BEFORE THE NATIONAL GREEN TRIBUNAL

(WESTERN

ZONE) AT PUNE

(Under Section 18(1) read with Sections 14, 15, 16

and 17 of The National Green Tribunal Act, 2010)

APPLICATION NO. 31 OF 2015

Chetak Co-operative Housing Society Limited

... Applicant

versus

State of Maharashtra and Ors. ... Respondents

INDEX

Sr. No.	Particulars	Page Nos.
1	Affidavit in Reply on behalf of Respondent Nos. 8 to 11 (in reply to the Affidavit dated 18.07.2023 of Respondent No. 7)	951 - 961
2	**EXHIBIT – "1"** Copy of the Letter dated 19.07.2023	962 - 969

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

	(holding reply to Show Cause Notice)	
3	**EXHIBIT – "2"** Copy of the Letter dated 05.08.2023	970 – 1196

Parikshit Desai

Advocate for the Respondent Nos. 8 to 11

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3649
My Commission
Expires
26 Sept. 2028
GOVT. OF INDIA

951

BEFORE THE NATIONAL GREEN TRIBUNAL

SITTING AT PUNE

ORIGINAL APPLICATION NO. 31 OF 2015 (WZ)

(Under Section 18(1) read with Sections 14, 15, 16 and 17 of the National Green Tribunal Act, 2010

In the matter of:

Chetak Co-operative Housing Society Limited .. Applicant

versus

State of Maharashtra and Ors. .. Respondents

AFFIDAVIT ON BEHALF OF RESPONDENT NOS. 8 TO 11 (in reply to the Affidavit dated 18.07.2023 of Respondent No. 7)

I, Kanwar Dilersingh Sandhu, aged 39 years, of Mumbai, Adult Indian Inhabitant, Respondent No. 11 and Partner of the Respondent No. 8 firm abovenamed, having my address at 41, Sandhu Palace, Pali Hill, Bandra (West), Mumbai – 400 050, for myself and on behalf of Respondent Nos. 8 and 9 and Deceased Respondent No. 10, do solemnly affirm and state as under:-

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3040 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

952

1. I say that I have read a copy of the Affidavit in Reply dated 18th July 2023, filed on behalf of Respondent No. 7 to the Original Application (OA) ("**Reply of Respondent No. 7**"). I say that I am conversant with the facts of the case and am able and authorised to depose to the same based on the records maintained by the Respondent Nos. 8. A copy of the Resolution passed by Respondent No. 8 authorising me to sign and depose to the present Affidavit is annexed at Exhibit '1' to the Affidavit in Reply dated 7th September 2023 on behalf of Respondent Nos. 8 to 11, to Interlocutory Application No. 153 of 2023 in the aforesaid Original Application. ("**Reply of Respondent Nos. 8 to 11**").

2. At the outset, I repeat, reiterate, confirm and adopt, all and singular, the statements, averments, allegations, contentions and insinuations, as stated in the said Reply of Respondent Nos. 8 to 11, as if the same are incorporated herein in verbatim and produced in seriatim. I deny all the statements, averments, allegations, contentions and insinuations as stated in the Reply of Respondent No. 1 which are contrary to and/or inconsistent with what is stated in the said Reply of Respondent No. 7 and hereinafter, as if the same were

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/s. SANDEEP BUILDERS MUMBAI

produced herein in verbatim and traversed in seriatim. Nothing that is not specifically dealt with therein shall be deemed to have been admitted, merely for want of traverse.

3. I state that the Reply of Respondent does not portray the full and complete facts regarding the Environment Clearance (EC) for the Building Project of Respondent No. 8, which is stated *in extenso* in the Reply of Respondent Nos. 8 to 11. I am not repeating the same herein in verbatim but crave leave to treat the same as forming part and parcel of the present Affidavit.

4. Without prejudice to the aforesaid, point no. 7 of SEAC-II meeting dated 21st July 2017, states that no separate EC was applicable for "expansion/diversification" in respect of the Building Project of Respondent No. 3. Thus, it cannot be stated by Respondent No. 7 that the Building Project is without EC.

5. I state and submit that the contents of the Reply of Respondent No. 7 is substantially a repetition of the contents of the Show Cause Notice 12th July 2023

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

954

(Annexure 'II' thereto), which have been dealt with by Respondent No. 8 vide its Letter dated 5th August 2023. Hereto annexed and marked as **EXHIBITS – "1"** and **"2"** are copies of the Letter dated 19th July 2023 (holding reply to the Show Cause Notice) and Letter dated 5th August 2023 (detailed reply to the Show Cause Notice).

6. Without prejudice to the aforesaid, I shall deal with Reply of Respondent No. 7 paragraph wise in seriatim as under.

7. With reference to paragraph 1, the contents thereof require no comments.

8. With reference to paragraph 2, I deny any illegal construction as alleged carried out by Respondent No. 8 allegedly without EC and/or illegally obtaining development plans sanctioned and permissions without complying with the basic conditions of environmental laws, etc. In this regard, I repeat and reiterate all that is stated in Respondent Nos. 8 to 11 and deny all that is contrary thereto and/or inconsistent therewith.

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3540 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

9. With reference to paragraph 3, I state that Respondent No. 8 has not placed on record, the true and correct facts in respect of the events that have transpired on 22nd June 2023 and 26th June 2023. I state that on 22nd June 2023 and 26th June 2023, a person claiming to be an officer of MPCB made a surprise visit (without notice) to the office of Respondent No. 8 and orally made a demand to see copies of the Environment Clearance, Consent to Establish and Consent to Operate, Architect's Certificate stating the total plot area, and total construction built up area in respect of our Building Project at Sandhu Palace, 41, Pali Hill, Bandra (West), Mumbai – 400 050. On both these dates, since the partners and the officers involved in day-to-day management of Respondent No. 8 were away from Mumbai, there was no responsible person available who was aware of the details of the Building Project and who could have provided the documents and details requested for. In any event, when the office peon of Respondent No. 8 asked for proof of identification of the person visiting the office of Respondent No. 8 that he is indeed an officer of MPCB, no proof was provided by that person. In absence of such proof, it was difficult for the office peon of Respondent No. 8 to verify

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

956

whether the person paying the visit was an officer duly empowered by MPCB or not. I state that only an officer duly empowered under section 21 of The Water (Prevention and Control of Pollution) Act, 1974 (Act No. 6 of 1974) ("**Water Act**"), section 26 of The Air (Prevention and Control of Pollution) Act, 1981 (Act No. 14 of 1981) ("**Air Act**") and sections 10 and 11 of The Environment Protection Act, 1986 (Act No. 29 of 1986) ("**Environment Protection Act**") read with Notification dated 16th February 1987, bearing S.O. 84(E), issued under the Environment Protection Act, more particularly at Sl. No. 29 thereto and Notification dated 16th February 1987, bearing S.O. 83(E), issued under the Environment Protection Act, more particularly at Sl. No. 29 thereto, can ask for such information. Since the office of Respondent No. 8 cannot allow any unauthorised person to have access and inspection of the premises of the Building Project, no inspection was given.

10. With further reference to paragraph 3 and without prejudice to the aforesaid, it is apparent that the SCN under reply has been purportedly issued under section 20(3) of the Water

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Regd. No. 3640 My Commission Expires 25 Sept. 2025 GOVT. OF INDIA

M/S. SAMHI BUILDERS MUMBAI

Act and section 25 of the Air Act. Both the said sections deal with the requirement of the project proponent "*to furnish the necessary information*". I state that however, till the date of issuance of the SCN, Respondent No. 8 has not been given any directions to furnish any information or provide any documents. On the contrary, the SCN has been issued directly with the threat of stoppage of work as stated therein. I state that a SCN cannot be issued at the preliminary stage of obtaining and furnishing information and the same can be issued only in accordance of the provisions of section 33-A of the Water Act and section 31-A of the Air Act. I further state that the concerned officer ought to follow the procedure laid down in section 11 of the Environment Protection Act read with rule 7 of the Environment Protection Rules and section 21 of the Water Act and section 26 of the Air Act.

11. With reference to paragraph 3(i), the contents thereof require no comments.

12. With reference to paragraph 3(ii), Respondent No. 8 is willing to provide a copy of the Occupation Certificate from

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 M/ Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

958

Respondent No. 12, provided the person asking for the same is a duly authorized officer of Respondent No. 7.

13. With reference to paragraph 3(iii), I state that none of the documents stated therein were requested for by the person claiming to be the official representative of Respondent No. 7. I further state that till the date of issuance of the Show Cause Notice, no demand was made for the documents/details in respect of which the said Show Cause Notice has been issued.

14. With reference to paragraph 3(iv), I state that inspection of the STP and OWC status could not have been given to a person who could not provide proper identification and authorization on behalf of the Applicant.

15. With reference to paragraph 3(v), the contents therein are a matter of record.

16. With reference to paragraph 3(vi), the necessary documents have been provided alongwith the Letter dated 5th August 2023 (detailed reply to the Show Cause Notice) (Exhibit '2' hereto).

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

17. With reference to paragraph 3(vii), I deny that the representative of Respondent No. 8 refused to sign the visit report, etc. I categorically state that no inspection report was ever provided to the representative of Respondent No. 8 at the time of the alleged inspection or thereafter and hence, refusal to sign the same does not arise. The alleged Inspection Report dated 26th June 2023 has been produced only alongwith the Affidavit under reply and was not shown to the representative of Respondent No. 8 at the time of the alleged inspection. Further, it seems that the Applicant has prepared the Inspection Report only in respect of the alleged inspection held on 26th June 2023 but not in respect of the alleged inspection allegedly carried out on 22nd June 2023, as allegedly stated in the Show Cause Notice. I deny *in toto,* the veracity and truthfulness of the contents of the Inspection Report dated 26th June 2023 and put Respondent No. 7 to strict proof of the same.

