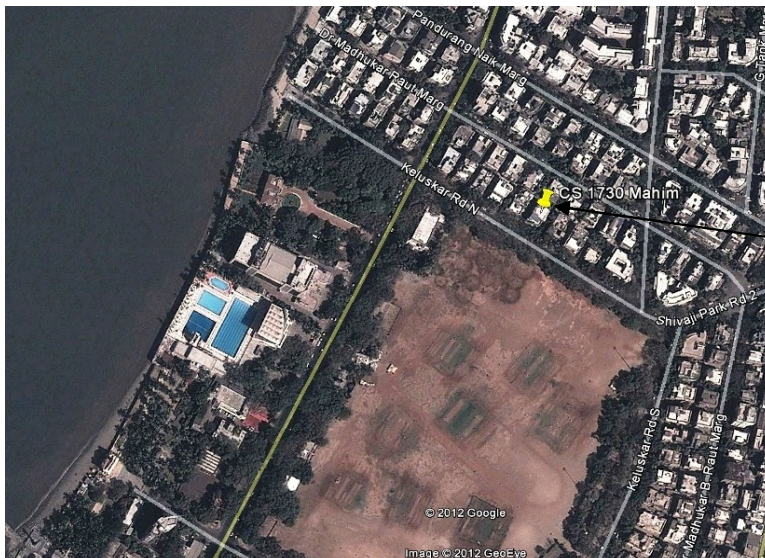
3.2 SIZE OF THE PROJECT

Area of the plot is 562.71 sq. mtr for which 1406.78 sq. mtr. area is proposed for FSI purpose. Cost of the Project is Rs. 16,30,00,000/- (Sixteen Crore Thirty Lakh).

3.3 LOCATION

The C.S. No. 1730 of Mahim Division at Keluskar Road, Dadar (W), Mumbai- 400028 is in the heart of the city. The nearest railway station is Dadar Railway Station 1.4 Kms on the central and western line and Matunga Road railway station 1.5 Kms on western line. The building is located around 259 meters away from the High Tide Line.

Google Earth Image of the site

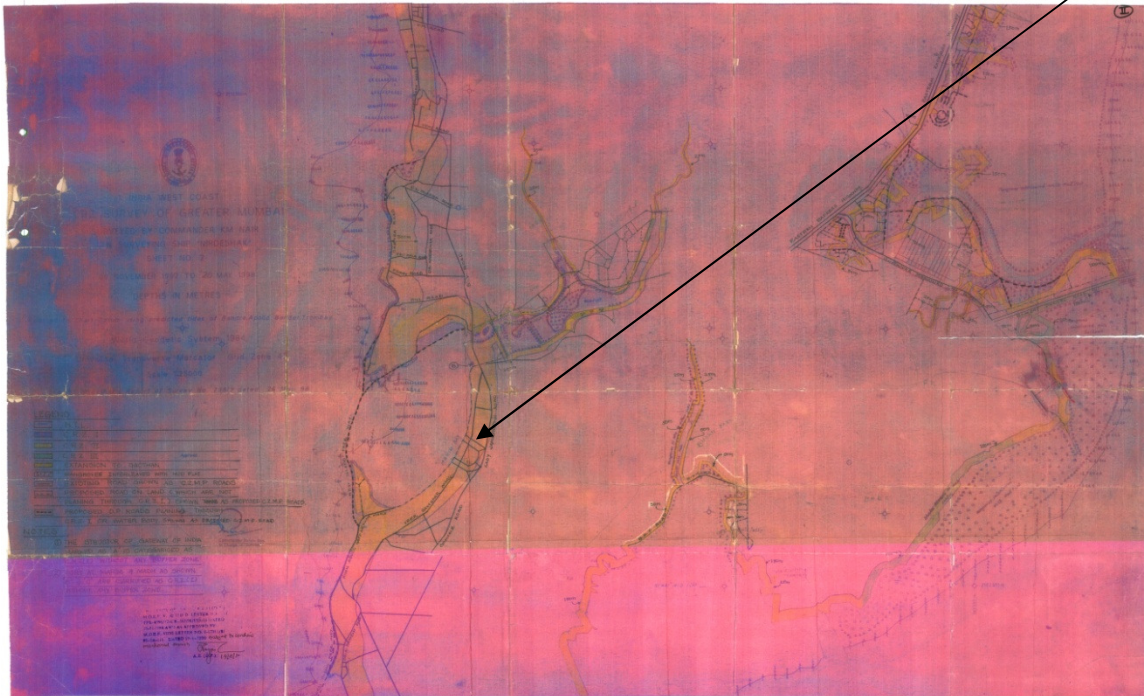


SITE UNDER REFERENCE



SITE UNDER REFERENCE

CZMP Plan showing location of reference Plot



3.4 SITE DESCRIPTION

The site under reference is affected by CRZ-II zone and the property falls on the landward side of the existing **Veer Savarkar Marg in existence prior to 19/2/1991, as may be seen from CZMP of Mumbai and 1967 DP**. Thus property attracts the CRZ legislation as per CRZ 2011.

The development site does not fall or contain the environmentally sensitive areas as specified in the coastal Regulation zone notification. Total plot Area in CRZ is 562.71 m².

Town / Tehsil	: Mumbai
District	: Greater Mumbai
State	: Maharashtra
Latitude	: 19° 01' 43.96" N
Longitude	: 72° 50' 19.65" E

3.5 PROPOSED DEVELOPMENT

3.5.1 AREA

Sr. No.	Description	Details
1	Total Plot Area	562.71 sq.m
2	Deductions for setback area	Nil
3	Balance area of plot(1-2)	562.71 sq.m
4	FSI Permissible	2.5
5	Permissible Built up area	1406.78 sq.m
6	Total Built up Area Proposed.	1406.78 sq.m
7	Total Construction Area	5287.00 sq.m (Approx.)
8	Parking required by MCGM Rule	13
9	Parking provided	17

PROJECT DEVELOPMENT DETAILS

Proposed development		
1	Structure of Building	Basement + Ground Floor + 1 to 21 upper floors including parking floors
2	Tenements proposed	12 nos.
3	Tenements existing	8
4	Height of Building from Ground level	65.35 mtrs
5	Emergency Power supply (D.G. Nos. x KVa	1 no. 35 KVa
6	Area required for D.G sets	5 sq. mtrs
7	Salient features of the project	
	<ul style="list-style-type: none"> • Earthquake Resistance Building structure. • Rain water Harvesting System in the complex. • Energy Conservation; Provision of Solar water heating system. • Eco-Friendly Measures. • Optimum use of Timber. 	

3.5.2 UTILITIES

The Utilities required during the construction phase area water, power, fuel and Labour.

i) **WATER :** (Expected Consumption – total 35 cum/day)

For Construction activities: 30 cum/day & For Domestic use: 5 cum/day

Water Balance (Construction Phase)				
Sr. No.	Consumption	Input m ³ /Day	Loss m ³ /Day	Effluent m ³ /Day
1.	Construction Activities	30	30 (Tanker consumption)	Nil
2.	Domestic (50 Site Workers)	5	1	4
Total		35	31	4

Water Balance (Operation Phase)					
Sr. No.	Component/ Head	Occupants	Water Requirement		Remarks
			Domestic	Flushing	
1	Total residential population	90	8.1	4.05	@ 90/45 lpcd
2	Total Commercial population	-	-	-	@ 20/25 lpcd
3	Total non residential population	48	0.96	0.12	@ 20/25 lpcd
4	Car washing	17	0.09 CMD		17 cars (@5L per car)
5	Total Quantity of Water Required	138	14.31 CMD		For a total population of 138
6	Grey Water generation	138	7.248 CMD		7.14 CMD to Treatment plant (capacity 9 CMD) after 1.5% evaporation losses
7	Sludge generated	-	0.01 CMD		-
8	GTP treated recycled water	-	7.04 CMD		-

1] Source: - Water will be available from Mumbai (MCGM) for domestic use and from Tanker for construction purpose

2] Storage: - Water for construction will be stored in open tank.

Drinking water will be stored in High Density Polyethylene (HDPE) tank.

ii) **POWER**

DURING CONSTRUCTION

(Expected Consumption- about 0.3 MW)

- 1] An Electricity supply of 0.3 MW will be available from BEST. It is mainly required for some construction equipments, general lighting etc.
- 2] All Fire & Safety measures will be taken as appropriate and will be supervised by the Authority.

DURING OPERATION

Total Energy consumption: 0.234 MW

The electricity supply will be available from BEST.

iii) **FUEL**

DURING CONSTRUCTION PHASE

Diesel (5 L/day during excavation & 10 L/ day post excavation).

All the equipment are electrically driven except JCB, poclain, and concrete mixers.

DURING OPERATION PHASE

Diesel will be required to run the D. G. Set in case of power failure. Hence the quantity of diesel consumed will vary depending upon the usage of D. G set.

1. Storage: Diesel and oil will be stored in drums / tins with proper identification mark/labels in identified areas only.
2. Fire and safety measures will be taken as per the guidelines from concerned authority.
3. All Safety and fire precautions will be followed.

iv) **MANPOWER**

DURING CONSTRUCTION PHASE

(Expected Manpower – about 50)

Approximately 50 persons will be working during the peak time of construction phase. These persons will be on the project site during 0900 hrs. Except Security Personnel, who will be on the field round the clock for twenty – four hours.

DURING OPERATION PHASE**POPULATION**

There will be about 138 persons residing in the building, out of these, 48 will be floating non residential staff including drivers, security.

4. CONSTRUCTION PHASE

The type of Construction Materials, Equipments used during the construction phase and persons involved in various activities on the field affect the status of environment to a great extent. The impact of construction Activities on various components of environment on the on the project site and surrounding area is predicated in this section.