18. With reference to paragraph 4, Respondent No. 8, vide its Reply Letter dated 5th August 2023 (detailed reply to the Show Cause Notice) (Exhibit '2' hereto), has replied to the said Show Cause Notice, wherein it has addressed all the

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

960

issues of the alleged non-compliances of various laws as alleged by Respondent No. 7. Respondent No. 8 has also disputed the circumstances under which the alleged Show Cause Notice has been issued.

19. In view of the aforesaid facts and circumstances, I state and submit that there are no alleged non-compliances of environmental laws by Respondent Nos. 8 to 11in respect of the Building Project of Respondent No. 8 and thus, the present IA and OA be dismissed with costs.

Solemnly affirmed at Mumbai)

This 7th day of September, 2023)

M/S. SANDHU BUILDERS MUMBAI

DEPONENT

Before me,

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3610 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

Identified by me,

Parikshit Desai
Advocates for Respondent No. 3.

961

VERIFICATION

I, Kanwar Dilersingh Sandhu, aged 39 years, of Mumbai, Adult Indian Inhabitant, Respondent No. 11 and Partner of the Respondent No. 8 firm abovenamed, having my address at 41, Sandhu Palace, Pali Hill, Bandra (West), Mumbai – 400 050, for myself and on behalf of Respondent Nos. 8 and 9 and Deceased Respondent No. 10, do hereby solemnly declare that what is stated in the foregoing paragraphs is based on the records maintained by Respondent No. 8 in the ordinary course of business and on legal advice and I believe the same to be true.

Solemnly declared at Mumbai)

This 7th day of September, 2023)

-7 SEP 2023

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

DEPONENT

Before me,

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 Epx. Dt. 25 Sept. 2026 GOVT. OF INDIA

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 NOTARIAL NOTARIAL GOVT. OF INDIA

BEFORE ME

S. M. H. ZAIDI NOTARY 19/22 Government of India Mumbai & Thane Dist.

-7 SEP 2023

Identified by me,

Amrishit Desai

Advocates for Respondent Nos. 8 to 11.

NOTED & REGISTERED Sr. No. 950 Page No. 71 Book No. 42 Date 7 SEP 2023

962

Exhibit - "I"

Gmail

Parikshit Desai <phdesai.84@gmail.com>

REPLY

1 message

sandhu builders Upgrade <sandhugroup@hotmail.com> Wed, Aug 9, 2023 at 7:00 PM
To: "romumbai@mpcb.gov.in" <romumbai@mpcb.gov.in>, Vardha Chari <vkchari45@gmail.com>
Cc: "Parikshit Desai (via Google Drive)" <phdesai.84@gmail.com>, Kanwar Diler Singh Sandhu <dilersandhu@gmail.com>, DARA SANDHU <darasandhu77@gmail.com>, "himankdesai54@gmail.com" <himankdesai54@gmail.com>

detailed reply to notice.pdf

M/s. SANDHU BUILDERS MUMBAI

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

True Copy

Advocate

963

SANDHU BUILDERS

SANDHU GROUP
SDL

Regd off. & Admn. Off.: Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai - 400050
Tel : - 26051177 / 1277 / 1377 Fax : 2605 1477
E-Mail: sandhugroup@hotmail.com Website :www.sandhugroup.net

Ref. No.:-
Date:- 19th July 2023.

To:
Maharashtra Pollution Control Board,
Kalpataru Point, 1st Floor, Sion- Matunga
Scheme Road No. 8, Opposite Cine Planet
Cinema (PVR Cinema), Near Sion Circle,
Sion (East), Mumbai – 400 022.

Kind Attn.:- Mr. S.B. Bhosale,
Regional Officer.

Sub:- Your Show Cause Notice dated 12th July 2023, bearing reference number MPCB/ROM/SCN-2307120006, received by us on 15th July 2023 ("**SCN**")

Ref.:- 1. Original Application No. 31 of 2015 (WZ) alongwith IA/46 of 2023 filed by M/s. Chetak Co-operative Housing Society Limited against The State of Maharashtra and Ors, before the Hon'ble National Green Tribunal WZ, Pune.

2. Visit of official of MPCB, Mumbai to our construction site on 22/06/2023 and 26/06/2023.

Sir/Madam,

We are in receipt of your captioned SCN and have noted the contents of the same.

We are in the process of collecting the documents as required by you and stated in your SCN. You are requested to grant us 15 (fifteen) days' time for the same.

In the meanwhile, nothing contained in your SCN shall be deemed to be admitted by us.

Yours truly,
For Sandhu Builders,

(Authorised Signatory).

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

C.C. to:- 1. The Hon'ble Member Secretary,
2. The Regional Officer (BMW),
3. The Sub-Regional Officer,
All having their office at
Maharashtra Pollution Control Board,
Kalpataru Point, 1st Floor, Sion- Matunga
Scheme Road No. 8, Opposite Cine Planet
Cinema (PVR Cinema), Near Sion Circle,
Sion (East), Mumbai – 400 022.

964

(no subject)

Inbox ×

sandhu builders Upgrade
to romumbai@mpcb.gov.in, me, Kanwar, himankdesai54@gmail.com, Vardha, vkchari@gmail.com

One attachment • Scanned by Gmail


SANDHU BUILDERS

maharashtra poll...

Reply Reply all Forward

M/S. SANDHU BUILDERS MUMBAI

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3540 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

965

15+Letter

Dial 18002666868> <Wear Masks. Stay Safe>

EM170036336IN IVR:697717003633
SP BANDRA WEST S.O <400050>
Counter No:1,20/07/2023.12:01
To:MAHARASHTRA P.KALPATRU POINT
PIN:400022. Sion SO
From:SANDHU BUIL.41 SANDHU PALACE
Wt:20gms
Amt:29.50(Cash)Tax:4.50
<Track on www.indiapost.gov.in>
<Dial 18002666868> <Wear Masks. Stay Safe>

EM170036322IN IVR:697717003632
SP BANDRA WEST S.O <400050>
Counter No:1,20/07/2023.12:01
To:THE SUB REGIO.MAHARASHTRA POLL
PIN:400002. Kalbadevi H.O
From:SANDHU BUIL.41 SANDHU PALACE
Wt:20gms
Amt:29.50(Cash)Tax:4.50
<Track on www.indiapost.gov.in>
<Dial 18002666868> <Wear Masks. Stay Safe>

EM170036217IN IVR:697717003621
SP BANDRA WEST S.O <400050>
Counter No:1,20/07/2023.12:01
To:THE REGIONAL .MAHARSHTRA POLLU
PIN:400022. Sion SO.
From:SANDHU BUIL.41 SANDHU PALACE
Wt:20gms
Amt:29.50(Cash)Tax:4.50
<Track on www.indiapost.gov.in>
<Dial 18002666868> <Wear Masks. Stay Safe>

EM170036225IN IVR:697717003625
SP BANDRA WEST S.O <400050>
Counter No:1,20/07/2023.12:01
To:HONBLE MEMBER.MAHARASHTRA POLL
PIN:400022. Sion SO
From:SANDHU BUIL.41 SANDHU PALACE
Wt:20gms
Amt:29.50(Cash)Tax:4.50
<Track on www.indiapost.gov.in>

sairakshpt@gmail.com

sairakshpt@gmail.com

sairakshpt@gmail.com

sairakshpt@gmail.com

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist
Reg. No. 2540
My Commission
Expires
23 Sept. 2028
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

966

Sign In Register

हिन्दी

You are here Home>> Track Consignment

Track Consignment

Quick help

* Indicates a required field.

* Consignment Number

EM170036336IN

Track More

Booked At	Booked On	Destination Pincode	Tariff	Article Type	Delivery Location	Delivery Confirmed On
Bandra West S.O	20/07/2023 12:01:02	400022	29.50	Inland Speed Post	Sion SO	21/07/2023 16:01:37

Event Details For : EM170036336IN

Current Status : Item Delivered(Addressee)

Date	Time	Office	Event
21/07/2023	16:01:37	Sion SO	Item Delivered(Addressee)
21/07/2023	11:49:12	Sion SO (Beat Number:15)	Item Delivered [To: mpcb Bord (Addressee)]
21/07/2023	09:53:25	Sion SO	Out for Delivery
21/07/2023	07:21:40	Sion SO	Item Received
21/07/2023	05:49:42	Mumbai NSH	Item Dispatched
21/07/2023	03:40:17	Mumbai NSH	Item Bagged
20/07/2023	12:01:02	Bandra West S.O	Item Booked

Home
About Us
Forms
Recruitments
Holidays
Feedback
Right To Information

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

967

Sign In Register

हिन्दी

You are here Home>> **Track Consignment**

Track Consignment

Quick help

* Indicates a required field.

* Consignment Number

EM170036322IN

Track More

Booked At	Booked On	Destination Pincode	Tariff	Article Type	Delivery Location	Delivery Confirmed On
Bandra West S.O	20/07/2023 12:01:02	400002	29.50	Inland Speed Post	Kalbadevi H.O	21/07/2023 16:01:37

Event Details For : EM170036322IN

Current Status : Item Delivered(Addressee)

Date	Time	Office	Event
21/07/2023	16:01:37	Sion SO	Item Delivered(Addressee)
21/07/2023	11:49:12	Sion SO (Beat Number:15)	Item Delivered [To: mpcb Bord (Addressee)]
21/07/2023	09:53:25	Sion SO	Out for Delivery
21/07/2023	07:21:40	Sion SO	Item Received
21/07/2023	05:49:42	Mumbai NSH	Item Dispatched
21/07/2023	03:40:17	Mumbai NSH	Item Bagged
20/07/2023	12:01:02	Bandra West S.O	Item Booked

Home
About Us
Forms
Recruitments
Holidays
Feedback
Right To Information

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3340 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

968

Sign In Register

हिन्दी

भारतीय डाक
India Post

Azadi Ka Amrit Mahotsav

You are here Home>> **Track Consignment**

Track Consignment

Quick help

* Indicates a required field.

* Consignment Number

EM170036217IN

Track More

Booked At	Booked On	Destination Pincode	Tariff	Article Type	Delivery Location	Delivery Confirmed On
Bandra West S.O	20/07/2023 12:01:02	400022	29.50	Inland Speed Post	Sion SO	21/07/2023 16:01:37

Event Details For : EM170036217IN

Current Status : Item Delivered(Addressee)

Date	Time	Office	Event
21/07/2023	16:01:37	Sion SO	Item Delivered(Addressee)
21/07/2023	11:49:12	Sion SO (Beat Number:15)	Item Delivered [To: mpcb Bord (Addressee)]
21/07/2023	09:53:25	Sion SO	Out for Delivery
21/07/2023	07:21:40	Sion SO	Item Received
21/07/2023	05:49:42	Mumbai NSH	Item Dispatched
21/07/2023	03:40:17	Mumbai NSH	Item Bagged
20/07/2023	12:01:02	Bandra West S.O	Item Booked

Home
About Us
Forms
Recruitments
Holidays
Feedback
Right To Information

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

969

Sign In Register

हिन्दी

भारतीय डाक
India Post

You are here Home>> **Track Consignment**

Quick help

Track Consignment

* Indicates a required field.

* Consignment Number

EM170036225IN

Track More

Booked At	Booked On	Destination Pincode	Tariff	Article Type	Delivery Location	Delivery Confirmed On
Bandra West S.O	20/07/2023 12:01:02	400022	29.50	Inland Speed Post	Sion SO	21/07/2023 16:01:37

Event Details For : EM170036225IN

Current Status : Item Delivered(Addressee)

Date	Time	Office	Event
21/07/2023	16:01:37	Sion SO	Item Delivered(Addressee)
21/07/2023	11:49:12	Sion SO (Beat Number:15)	Item Delivered [To: mpcb Bord (Addressee)]
21/07/2023	09:53:25	Sion SO	Out for Delivery
21/07/2023	07:21:40	Sion SO	Item Received
21/07/2023	05:49:42	Mumbai NSH	Item Dispatched
21/07/2023	03:40:17	Mumbai NSH	Item Bagged
20/07/2023	12:01:02	Bandra West S.O	Item Booked

Home
About Us
Forms
Recruitments
Holidays
Feedback
Right To Information

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 M.Y. Commission Expires 26 Sept. 2023 GOVT. OF INDIA

True Copy
PHD
Advocate

M/S. SANDHU BUILDERS MUMBAI

Exhibit – "2"

970

SANDHU BUILDERS

SANDHU GROUP
SDL

Regd off. & Admn. Off.: Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai - 400050
Tel : - 26051177 / 1277 / 1377 Fax : 2605 1477
E-Mail: sandhugroup@hotmail.com Website :www.sandhugroup.net

Ref. No.:- _____
Date:- 5 August 2023.

To,
Maharashtra Pollution Control Board,
Kalpataru Point, 1st Floor, Sion- Matunga
Scheme Road No. 8, Opposite Cine Planet
Cinema (PVR Cinema), Near Sion Circle,
Sion (East), Mumbai – 400 022.

Kind Attn.:- Mr. S.B. Bhosale,
Regional Officer.

Sub:- 1. Your Show Cause Notice dated 12th July 2023, bearing reference number MPCB/ROM/SCN-2307120006, received by us on 15th July 2023 ("**SCN**")
2. Our Reply dated 19th July 2023.

Ref.:- 1. Original Application No. 31 of 2015 (WZ) alongwith IA/46 of 2023 filed by M/s. Chetak Co-operative Housing Society Limited against The State of Maharashtra and Ors, before the Hon'ble National Green Tribunal WZ, Pune.

2. Visit of official of Maharashtra Pollution Control Board (MPCB), Mumbai to our construction site on 22/06/2023 and 26/06/2023.

Sir/Madam,

This is in furtherance of my aforesaid holding Reply dated 19th July 2023, in reply to the captioned SCN. Before dealing with the SCN on merits, we shall place on record, certain true and correct facts as under:-

1. At the outset, we state that the SCN under reply is misconceived and based on erroneous facts. We categorically state that we have neither refused to provide inspection of the Sewage Treatment Plant ("**STP**") at site, nor have we denied to furnish the documents requested for by you.

2. We state that on 22nd June 2023 and 26th June 2023, a person claiming to be an officer of MPCB made a surprise visit (without notice) to our office at the aforementioned address and orally made a demand to see copies of the Environment Clearance, Consent to Establish and Consent to Operate, Architect's Certificate stating the total plot area, and total construction built up area in respect of our Building Project at Sandhu Palace, 41, Pali Hill, Bandra (West), Mumbai – 400 050. On both these dates, since the partners and the officers involved in day-to-day management of M/s. Sandhu Builders were away from Mumbai, there was no responsible person available who was aware of the details of the Building Project and who could have provided the documents and details requested for. In any event, when our office peon asked for proof of identification of the person visiting our office that he is indeed an officer of MPCB, no proof was provided by that person. In absence of such proof, it was difficult for our office to verify whether the person paying the visit was an officer duly empowered by MPCB or not. We state that only an officer duly empowered under section 21 of The Water (Prevention and Control of Pollution) Act, 1974 (Act No. 6 of 1974) ("**Water Act**"), section 26 of The Air (Prevention and Control of Pollution) Act, 1981 (Act No. 14 of 1981) ("**Air Act**") and sections 10 and 11 of The Environment Protection Act, 1986 (Act No. 29 of 1986) ("**Environment Protection Act**") read with

NOTARY S.M.H. ZAIDI Mumbai & Thane Dist. GOVT. OF INDIA

True Copy
PHD
Advocate

M/s. SANDHU BUILDERS MUMBAI

SANDHU GROUP
SDL

SANDHU BUILDERS

Regd off. & Admn. Off.: Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai - 400050
Tel : - 26051177 / 1277 / 1377 Fax : 2605 1477
E-Mail: sandhugroup@hotmail.com Website :www.sandhugroup.net

Notification dated 16th February 1987, bearing S.O. 84(E), issued under the Environment Protection Act, more particularly at Sl. No. 29 thereto and Notification dated 16th February 1987, bearing S.O. 83(E), issued under the Environment Protection Act, more particularly at Sl. No. 29 thereto, can ask for such information. Since our office cannot allow any unauthorised person to have access and inspection of the premises of our Building Project, no inspection was given.

3. Without prejudice to the aforesaid, it is apparent that the SCN under reply has been purportedly issued under section 20(3) of the Water Act and section 25 of the Air Act. Both the said sections deal with the requirement of the project proponent "*to furnish the necessary information*". We state that however, till the date of issuance of the SCN, we have not been given any directions to furnish any information or provide any documents. On the contrary, the SCN has been issued directly with the threat of stoppage of work as stated therein. We state that a SCN cannot be issued at the preliminary stage of obtaining and furnishing information and the same can be issued only in accordance of the provisions of section 33-A of the Water Act and section 31-A of the Air Act. We further state that the concerned officer ought to follow the procedure laid down in section 11 of the Environment Protection Act read with rule 7 of the Environment Protection Rules and section 21 of the Water Act and section 26 of the Air Act.

4. We state that we are ready and willing to offer inspection of the present status of the STP at site at a mutually agreeable date and time, during normal business hours and on working days. Further, we are enclosing the documents as requested for by you, in compliance of the requisitions stated in the SCN under reply. Kindly acknowledge the receipt of the same.

Yours faithfully,
For Sandhu Builders,

M/s. SANDHU BUILDERS MUMBAI

(Authorised Signatory).
Encl:- As above.

C.C. to:- 1. The Hon'ble Member Secretary, (for information)
2. The Regional Officer (BMW), (for information)
3. The Sub-Regional Officer, (for information)
All having their office at
Maharashtra Pollution Control Board,
Kalpataru Point, 1st Floor, Sion- Matunga
Scheme Road No. 8, Opposite Cine Planet
Cinema (PVR Cinema), Near Sion Circle,
Sion (East), Mumbai – 400 022.