4.1 LIST OF MATERIALS

The Construction material required for the proposed redevelopment is given below.

Sr. No.	Item	Unit	Quantity	Source	Process
1.	Sand	CUM	1557	River bed/ Creek	Nil
2.	Aggregate	CUM	3464	Quarry	Crushing
3.	Standard Bricks	M.T	1254	Red Soil	Heating, Moulding
4.	Timber	M.T	57	Forest	Cutting & Trimming
5.	Construction Waste	Kg/ Day	107	-	-

- The basic engineering materials like aggregate, cement, sand and bricks/blocks will be purchased locally. However, finishing materials will be purchased keeping in mind the energy conservation aspect.
- Fly ash generated from Thermal Power Plants will be used in concrete to the extent of about 20 to 30 %. Depending up on the grade of concrete specified.

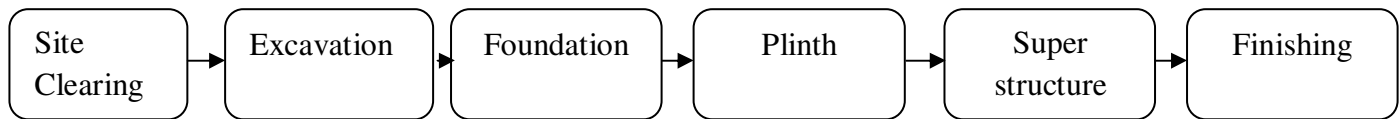
4.2 LIST OF EQUIPMENTS

The construction equipments required for the residential building is given below.

Sr. No.	Equipments	Numbers	Operation	Duration
1.	JSB, Poclain	1	Diesel	Short
2.	Dumpers	2	Diesel	Short
3.	Goods lifts / Personal lifts	1	Electric	Total
4.	Vibrators	4	Electric	Total
5.	Dewatering Pumps	1	Electric	Total
6.	Concrete Mixers	1	Electric	Total
7.	Wood Cutting Machine	1	Electric	Total
8.	Drill Machine	1	Electric	Total

4.3 CONSTRUCTION PROCEDURES

The outline of the construction procedure is described below schematically.



Note:

- 1] The project is expected to be completed within three years (Maximum) period Construction Parameters and Quality will be strictly adhered to as per the approved architectural design data/map. All the regulations of government authorities will be followed.
- 2] All the safely precaution will be observed as per the guidelines during the construction phase. Personal Protective Equipments (PPE) will be provided to all the personnel involved in the construction activities.
- 3] Site barricading by corrugated tin sheets up to height of 5.0 mtr will be done to protect the surrounding area of the project site from nuisance /dusting.

- 4] All electrical connections & cables will be checked by authorized persons to ensure the safety of workers on field.
- 5] Water sprinkling will be done, wherever required to reduce the dusting in atmosphere. Jute barricading along building / plot boundary shall be provided to minimize noise level from construction activities.
- 6] The safety and security officers shall supervise the site.
- 7] Safety helmets will be mandatory to all the persons present on the site during the construction activities.
- 8] Hand gloves and dust masks will be provided to persons handling construction materials during the operation.
- 9] Safety belts will be provided to the persons working at height during the operation.
- 10] Safety nets will be arranged at a height at about 5.0 mtr.when the structures get raised above the required height from the ground.

5. ENVIRONMENTAL CONCERNS

5.1 AIR POLLUTION

1] Source: - The source of Air Emissions is from the use of some equipment like concrete pumps, mixers, etc. These equipments consume Diesel as fuel during their operation. Carbon Monoxide, Hydrocarbons, Oxides of Nitrogen and Particulate Matter etc. will be the major pollutants.

Fugitive Emissions i.e. Emissions from construction activities will mainly consist of dust. Movement of Heavy & light vehicles, for loading and unloading of Construction Materials, transporting people, will also add on to source of emissions.

Parameter	Permissible Range	CPCB Limits	AVG Range Before Activity	During Activity
SPM ($\mu\text{g}/\text{m}^3$)	100 ~ 200	200	80-100	150-200
RSPM ($\mu\text{g}/\text{m}^3$)	50 ~ 100	100	20-30	50-100
SO ₂ ($\mu\text{g}/\text{m}^3$)	50 ~ 80	80	10-15	10-15
NO _x ($\mu\text{g}/\text{m}^3$)	40 ~ 80	80	5-10	5-10

Ref: 24 Hourly values as per Central Pollution Control Board, National Ambient Air Quality Monitoring, Notification 11th April, 1994, Schedule 1.

5.2 AIR POLLUTION MITIGATION

Sr. No.	Source	Mitigation	
1.	Vehicle	i]	All the vehicles coming to the site will be ensured to be in good condition having PUC.
		ii]	Public awareness to use Green Fuel will be done.
2.	Solid Waste	i]	Proper segregation and collection of waste will be ensured.
		ii]	Location of loading and unloading will be fixed.
		Iii]	Good Housekeeping practices will be ensured at the premises.
3.	Construction Activities	i]	Noise / Dust nuisance preventions by barricading site up to 5.0 meter height by GI Sheets
		ii]	Water sprinkling on dry site, sand.
		Iii]	Maximum use of electrical driven construction equipments with regular maintenance.