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

<Dial 18002666868> <Wear Masks. Stay Safe>

EM238409991IN IVR:697723840999

India Post

SPP BANDRA WEST S.O <400050>
Counter No:1,07/08/2023,12:57
To:MAHARSHTRA PO,1ST FLOOR
PIN:400022, Sion SO
From:SANDHU BUIL.SANDHU PALACE
Wt:1035gms
Amt:59.00(Cash)Tax:9.00
<Track on www.indiapost.gov.in>
<Dial 18002666868> <Wear Masks. Stay Safe>

भारतीय डाक

EM684776282IN IVR:69776847762

India Post

SP BANDRA WEST S.O <400050>
Counter No:1,07/08/2023,12:57
To:SUB REGIONAL .1ST FLOOR
PIN:400022, Sion SO
From:SANDHU BUIL.SANDHU PALACE
Wt:15gms
Amt:29.50(Cash)Tax:4.50
<Track on www.indiapost.gov.in>
<Dial 18002666868> <Wear Masks. Stay Safe>

भारतीय डाक

EM684776296IN IVR:69776847762

India Post

SP BANDRA WEST S.O <400050>
Counter No:1,07/08/2023,12:57
To:REGIONAL OFFICER .1ST FLOOR
PIN:400022, Sion SO
From:SANDHU BUIL.SANDHU PALACE
Wt:15gms
Amt:29.50(Cash)Tax:4.50
<Track on www.indiapost.gov.in>
<Dial 18002666868> <Wear Masks. Stay Safe>

भारतीय डाक

EM684776044IN IVR:69776847760

India Post

SP BANDRA WEST S.O <400050>
Counter No:1,07/08/2023,12:57
To:HONBLE MEMBER .8
PIN:400022, Sion SO
From:SANDHU BUIL.SANDHU PALACE
Wt:30gms
Amt:29.50(Cash)Tax:4.50
<Track on www.indiapost.gov.in>

sairakeshpt@gmail.com

sairakeshpt@gmail.com

sairakeshpt@gmail.com

sairakeshpt@gmail.com

EXPRESS

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3040
My Commission
Expires
25 Sept. 2028
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant
701/702, Shakti Niwas 21 Ramchandra Lane, Malad (West), Mumbai - 400 064.
Phone : 2881 1715 / 2888 3811 E-mail : dg_bhave@rediffmail.com / dnyaneshbhave@gmail.com

FEASIBILITY REPORT
ON
SEWAGE TREATMENT PLANT
AT

SANDHU PALACE AT PALLI HILL BANDRA

CONTENTS

CHAPTER NO.	DESCRIPTION		PAGE NO.
1	TECHNICAL SPECIFICATIONS		3-16
	I	Basis of Design	4
	II	Sewage Treatment Scheme	5-6
	III	Process Flow Sheet	7
	IV	Equipment List	8-10
	V	Power & Electric Connecting load	11
	VI	Design calculation of STP	12-13
2	DRAWINGS		
	I	Process & Instrumentation Diagram	Enclosed
	II	Layout Drawing	Enclosed

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3840 My Commission Expires 25 Sept. 2026 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

CHAPTER - 1

TECHNICAL SPECIFICATIONS

ANNEXURE NO.	CONTENT
I	Basis of Design
II	Sewage Treatment Scheme
III	Process Flow Sheet
IV	Equipment List
V	List of Acceptable Standards of Materials & Machinery
VI	Power Consumables

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 26 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

ANNEXURE – I

BASIS OF DESIGN

SEWAGE GENERATION:
Calculation for Total Quantity of Sewage considered for STP Design:

1. Total No. of Flats = 54 Nos.
2. 5 Nos. Persons per flat and 135 ltr. Water per person
3. Therefore total water consumption will be = 54 x 5 x 135 = 36450
   = 36.45 m³

Total STP capacity = 40 m³

Therefore STP is designed for 40 m³ Capacity

Sr. No.	particulars	Quantity of Sewage Generated (m³/Day)
1	Total sewage generation considered for designing	40

QUALITY OF THE SEWAGE BEFORE TREATMENT

Sr.No	Details	Concentration	Units
1	pH	6 - 8.5	
2	Biochemical Oxygen Demand, 3 day, 27°C	250 - 400	mg/lit
3	Total Suspended Solids	200 - 450	mg/lit
4	Chemical Oxygen Demand	600 - 800	mg/lit
5	Oil & Grease	50	mg/lit

QUALITY OF THE SEWAGE AFTER TREATMENT

Sr.No	Details	Concentration	Units
1	pH	7.0 - 8.0	
2	Biochemical Oxygen Demand, 5 day, 20°C	Less than 10	mg/lit
3	Total Suspended Solids	Less than 10	mg/lit
4	Chemical Oxygen Demand	Less than 60	mg/lit
5	Oil & Grease	Less than 1	mg/lit

Note: The Treated sewage will be suitable for gardening or flushing purpose.

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No 3640 My Commission Expires 25 Sept. 2028

DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT MUMBAI

M/S. SANDHU BUILDERS MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

ANNEXURE – II

SEWAGE TREATMENT SCHEME:

The treatment will include the following unit/equipment:

- Bar Screen Chamber with oil and Grease Trap
- Raw Sewage Collection Sump
- Raw Sewage Transfer pumps

All the Sewage generated will gravitate through Bar Screen. The Bar Screen will take care of any floatable matter, which will be manually scraped out and collected in drums. Bar screen chamber will comprise of MS plate type screen for removing floatable matter. This will be followed by Oil and Grease Trap for removal of oil from the kitchen waste sewage.

The Sewage will be collected in Equalization cum collection Tank. Uniform mixing is achieved by providing aeration grid (air sparging) in the equalization cum neutralization tank. After completion of equalization and neutralization, the sewage will be pumped at a uniform rate by sewage transfer pumps to Biological Treatment.

BIOLOGICAL TREATMENT (SECONDARY TREATMENT):

The system planned is an extremely compact modular one based on the Rotating Media Bioreactor and a lamella settler followed by tertiary treatment. The RMBR due to low rotational speeds has an extremely low wear and tear rate and requires negligible maintenance inputs. The treatment plant is based on the rotating media aerobic attached growth process i.e. the Rotating Media Bioreactor (RMBR) which is the heart of the system. Screened wastewater is pumped to the Rotating Media Bioreactor (RMBR).

The RMBR brings about an intimate contact between the substrate in the wastewater and the active biomass in the presence of air. Here, organic matter in the wastewater comes into intimate contact with a very large area of biofilm residing on polypropylene media placed in a drum.

The media has a very high specific surface, typically 500 sq.metres per cubic meter of drum volume. The pack of disks is gently rotated in a tank up to 40% submergence and at a very low speed, typically 2-3 rpm. Thus the biofilm comes into contact with the wastewater and the atmospheric oxygen alternately thus ensuring a rich aerobic environment. As the film grows in thickness it sloughs off and a new film takes its place. Substrate is biochemically oxidized to simple inorganic products like carbon dioxide and water. It may be stated here that the RMBR is based on identical biochemistry as the activated sludge process and the only differences being the method of supporting the microbes and the oxygen supply mechanism. As in case of the aeration tank, the microbial concentration (measured as Mixed Liquor Volatile Suspended Solids or MLVSS) in the tank is limited to a range of 2000-3500 ppm, the aeration tank needs to have a large volume to accommodate the requisite microbial mass. Again, the entire contents of the aeration tank need to be kept well mixed thereby requiring a high input of power, typically 20-30 HP per 1000 cum of aeration tank volume. In case of the RMBR, the microbial mass adheres as a film (similar to the trickling filter process) to the support media. As the area of the media is very large, a huge mass of microbial film can be supported on the media. Thus, a significantly larger (5-10 times) of biomass can be supported per unit volume of reactor compared to the activated sludge process. Further, in order to aerate the microbial film, all that is needed is a gentle rotation of the media at 40% submergence so that 40% of the time of a single rotation provides a pickup of the effluent and 60% of the time in a rotation is for diffusion of atmospheric oxygen through the thin film of effluent into the biofilm. This requires far less energy in comparison with the conventional aeration system. The RMBR is thus an eco friendly process due to its lower

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

energy consumption and complete absence of contaminated aerosol generation. In a residential environment, the microbially contaminated aerosols and foam generation by vigourous aeration is highly undesirable and hence the activated sludge

Process is not suitable for maintaining a clean air environment. The RMBR is a far superior process as it is far more eco friendly.
Wastewater then flows into a secondary lamella settler in which the insolubles are separated from the liquid. The lamella settler is based on the widely used principle of shallow depth sedimentation using lamella modules inclined at 60 degrees with the horizontal. Extremely efficient sedimentation takes place due to a shallow settling depth of the order of 60 mm. Sludge settles on the corrugated lamella plates and slides down into the hopper below while the clarified liquid flows upwards. Sludge formed in the lamella settler has a better solids consistency than that obtained in conventional sedimentation tanks. Clear effluent flows into a chlorine contact chamber where chlorine is dosed in the form of Sodium Hypochlorite for disinfection and trace organic destruction.

Disinfected

Features of the design:

Treated effluent quality: Treated effluent meets the most stringent of standards

Compact and Elegant: The system is elegantly designed with particular emphasis on compactness, aesthetics and ergonomics.
Custom designed geometry: geometry of the unit has been tailored to suit the site geometry. The system requires far less space than that earmarked for the plant.

Odour-free environment: The system design ensures an odour-free environment unlike competing systems.

Low process power input: less than 30% of that for a conventional activated sludge system.

Corrosion free materials: The plant is manufactured from Mild steel plates and structurals with resin epoxy coating on all surfaces for superior protection against corrosion.

Minimal moving parts: Geared motors, pumps and support bearings for the RMBR constitute the moving parts requiring lubrication and servicing– the easy accessibility of these makes maintenance very convenient.

Modular design: as the design is modular, expandability of the plant is convenient

Dismantling and relocation: The entire plant can be conveniently shifted to a new location in future.

RESIDUALS (SLUDGE MANAGEMENT)

Excess sludge from the biological treatment process is dewatered in wedge wire stainless steel Sludge drying trays with a forced draft drying system. This is preferred to other sludge drying methods for the following reasons:

Eco friendly operation–no adverse visual impacts
More compact sludge
Very low footprint area
Independent of weather conditions
No operational inputs

NOTARY S.M.H. ZAIDI Mumbai & Thane Dist. Reg. No. 7640 My Commission Expires GOVT. OF INDIA

DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT MUMBAI

M/S. SANDHU BUILDERS MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

TERTIARY TREATMENT:
The treatment will include the following unit/equipment:

- Intermediate holding tank
- Multi Grade Filter
- Activated Carbon Filter
- UV System
- Final Treated Water Tank

The clear supernatant from the Secondary tube settler will be collected in Intermediate holding tank from where the treated sewage will be pumped to multi grade filter followed by Activated Carbon filter. 'After ACF treated sewage will be passed through UV system for disinfection and then be collected in a Final Treated Water Tank provided by client and then can be used for gardening and flushing.