5.3 WATER POLLUTION

1] **Use** : - The MCGM water will be used for domestic purpose i.e. drinking water for staff and laborers working on the field whereas bore well water/Tanker water will be used for various constructions activities like, Concreting, Plastering , Flooring & Finishing etc.

2] **Effluent** : - There will be no generation of effluent from construction activities as the water used for concreting; Plastering, Flooring and Finishing etc. will get evaporated during drying or curing time. All the construction activities are physical in nature. The Domestic Effluent will be generated due to the persons working on the site who will require water for drinking, cleaning, bathing etc.

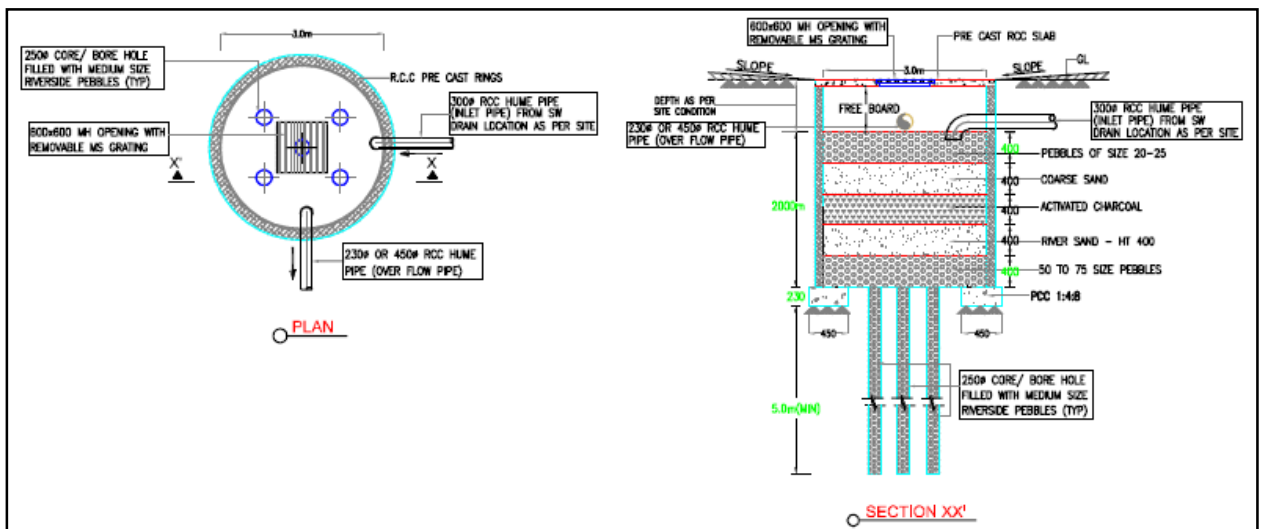
Grey Water generated during operation phase will amount to 7.248 CMD of which 7.14 CMD will be treated in the Grey Water Treatment Plant. The treated water will be used for non domestic purposes such as gardening, flushing etc.

3] **Treatment & Disposal**:-The Domestic Effluent generated in construction phase will be disposed off in existing MCGM Sewer.

4] **Rain Water Harvesting** : The plot is already covered with CESSSED A and C category structures of Ground + 3 Upper Floors which will be developed into Basement + Ground + 1-21 Upper Floor. The plot area is 562.71 sq mtrs, which is very small. Hence roof rain water harvesting is proposed in the project. The permeable paver blocks are proposed along with 1 Recharge pits to increase the percolation of rain water into the soil rather than flowing to the drain.

* (AS PER MOEF GUIDELINES)

- **Percolation Pits: 1 nos. (0.5 * 0.5 * 2m)**



5] Storm Water Discharge:

Storm water drains will be constructed for proposed facility as per the norms. The recharge pits and Rain water recharge pits will help to reduce the run off and reduce the load on external storm water drain.

5.4 NOISE POLLUTION

Location	Range dB (A)
	Day Time
National Ambient Air Quality Standards (For Residential Zone)	55

5.5 NOISE LEVEL MITIGATION

Sr. No.	Source	Mitigation
1.	Near Residential Areas	i] Site Barricading by corrugated tin sheets will be done to protect the surrounding area. ii) Construction Activity will be carried out during daytime only.
2.	Nearby Traffic	i] All the vehicles coming to the site will be ensured in good condition, having Pollution Under Check (PUC). ii] Smooth Roads will be maintained in a project site.
3.	Construction Equipments	i] All the equipments will be run during daytime only. ii] Lubricants will be applied to all the equipments at proper interval. Iii] Acoustic Enclosure will be provided for all the Equipments

2] It is evident from the nature of operation (i.e. Construction) that the Concentration of suspended particulate matter would be higher than the other two parameters.

3] Control of Emission: - Proper precaution will be taken to reduce the particulate matter by water sprinkling on the dry site area, barricading the periphery by corrugated tin Sheets of 5.0 mtrs height to protect the surrounding area from dusting. The pollution generated will be controlled by, allowing vehicles that will comply to mass Emission Standard (Bharat Stage –II) stipulated by Central Pollution

Control Board (CPCB)–Ministry of Environment & forest (MoEF), New Delhi. Also it will be ensured that the vehicles will carry PUC certificate. To minimize air pollution efforts shall be made by use of equipments, which area electric power driven.

5.6 SOLID WASTE

1] Normal debris, waste concrete, soil, broken bricks, waste plasters etc. will be collected properly and will be reused for land filling in the premises.

2] Total solid waste (Quantity about 69 kg per day) and organic waste (21.25 Kg/ day) will be segregated properly and stored in a separate bins and will be disposed off as per MCGM rules.

3] Metallic Waste and paper waste will be collected separately and will be salvaged or recycled or sold to authorized recyclers.

6. PROJECT SCHEDULE AND COST ESTIMATES

The Proposed Project is Redevelopment project and will be started as soon as all government NOC's and CRZ Clearance is received to start the work. The projected Date of Start is January 2013 while the Date of completion will be Jan 2016 if everything went as per planning.

7. TRAFFIC MANAGEMENT

7.1 CONSTRUCTION PHASE

- Storage and Godown area will be properly identified.
- There will be about adequate wider space for movements of vehicles and parking.
- The area for loading and unloading will be located at proper demarcated location in the premises.
- Thus the traffic management on the project site will be easily and smoothly monitored without any hindrance to the regular flow of traffic on the main road.

7.2 OPERATIONAL PHASE

- About 17 cars per day are expected to be accommodated in the premises. The parking space will be provided in basement and under stilt / parking floors. There is ample car parking space in the building on all sides; there will be smooth movements of cars.
- There will be 6.0 mtrs wide approach road to the building from municipal road for movements of vehicles and parking.
- Traffic Management Plan system will be approved from concern MCGM Authority.
- Thus the traffic management will be easily and smoothly monitored without any hindrance to the regular flow of traffic on the main road.

8. ENVIRONMENTAL, HEALTH AND SAFETY

All the safety and security measures shall be observed at constructions site. Safety precautions will be observed as per the guidelines during the construction phase. Personal Protective Equipments (PPE) will be provided to all the personnel involved in the construction activities. The project authorities will ensure use of safety equipments for workers during execution process. The safety and security officers shall supervise the site. Proper training will be given to workers and authorities to handle the hazard situation.

8.1 SAFETY MEASURES ON SITE

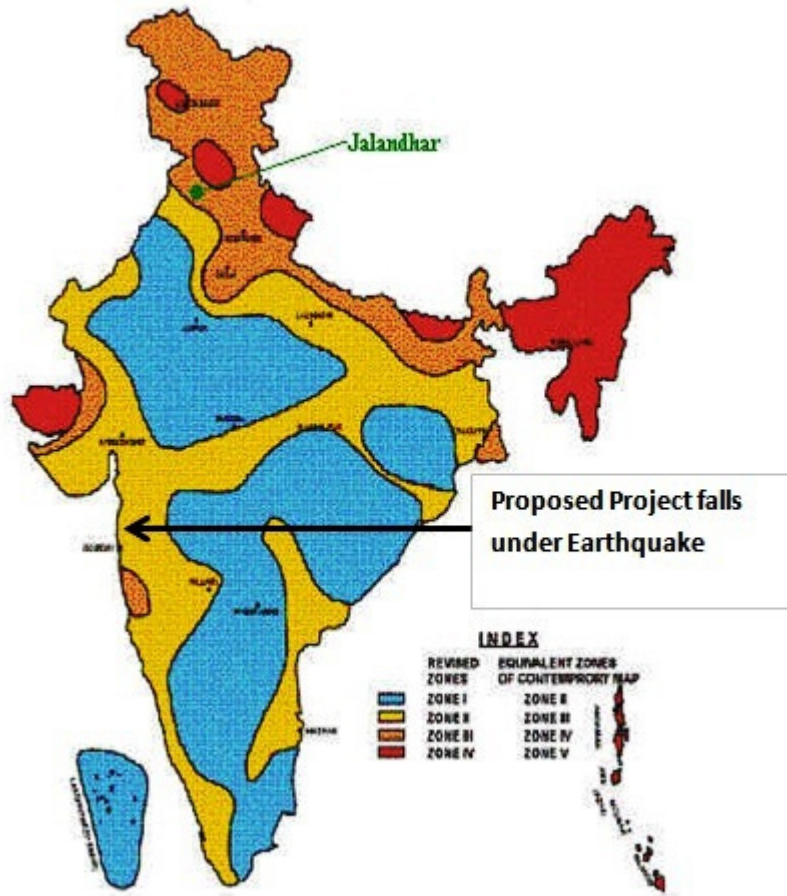
- 1] Parameters and Quality will be strictly adhered to as per the approved architectural design data/map. All the regulations of government authorities will be followed.
- 2] All the safely precaution will be observed as per the guidelines during the construction phase. Personal Protective Equipments (PPE) will be provided to all the personnel involved in the construction activities.
- 3] Site barricading by corrugated tin sheets up to height of 5.0 mtr will be done to protect the surrounding area of the project site from nuisance /dusting.
- 4] All electrical connections & cables will be checked by authorized persons to ensure the safety of workers on field.
- 5] Water sprinkling will be done, wherever required to reduce the dusting in atmosphere. Jute barricading along building / plot boundary shall be provided to minimize noise level from construction activities.