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3540 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

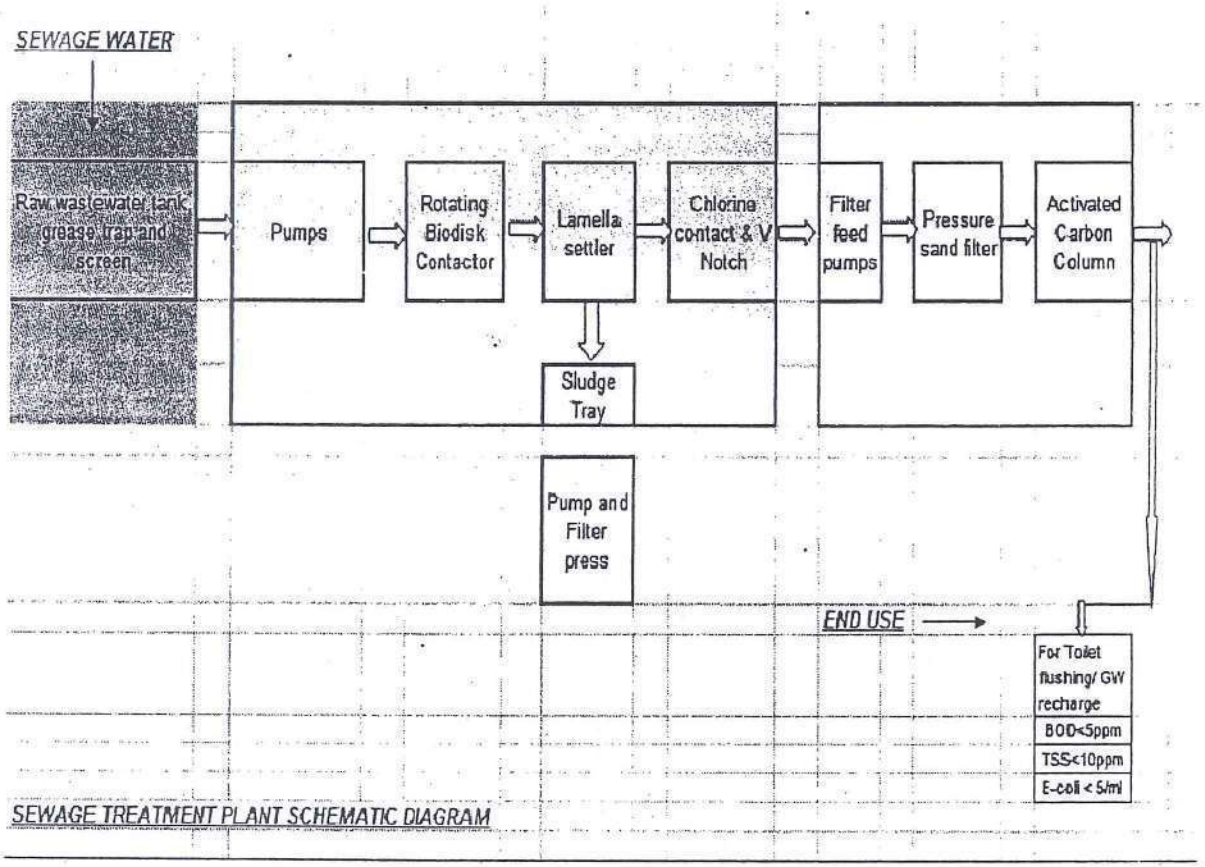
DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT

M/S. SANDHU BUILDERS MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

ANNEXTURE - III

BLOCK DRAWING:



SEWAGE TREATMENT PLANT SCHEMATIC DIAGRAM

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3540 My Commission Expires 26 Sept. 2026

M/s. SANDHU BUILDERS MUMBAI

DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

ANNEXURE - IV

EQUIPMENT LIST
CIVIL UNITS: BY CLIENT

SR. NO.	TAG NO.	EQUIPMENT DESCRIPTION	SIZE	RETENTION TIME	QTY	MOC
1	T-101	Bar Screen/Oil & Grease Trap	750 x 750mm	26.5 Min	1	RCC
2	T-102	Equalization cum collection Tank	16.4m x 10m x 4.65 m = 770 m3	12 hrs.	1	RCC
3	T-103	RMBC Bio Rector	2:5m x 5.4m x 2.5m	1.5 hrs.	3	MS
4	T-104	Intermediate holding Tank	4.5m x 10m x 5.7m = 200 m3	3.25 hrs.	1	RCC
5	T-105	Sludge Holding Tank	In Built in to Design			MS
6	T-106	Treated Water Tank	8m x 10m x 6.15 m	8 hrs.	1	RCC
7	T-107	Equipment foundations and open space for walkway	---------	------	Lumpsum	

MECHANICAL OF EQUIPMENT:

SR. NO.	TAG NO.	EQUIPMENT DESCRIPTION	QTY	SIZE/ CAPACITY	HP (each)	MOC
1	P-101 A/B	Raw Sewage Transfer Pump	1+1	90 CUM/HR	2	CI
2	BS-101	Bar Screen	1	750 x 750mm	----	SS-304
3	T-103	RMBC Bio Rector	3	2.5m x 5.4m	5x3= 15	MS
4	T-104	Secondary Settler	1	72.50 Sqm	----	RCC
5	P-102 A/B	Filter feed Sump	1+1	90.1 Cum/hr	----	CI
6	P-104	Filter Press Feed Pump	1	15 cum/hr	1.5	CI
7	F-101	Pressure Sand Filter	1	2.3m dia	---	FRP
8	ACF-101	Activated Carbon Filter	1	2.3m dia	---	FRP
9		Dosing Systems	1			

LIST OF INSTRUMENTS:

SR. NO.	TAG NO.	INSTRUMENT	LOCATION	MOC	QTY	REMARKS
1	LS-101	Level controls	For raw sewage pumps and filter feed pumps	SS-304	2 Nos.	High level start & low level stop
2		Flow meter	one no-- orifice type			
3		Pressure gauges	on pump manifolds			

NOTARY GOVT OF INDIA

M/S. SANDHU BUILDERS MUMBAI

DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

ELECTRICALS:

SR. NO.	EQUIPMENT DESCRIPTION	CAPACITY/SIZE	QTY	MOC
1	M.C.C foot mounted non compartmental	Suitable to accommodate all Equipment feeders	1 No.	Suitable
2	Power and control cables and accessories	Suitable copper/Aluminium cables	Lot	Aluminium/Copper armoured cables
3	Cabling for instruments		Lot	Suitable
4	Earthing	Suitable	Lot	Aluminium wire
5	Cabinet	18 gauge sheet metal with powder coating		
6	Weather Proof	YES		
7	Components	Siemens		

a) All equipment/motors/electrical will be non FLP
b) MCC will be located in STP office.
c) Main Earthing & incoming cabling up to MCC shall be provided by client. Necessary main earth connection to MCC shall be provided by client.
d) MCC will be single compartmentalized MCC with incomer MCB, Aluminum bus bar, outgoing feeders with OLR and starters, on/trip indication will be provided on MCC. MCC will be also provided with one KWh meter, Voltmeter, Ammeter and RYB indication lamp with Buffer system for level indicator and blower.
e) All cabling will be underground.

PIPES AND FITTINGS:

SR.NO.	DESCRIPTION	CAPACITY/SIZE	QTY	MOC
1	Piping/Fittings within battery limit	Suitable	As per Requirement	PVC
2	Valves	Suitable	As per Requirement	PP Valves

DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT MUMBAI

SANDHU BUILDERS MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

ANNEXURE – V

POWER & ELECTRIC CONNECTING LOAD

SR. NO.	DESCRIPTION	QUANTITY			HP EACH	OPERATING HRS.	OPERATING KWH/DAY
		W	S	T			
1	Raw Sewage Pump	1	1	2	2	2	36
2	RMBC Reactor	3		3	5	24.0	90
3	Filter feed pump	1	1	2	2.0	16.00	24.00
4	Filter Press pumps	1	--	1	1.5	2.0	2.25
						Total KWH /day	**152.25**

COSTING:

SR.NO.	PARTICULARS	AMOUNT IN RS.
1	**Power Cost** (152.25Kwh x 7/- x 365 days)	3,88,998/-
2	**Chemical/Consumables** • Lubricants Approx 20 lit of lube/grease per year • Routine maintenance spares per year	20,000/- 30,000/-
3	**Manpower for 12 Months** 3 Operators + 1 Reliever	3,60,000/-
4	**Sludge Handling** (Rs. 2000/- per month x 12)	24,000/-
	Total Operating Cost (per year)	8,22,998/-
	Total Operating Cost (Per day)	2,254/-
	Operating Cost Per M3 of Sewage	1.55/-

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028

DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT MUMBAI

M/S. SANDHU BUILDERS MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

ANNEXURE – VI

Bar Screen Chamber cum Oil & Grease Trap:

Sr. No.	Parameters	Dimensions/Values
1	Total number of screens	1
2	Flow Rate	40 m^3/day = 1.67 m^3/hr
3	Retention Time	15 min
4	Operation	Manual
5	Dimension of Bar Screen chamber	3m x 3.5m x 1.4m ht=14.7 m^3
6	MOC of screen and chamber	Screen: MSEP and Chamber :RCC