- 6] The safety and security officers shall supervise the site.
- 7] Safety helmets will be mandatory to all the persons present on the site during the construction activities
- 8] Hand gloves and dust masks will be provided to persons handling construction materials during the operation.
- 9] Safety belts will be provided to the persons working at height during the operation.
- 10] Safety nets will be arranged at a height at about 5.0 mtrs when the structures get raised above the required height from the ground.

9. **BENEFITS OF THE PROJECT**

- The proposed redevelopment will initiate redevelopment of surrounding old building.
- The surrounding area will also be developed from residential point of view.
- It will provide employment opportunities to the local people in terms of labour during construction and services personnel during operational phase.
- Modern sanitation and infrastructure facilities will have minimal impact on living condition of local people.
- The project will improve living standard and welfare of the area and local people.

SEISMIC ZONE MAP OF INDIA



ANNEXURE – IV**FORM 1 for seeking clearance for projects attracting CRZ notification****1. Basic Information**

Sr. No.	Item	Details	
1	Name of the project/s	Development of Residential Project	
2	Location or site alternatives under consideration	Proposed development of Residential Building on plot bearing C.S. No. 1730 of Mahim Division at Keluskar Road, Dadar (W), Mumbai-400028	
3	Size of the project (in terms of total area)	Total Plot Area	562.71 m ²
		Built Up Area	
		Total Built up area proposed	1406.78 m ²
		Total Construction area proposed	5287.00 m ²
4	CRZ Classification of the area	CRZ II	
5	Cost of the project	Rs. 16,30,00,000 (Sixteen Crore Thirty Lakhs)	
6	Contact information	Shree Chamunda Realtors Office No. 1, Ground Floor, Behind Sane Niwas, Taikalwadi, Off L.J. Road, Matunga (W) Mumbai 400016 Tel : 2438491/2438492/65184445 Email : shreechamunda@yahoo.co.in	

(II) Activity**1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies and the like)**

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	No	Land reserved for Residential purpose. Redevelopment of the same would not change the land use. Refer Page 1 of Executive Summary
1.2	Details of CRZ classification as per the approved Coastal Zone Management Plan	Yes	The plot under reference falls under CRZ II as per the approved Coastal Zone Management Plan (CZMP). Refer Page 3 of Executive Summary
1.3	Whether located in CRZ-I area?	No	Not Applicable
1.4	Distance from CRZ-I areas	No	Not Applicable.
1.5	Whether located within the hazard zone as mapped by Ministry of Environment and Forests/ National Disaster Management Authority?	No	The building is located around 259 meters away from the High Tide Line. Refer Page 2-3 of Executive Summary
1.6	Whether the area is prone to cyclone, tsunami, tidal surge, subduction, earthquake etc.?	No	The proposed structure is designed taking in to consideration the Earthquake zone i.e. it falls in Seismic Zone III as per The Geological Survey of India. The area is not prone to cyclone, tsunami, earthquake etc.
1.7	Whether the area is prone for saltwater ingress?	No	Not Applicable
1.8	Clearance of existing land, vegetation and buildings?	No	It is a redevelopment project. Existing vegetation will not be affected
1.9	Creation of new land uses?	No	Land uses for residential purpose Refer Page 1 of Executive Summary
1.10	Pre-construction investigations e.g. bore hole, soil testing?	Yes	Soil samples taken within the plot premises for geotechnical investigation. Soil toxicity testing has been carried out.

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.11	Construction works?	No	Not yet started, residential project, will be started after obtaining all the statutory approvals Refer 4.0 Page 8 of Executive Summary
1.12	Demolition works?	Yes	Excess debris material will be sent to the authorized debris disposal site as per debris management rules of MCGM.
1.13	Temporary sites used for construction works or housing of construction workers?	Yes	Site office, storage for construction material is required. All the construction workers will be locally deployed and hence no major Labour camps are required. However, minimal Labour housing will be provided.
1.14	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	There will be above ground building. Buildings will be residential building. Excavation will be done for building basement and foundation only.
1.15	Underground works including mining or tunnelling?	No	Not Applicable
1.16	Reclamation works?	No	Not Applicable
1.17	Dredging/reclamation/land filling / disposal of dredged material etc.?	No	Not Applicable
1.18	Offshore structures?	No	Not Applicable
1.19	Production and manufacturing processes?	No	This is residential project
1.20	Facilities for storage of goods or materials?	Yes	Temporary sheds / identified & cordoned area for storage of construction material within plot premises.