Equlization cum Collection Tank:

Sr. No.	Parameters	Dimensions/Values
1	Flow Rate	40 m^3/day = 1.67 m^3/hr
2	Retention Time given	12 hrs.
3	Volume of tank	16.4m x 10m x 4.65 m = 770 m3
4	Liquid depth (side water depth of tank)	4.65m
5	Free board of tank	1.5m
6	Dimension of tank	16.4m x 10m x 4.65m
7	MOC	RCC

RMBC Bioreactor:

Sr. No.	Parameters	Dimensions/Values
1	Flow Rate	40 m^3/day = 1.67 m^3/hr
2	Retention Time given	1.5 hrs.
3	Volume of tank	24.5 cum x 3 = 72.9 cum
4	Liquid depth (side water depth of tank)	1.8 m
5	Free board of tank	0.3m
6	Dimension of tank	2.5m x 5.4m x 2.5m
7	MOC	MS

Clarified Water Tank:

Sr. No.	Parameters	Dimensions/Values
1	Flow Rate	40 m^3/day = 1.67 m^3/hr
2	Retention Time given	3 hrs.
3	Volume of tank	4.5m x 10m x 5.7m = 200 m3
4	Liquid depth (side water depth of tank)	5.725m
5	Free board of tank	0.30m
6	Dimension of tank	4.5m x 10m x 5.275m
7	MOC	RCC

Treated Water Tank:

Sr. No.	Parameters	Dimensions/Values
1	Flow Rate	40 m^3/day = 1.67 m^3/hr
2	Retention Time given	8 hrs.
3	Volume of tank	8m x 10m x 6.0m = 480 m^3
4	Liquid depth (side water depth of tank)	6.0m
5	Free board of tank	0.30m
6	Dimension of tank	8m x 10m x 6.3m
7	MOC	RCC

NOTARY S.M.H. ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2026 GOVT. OF INDIA

SANDHU BUILDERS MUMBAI

DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

Pressure Sand Filter:

Sr. No.	Parameters	Dimensions/Values
1	Design Flow	40 m^3/day = 1.67 m^3/hr
2	Surface loading rate range	15 m^3/m2/day
3	Diameter of the tank	2.3m
4	Height of straight	1.73 m
5	MOC	FRP

Activated Carbon Filter:

Sr. No.	Parameters	Dimensions/Values
1	Design Flow	40 m^3/day = 1.67 m^3/hr
2	Surface loading rate range	15 m^3/ m2/day
3	Diameter of the tank	2.3m
4	Height of straight	1.73 m
5	MOC	FRP

NOTARY GOVT. OF INDIA

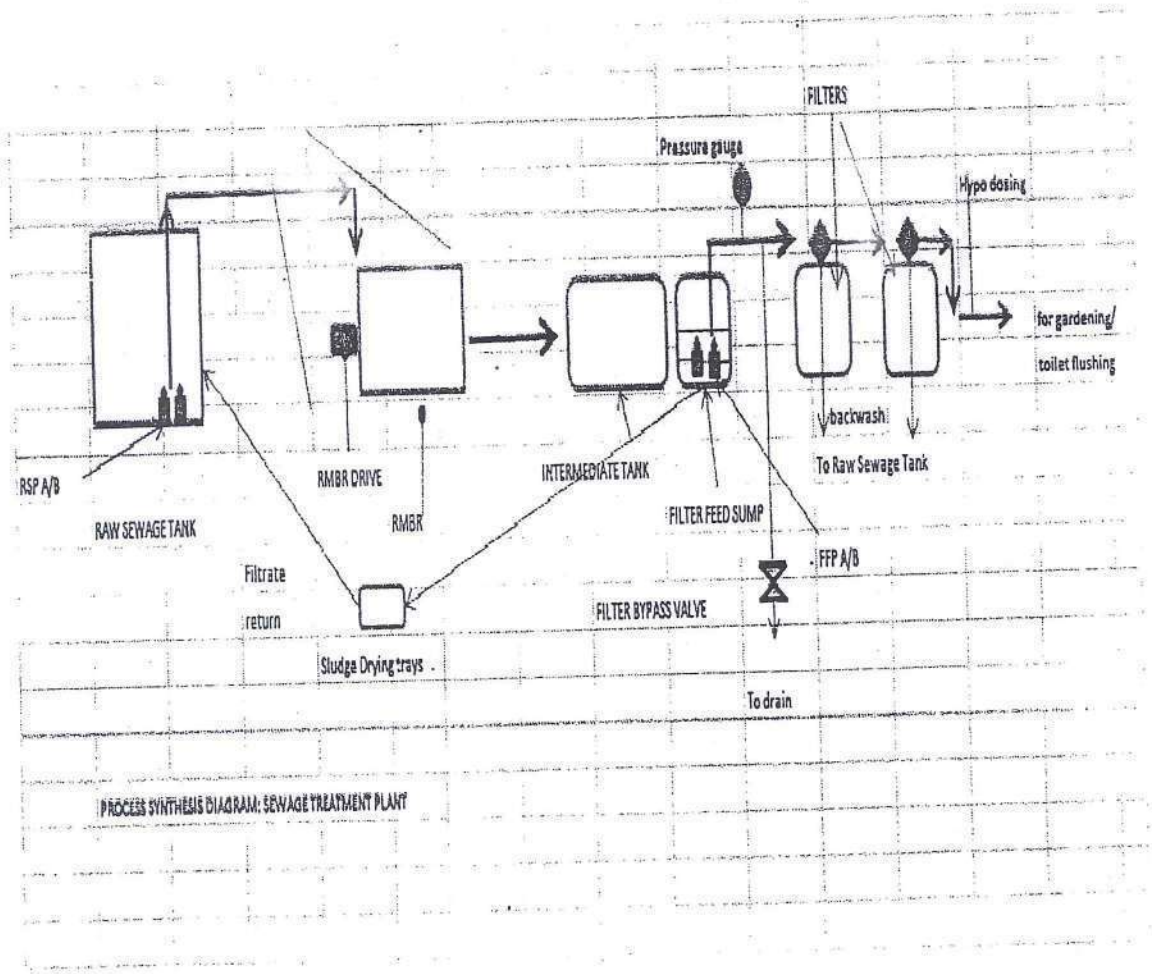
DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT MUMBAI

M/S. SANDHU BUILDERS MUMBAI

Dnyanesh G. Bhave
Plumbing & Fire Fighting Consultant

CHAPTER - 2

ANNEXURE - I

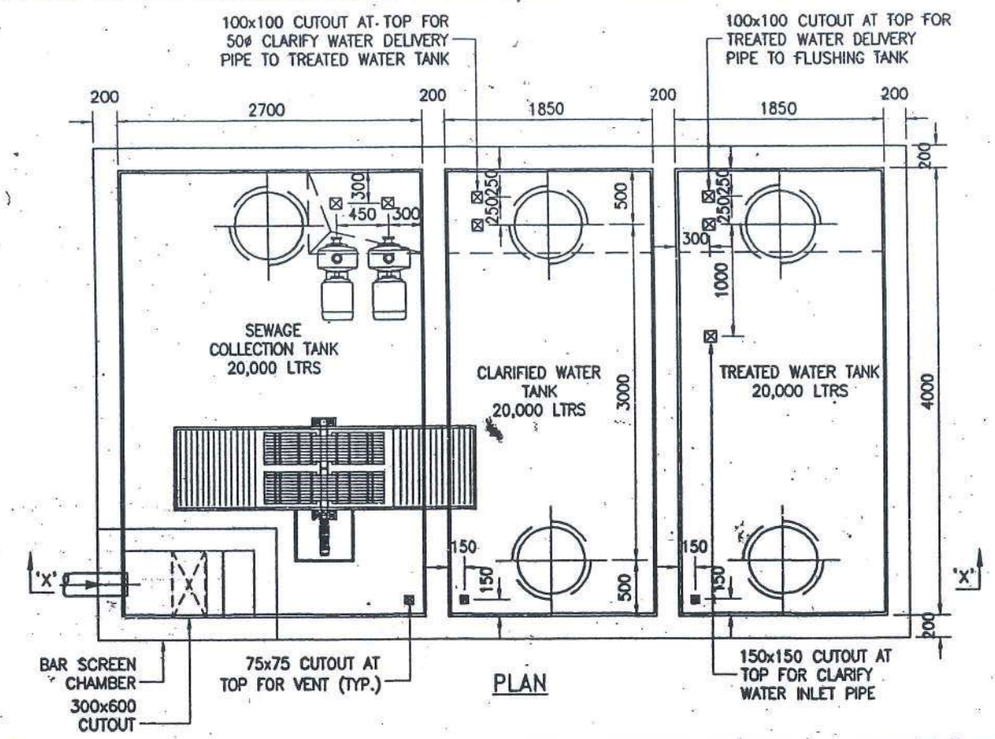


PROCESS SYNTHESIS DIAGRAM: SEWAGE TREATMENT PLANT

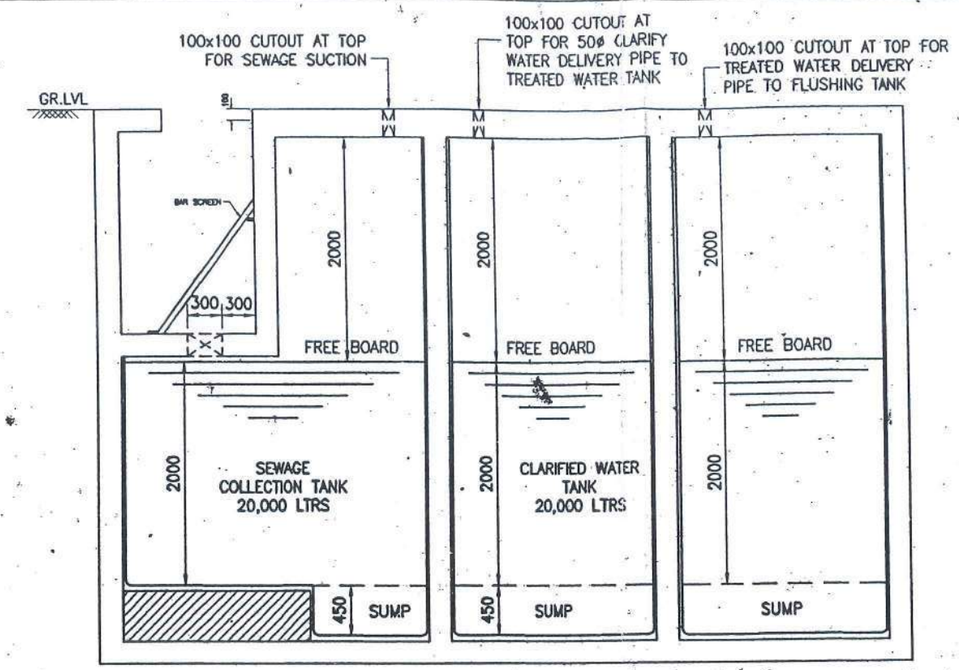
NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission
Expires
25 Sept. 2028
GOVT. OF INDIA

M/S. SAYDHU BUILDERS
MUMBAI

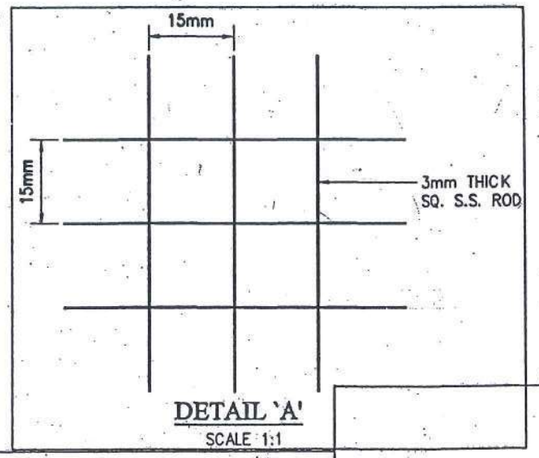
DNYANESH G. BHAVE PLUMBING & FIRE FIGHTING CONSULTANT
Mumbai



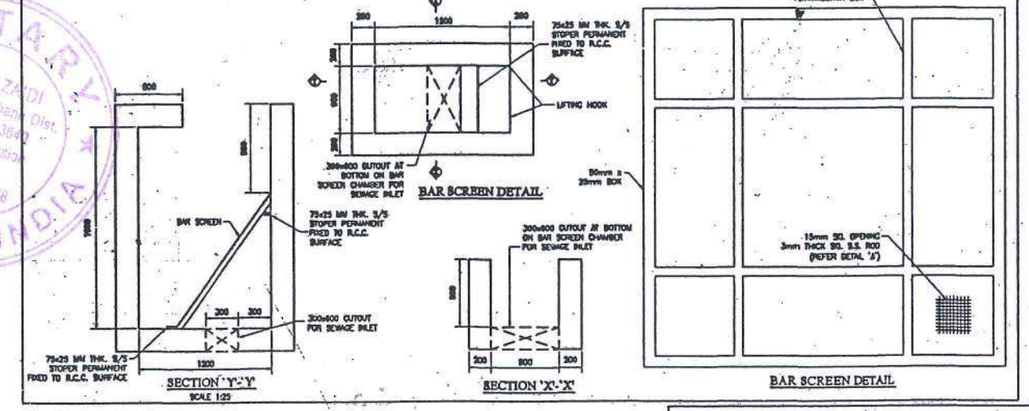
PLAN



SECTION 'X'-'X'



DETAIL 'A'
SCALE 1:1



REV.NO.	DATE	DESCRIPTION	DRAWN

PROJECT:

SANDHU BUILDER

PALI HILL, BANDRA (WEST), MUMBAI

DRAWING TITLE: PLUMBING LAYOUT

STP 40 KLD

ARCHITECTS: SKY LINE ARCHITECTS

BLOCK NO. 12, 2ND FLOOR, 16A / 16B, RAGHUVANSHI MILL COMPOUND, RAGHUVANSHI MANSION, SENAPATI BAPAT MARG, LOWER PAREL. MUMBAI: - 13

NORTH	SCALE: 1 : 50	DATE: 05/09/2012	DRAWING NO.:- 416/P/06
	DRAWN: Sudhir	CHD: D. G. BHAVE	
	DRG. STATUS: -		REVISION No. :- -

APPROVED STAMP/SIGN.

STAMP/SIGN.

CONSULTANTS:

Dnyanesh G. Bhave

Plumbing & Fire Fighting Consultant

701 & 702, 7TH FLOOR, SHAKTI NIWAS PLOT NO. 21, RAMCHANDRA LANE EXTN., MALAD (W), MUMBAI- 400 064.
TEL. 2881 17 15 / 2888 38 11
E-mail : dg_bhave@rediffmail.com
dnyaneshbhave@gmail.com

SIZE - A3

HP Consultants

(Project Management Consultancy)

"Zeel-Ashray,Plot no:3,Ambarnath CHS,Katrap,Badlapur (East).Dist:Thane Pin:421503.

Contact No: 0251-2693961,+91 9004787980. email: hitenpatel16@gmail.com

Date: 16th December-2017

To,

Executive Engineer

MCGM,

Mumbai

Sewerage Treatment Plant Completion certificate for Sandhu Palace at Pali Hill,Bandra West ,Mumbai.

Sewerage tratemnet plant works of residential building at Sandhu Palace at Pali Hill,Bandra West is completed by Agency: M/S Eco Pollutech Engineers, under our supervision and to our satisfaction.

Work is completed in good workmanship and manner.

For HP Consultants

Proprietor

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3540 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

988

ज्ञानेश भारती
Gyanesh Bharti, I.A.S.

संयुक्त सचिव
भारत सरकार
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Joint Secretary
Government of India
Ministry of Environment, Forest & Climate Change

D.O. No. 19-159/2014-IA.III(Pt.)
Dated: 06th October, 2017

Dear Sir,

Please find enclosed herewith a letter from Shri S.S.Hussain, CEO, CREDAI-MCHI addressed to Secretary, MoEF&CC.

2. The Ministry in pursuance of Notification No. S.O. 3999(E) dated 9th December, 2016 has issued an order on 7th July, 2017 that no separate Environment clearance is required for building and construction projects upto 1,50,000 square meter built up area in respect of Municipal Corporations, Municipal Councils and all Special Planning Authorities in Pune and Konkan Divisions. The authority competent to grant the building permission will integrate the Environment Clearance conditions based on the recommendation of Environment Cell following the process as envisaged in the notification.

3. In view of this you are requested to take appropriate action under intimation to the sender of the letter.

With Regards

Yours sincerely,

(Gyanesh Bharti)

Shri. Satish Gavai,
Additional Chief Secretary,
Environment Dept.
Government of Maharashtra,
Mumbai 400 032.

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. No. 3540

M/S. SANDHU BUILDERS MUMBAI

इंदिरा पर्यावरण भवन, जोर बाग रोड, नई दिल्ली-110 003. फोन : 011-24695268, फैक्स : 011-24695288
INDIRA PARYAVARAN BHAWAN, JOR BAGH ROAD NEW DELHI-110 003. PH 011-24695268, Fax 011-24695288
E-mail gyanesh.bharti@nic.in

989

SPEED POST

F. No. 2-38/2017-IA-III
Government of India
Ministry of Environment, Forests and Climate Change
(I.A. Division)

Indira Paryavaran Bhavan
Jor Bagh Road, Aliganj
New Delhi-110 003

Date: 15th November, 2017

Subject: Applicability of MoEF&CC Notification S.O. (E) 695 dated 04.04.2011 etc. - reg.

This has reference to the representations received in the Ministry on applicability of Notification S.O. (E) 695 dated 04.04.2011 regarding the above mentioned subject.

2. In this regard, the undersigned is directed to say that the Ministry has made amendment to the S.O. 1533(E) dated 14th September, 2006 and issued notification S.O. 695(E) dated 4th April, 2011 and further clarified the applicability of notification S.O. 695(E) dated 4th April, 2011 vide its OM No. 22-35/2017-IA-III dated 7th July, 2017. The copy of the notifications and OM are available on the Ministry's website. However the same are enclosed for your reference.

3. This issues with the approval of Competent Authority.

Encls: As above

Kushal Vashist
Director
Tel: 011- 24695382
E Mail: kushal.vashist@gov.in

To,

The Municipal Commissioner
Municipal Corporation of Greater Mumbai,
Municipal Extension Building,
Mahapalika Marg, Esplande Road, GPO,
Mumbai - 400001, Maharashtra.

Copy to,

(I) **The Additional Chief Secretary & Member-Secretary, SEIAA,** Maharashtra, Environment Department, Government of Maharashtra, 15th floor, New Administration Building Mantralaya, Mumbai – 400 032.

(ii) **Shri Kanwarjeet Singh Sandhu,** M/s Sandhu Builders, Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai- 400050, Maharashtra.