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.21	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	The sewage will be let out in the municipal sewer line as total water requirement is of 14.31 CMD very less for economic feasibility of a Sewage Treatment Plant for a residential building of population of 138 persons. Hence Grey water treatment plant is proposed. Refer 3.5.2 (i) Page 5-6 of Executive Summary
1.22	Facilities for long term housing of operational workers?	No	Not Applicable
1.23	New road, rail or sea traffic during construction or operation?	No	Existing road and rail network will be used for movement of material transport during construction phase as well as by the occupants during operational phase of the project.
1.24	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	Not Applicable
1.25	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Not Applicable
1.26	New or diverted transmission lines or pipelines?	No	Not Applicable
1.27	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not Applicable
1.28	Stream and river crossings?	No	Not Applicable
1.29	Abstraction or transfers of water form ground or surface waters?	No	Not Applicable
1.30	Changes in water bodies or the land surface affecting drainage or run-off?	No	There will not be any changes in water bodies or the land surface

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.31	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Construction workers and construction materials, Demolition & construction waste will be transported by trucks & tempos. Refer 3.5.2 (iv) & 4.1 Page 7 & Page 8 of Executive Summary.
1.32	Long-term dismantling or decommissioning or restoration works?	No	Not Applicable
1.33	Ongoing activity during decommissioning which could have an impact on the environment?	Yes	Existing structure will be demolished and debris will be disposed as per the Municipal rules. Utmost care will be taken while demolishing the structure. Site barricading and water sprinkling will be done to arrest the spreading dust during demolition work. No demolition work will be carried out in night time.
1.34	Influx of people to an area in either temporarily or permanently?	Yes	There will be only construction workers (50 nos) during construction period of the project. Project will result in influx of residential population of approximately 90 nos. Floating population = 48
1.35	Introduction of alien species?	No	Not Applicable.
1.36	Loss of native species or genetic diversity?	No	No threat of species loss will occur
1.37	Any other actions?	No	No

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

Sr. No.	Information/checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	No	Already developed land is being used for redevelopment. The proposed development is as per the Development Plan of MCGM.
2.2	Water (expected source & competing users) unit: KLD	Yes	Total water requirement 14.31 m ³ /day, Construction Phase : 35 CMD Operation Phase : 14.31 CMD Source from MCGM water supply & tankers. Refer 3.5.2 (i) Page 5-6 of Executive Summary
2.3	Minerals (MT)	No	Not Applicable
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	Yes	Quantity : As per requirement Stone aggregates demand will be met from the clay/soil generated after excavation and cutting of rocks and from open market Sources: The material required for construction activities shall be procured from company's authorized / approved vendors only. The vendor's performance will be monitored periodically. In case of urgency or non-availability of materials from authorized/approved vendors, it will be procured from the open market. Refer 4.1 Page 8 of Executive Summary.
2.5	Forests and timber (source – MT)	Yes	Quantity : 57 MT Source: Certified local suppliers. Timber will be required for doors. Timber will be sourced from local suppliers. Refer 4.1 Page 8 of Executive Summary

2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	Construction Phase Source : BEST Total energy consumption : 0.30 MW Operational Phase: Source : BEST Total energy consumption 0.235 MW Refer 3.5.2 (ii) Page 7 of Executive Summary
2.7	Any other natural resources (use appropriate standard units)	No	Not Applicable.

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	No	Not applicable
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	There is no possibility of diseases. No stagnant water, no contamination of water or other material will happen during and post construction. MCGM rules will be followed for proper housekeeping to keep the site hygienic and free of any disease like malaria etc.
3.3	Affect the welfare of people e.g. by changing living conditions?	No	The project is a Residential project. It will provide employment opportunities to the local people in terms of labour during construction and services personnel during operational phase. Modern sanitation and infrastructure facilities will have minimal impact on living condition of local people. Thus the project will improve living standard and welfare of the area and local people.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	Proposed project will not affect hospital patients, children etc.
3.5	Any other causes, that would affect local communities, fisherfolk, their livelihood, dwelling units of traditional local communities etc.	No	Not Applicable

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	Not Applicable
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Total Municipal Solid Waste generated will be 69 kg/per person per day by occupants. Refer 5.6 Page 15 of Executive Summary
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	No	Not Applicable
4.4	Other industrial process wastes	No	Not Applicable
4.5	Surplus product	No	Not Applicable
4.6	Sewage sludge or other sludge from effluent treatment	Yes	Quantity : 0.01 CMD The sewage will be let out in the municipal sewer line as total water requirement of 14.31 CMD is very less for economic feasibility of an STP for a residential building of population of 138 persons. Hence only grey water treatment plant is proposed to treat water from bathrooms and kitchens. This water will be used after treatment for gardening and car washing. Refer 3.5.2 (i) Page 5-6 of Executive Summary
4.7	Construction or demolition wastes	Yes	The same will be disposed off at recognised municipal sites.
4.8	Redundant machinery or equipment	No	Not Applicable
4.9	Contaminated soils or other materials	No	Not Applicable
4.10	Agricultural wastes	No	Not Applicable
4.11	Other solid wastes	No	Not Applicable

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	No	<p>Stationary Source: DG sets</p> <p>Minimal impact on air quality due to operation of Diesel Generator during power failure. Emissions of PM, SO₂, NO_x, CO and Noise from DG operation are envisaged.</p> <p>Mobile Source: Vehicular movement</p> <p>The major pollutant due to vehicular movement will be CO. The maximum contribution by vehicular movement to atmospheric concentration of CO.</p> <p>Refer 5.1 Page 11 of Executive Summary</p>
5.2	Emissions from production processes	No	Not Applicable
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive emission from handling such as sand, aggregates and cement
5.4	Emissions from construction activities including plant and equipment	Yes	Transportation of construction material, DG sets etc.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Transportation, loading and unloading of material will generated dust. No odour from sewage is envisaged as it will be carried through underground drainage network. Waste will be segregated at source and will be disposed off daily as per MCGM rules.
5.6	Emissions from incineration of waste	No	Not Applicable
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Not Applicable
5.8	Emissions from any other sources	No	Not Applicable

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	<p>Construction phase: The noise & vibrations will be generated from</p> <ul style="list-style-type: none"> • Construction machinery • On-going construction activity <p>Operation phase: Potential noise generating sources during operation phase are:</p> <ul style="list-style-type: none"> • DG sets (in case of power failure) • STP • Vehicular traffic. <p>However, all the equipments will be kept in acoustic enclosures and hence the noise will be well within permissible standards.</p> <p>Refer 5.5 Page 14 of Executive Summary</p>
6.2	From industrial or similar processes	No	Not Applicable.
6.3	From construction or demolition	Yes	<p>Minor construction machinery as Ready Mix Concrete is to be used.</p> <p>Refer 4.2 Page 9 of Executive Summary</p>
6.4	From blasting or piling	No	Open foundation
6.5	From construction or operational traffic	Yes	By movement of trucks for material & Ready Mix Concrete.
6.6	From lighting or cooling systems	No	Not Applicable
6.7	From any other sources	No	Not Applicable

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	No	Not Applicable
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	Yes	The sullage generated on the project site will be treated in the Grey Water treatment plants proposed on the site. The treated water will be used for non-domestic use and the excess treated water will be let out in the MCGM sewers. Refer 3.5.2 (i) Page 5-6 of Executive Summary
7.3	By deposition of pollutants emitted to air into the land or into water	No	Not Applicable
7.4	From any other sources	No	Not Applicable
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	Not Applicable

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

Sr. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	No	Fire and Safety measures will be followed as per MCGM rules both during construction and operation phases. HSD, which is used as fuel for DG sets will be properly stored and used as per rules & regulations. Also, quantity required is very less. The probability of hazard would be almost negligible. Proper safety measures will be followed at the site to avoid any accidents from hazardous substances.
8.2	From any other causes	No	In case of accident and collapse of building, there is risk to the workers on site
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	No	The proposed structure is designed as per Seismic Zone III standards. Refer Page 18 for Seismic Zone Map of India in Executive Summary

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

Sr. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting, facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: <ul style="list-style-type: none"> • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries • other 	No	Not Applicable
9.2	Lead to after-use of the site, which could have an impact on the environment	No	Not Applicable
9.3	Set a precedent for later developments	No	Will lead to redevelopment of other old buildings.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	Positive impact due to redevelopment.

(III) Environmental Sensitivity

Sr. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Yes	Not Applicable
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Yes	Arabian Sea towards West at 259 mtrs from the site
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	Not Applicable
4	Inland, coastal, marine or underground waters	Yes	Not Applicable
5	State, National boundaries	No	Not Applicable. The project is located within MCGM area.
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Yes	Not Applicable
7	Defence installations	Yes	Not Applicable
8	Densely populated or built-up area	Yes	Fully urbanised area. Residential & Commercial area all around the site.
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	Hospitals, Schools, Colleges, Places of worship, Community facilities like parks and recreation facilities are already existing within 5 Km.
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	No	Not Applicable
11	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	No	Not Applicable

Sr. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	No	The project site lies in Seismic Zone III as per the seismic zone map of India. Refer Page 18 for Seismic Zone Map of India in Executive Summary

The contents of this form-I Annexure-IV as filled in are correct as per my knowledge and I shall abide by the conditions imposed by MCZMA while granting sanction to the project.

Signature of Project Proponent