NOTARY GOVT. OF INDIA S.M.H. ZAIDI Mumbai & Thane Dist. Reg. No. 3940 My Commission Expires 25 Sept. 2020

M/s. SANDHU BUILDERS MUMBAI

990

SANDHU GROUP
SDL

SANDHU BUILDERS

Regd off. & Admn. Off.: Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai - 400050
Tel : - 26051177 / 1277 / 1377 Fax : 2605 1477
E-Mail: sandhugroup@hotmail.com Website :www.sandhugroup.net

To
The Member Secretary
State Environmental Impact Assessment Authority
15th Floor, New Administration Building
Department of Environment, Mantralaya
Mumbai, Maharashtra

24.03.2015

Subject : Submission of Form-1& Form-1A for our Project Sandhu Palace at 41, Pali Hill, CTS Nos 1381, 1382/C, 1378/A, 1629 A/1-10, Village Bandra, Mumbai 400 050 for obtaining Environmental Clearance from the State Level Environmental Impact Assessment Authority (SEIAA).

Dear Sir,

With reference to the above mentioned subject, this is an application for obtaining Environmental Clearance from the State Level Environmental Impact Assessment Authority (SEIAA) for our project Sandhu Palace at 41, Pali Hill, CTS Nos 1381, 1382/C, 1378/A, 1629 A/1-10, Village Bandra Mumbai 400 050

The aforesaid project falls under Category B2 of projects 8(a) (Building & construction Projects.

We are hereby attaching the Form-1& Form-1A for your kind reference.

We request you to provide an early date for presentation before the Appraisal Committee.

Thanking You

Yours Faithfully,

For, M/s. SANDHU BUILDERS

AUTHORIZED SIGNATORY

Encl.: As above

Received on:
25/3/2015
Clerk
S. E. A. C. Cell - II

M/s. SANDHU BUILDERS MUMBAI

991

Residential Development at Pali Hill, Bandra (W),Mumbai , Maharashtra, India by M/s. Sandhu Builders

March 25 2015

Form-1&1A

Residential Development
At Pali Hill by M/s. Sandhu Builders.
Category B2Project

Submitted to

State Level Expert Appraisal Committee (SEAC-II), Maharashtra

Environmental Consultant

buildingenvironment

Building Environment (India) Pvt. Ltd
Sector- 15, C.B.D. Belapur – 400 614
Telefax: 022 4123 7073/2757 8554
Web: www.beipl.co.in

Submitted by

SANDHU GROUP SDL

M/s. Sandhu Builders.
Sandhu Palace,41, Pali Hill,
Bandra (W),Mumbai 400 050.

M/s. SANDHU BUILDERS MUMBAI

FORM-1

(I) Basic Information

Sr. No.	Item	Details
1	Name of the Project	The Residential development at 41, Pali Hill bearing C.T.S Nos. 1381, 1382/C, 1378/A, 1629 A/1-10 of Village Bandra, Mumbai-400050, Maharashtra, India.
2	S. No. in the Schedule	The project falls under category B2 of project activity number 8(a) as per MOEF EIA notification dated 14th September, 2006.
3	Proposed capacity/area /length/tonnage to be handled/command area/lease area/ number of wells to be drilled	The subject project will be developed in the, • **Total Plot area:** 12703.90 Sq.m • **Deduction:** 2,522.38 Sq.m • **Net plot area:** 10181.52 Sq.m
4	New/Expansion/Modernization	This is a new project.
5	Existing Capacity/Area etc.	There are some existing structures on the site which are going to be retained. One building named "Sandhu Palace" constructed on site by demolishing another two bunglows & 70% work has been completed. For "Sandhu Palace" we got C.C on 24th February 2006, & I.O.D issued on 24th June, 2006.
6	Category of Project i.e. 'A' or 'B'	'B'
7	Does it attract the general condition? If Yes, Please specify	No
8	Does it attract the specific condition? It yes, Please specify	No
9	Location	The project site is located at 41, Pali Hill bearing C.T.S Nos. 1381, 1382/C, 1378/A, 1629 A/1-10 • **Latitude:** 19° 4'6.38"N • **Longitude:** 72°49'43.86"E Location map is provided in **Annexure I.**
	Plot/Survey/Khasra No.	C.T.S Nos. 1381, 1382/C, 1378/A, 1629 A/1-10
	Village	Bandra
	Taluka	
	District	Mumbai
	State	Maharashtra
10	Nearest railway station/airport along with distance in kms.	Khar & Bandra is the nearest railway station from the site at a distance of approx.1.16 kms. & 1.30 kms. Respectively. Chhatrapati Shivaji International airport is situated at a distance of approx. 3.00 kms from the project site.
11	Nearest Town, City, District Headquarters along with distance in kms.	The nearest town from the project site is Bandra.
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal addresses with telephone nos. to be given)	The project site comes under Municipal Corporation of Greater Mumbai (M.C.G.M)

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3540 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDI

13	Name of the applicant	**M/s. Sandhu Builders.**
14	Registered Address	**M/s. Sandhu Builders.** Sandhu Palace, 41 Pali Hill, Bandra (W),Mumbai 400 050.
15	Address for correspondence:	**M/s. Sandhu Builders.** Sandhu Palace, 41 Pali Hill, Bandra (W), Mumbai 400 050.
	Name	Mr. Diler Sandhu
	Designation(Owner/Partner/CEO)	Owner
	Address	**M/s. Sandhu Builders.** Sandhu Palace, 41 Pali Hill, Bandra (W), Mumbai 400 050.
	Pin Code	400 050
	E-mail	dilersandhu@gmail.com
	Telephone No.	+ 91 9967177777
	Fax No.	
16	Details of Alternative Sites examined, If any. Location of these sites should be shown on a topo sheet	No
17	Interlinked Projects	Not Applicable
18	Whether separate application of interlinked project has been submitted?	Not Applicable
19	If yes, date of submission	Not Applicable
20	If no, reason	Not Applicable
21	Whether the proposal involves approval/clearance under: if yes, details of the same and their status to be given. (a) The Forest (Conservation) Act, 1980? (b) The Wildlife (Protection) Act, 1972? (c) The C.R.Z. Notification, 1991?	No
22	Whether there is any Government Order/Policy relevant/relating to the site?	NA
23	Forest land involved (hectares)	No
24	Whether there is any litigation pending against the project and/or land in which the project is propose to be set up? (a) Name of the Court (b) Case No. (c) Orders/directions of the Court, if any and its Relevance with the proposed project.	No

NOTARY S.M.H.ZAIDI Mumbai & Thane Reg. No. Maharashtra GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

(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, etc.)**

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	The project will not bring about changes in the land cover or land use of the site as it's the residential building construction is going on by demolishing existing residential bunglows.
1.2	Clearance of existing land, vegetation and building?	No	There are some existing structures on the site which are going to be retained. One building named "Sandhu Palace" constructed on site by demolishing two bunglows. No clearance of vegetation involved as 32 numbers of trees exists on the site was retained. The excavated top soil was used for plantation.
1.3	Creation of new land uses:	No	No creation of new land uses due to the project is envisaged. The existing land use of the site was residential & remains same. Thus the existing land use of the site is not changed.
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Soil and Water Testing has been carried out.
1.5	Construction works?	Yes	The project involves construction activity. Building configuration are as follows: **Existing Structures to be Retained:** **Manju Mahal:** 4 Wing A,B,C,D of Gr+8 **Tejas Bunglow:** Gr Flr **Row Houses:** Gr+1 **New Structures Constructed "Sandhu Palace":** 1 Residential Building with 2 Wings of A&B. **Wing A:** 2 basements + Ground +18 + 19(Part). **Wing B:** 2 basements+Gr+5
1.6	Demolition Works?	Yes	Initially there were two private bungalows which were demolished & waste generated from the demolition was used for leveling of land.
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	Temporary labour sheds and adequate sanitation facilities were provided to the construction laborers at the site during the construction work.
1.8	Above ground buildings, structures or	Yes	The project involves construction activity.

SANDHU GROUP

M/s. SANDHU BUILDERS MUMBAI

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
	earthworks including linear structures, cut and fill or excavations.		Building configuration are as follows: **Existing Structures to be Retained:** **Manju Mahal:** 4 Wing A,B,C,D of Gr+8 **Tejas Bunglow:** Gr Flr **Row Houses:** Gr+1 **New Structures Constructed "Sandhu Palace":** 1 Residential Building with 2 Wings of A&B. **Wing A:** 2 basements + Ground +18 + 19(Part). **Wing B:** 2 basements+Gr+5
1.9	Underground works including mining or tunneling?	Yes	Basement Construction
1.10	Reclamation works?	No	Not Applicable
1.11	Dredging?	No	Not Applicable
1.12	Offshore structures?	No	Not Applicable
1.13	Production and manufacturing Process?	No	Not Applicable
1.14	Facilities for storage of goods or materials?	Yes	Temporary sheds were constructed for the storage of construction materials during construction phase as per the material requirement.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	**Construction Phase** During the construction phase, soak pits and septic tanks were provided for disposal of waste water. Temporary sanitary toilets were also provided during peak labor force. **Operation Phase** Solid waste generated from the project will be segregated at source. The total quantities of solid waste that will be generated in the project will be 527.00 Kg/day. Out of which 214.00 Kg/day will be non-biodegradable and 313.00 Kg/day will be biodegradable. Biodegradable waste will be treated in OWC. Non Bio-degradable waste will be handed over to authorized local vendor for recycling. Sludge generated from the project will be 12 .00 Kg/day will be used as manure. Total 115.00 KLD of wastewater will be generated from the project site. Out of which 47 KLD will be treated in Sewage Treatment Plant (STP). After recycling treated sewage will be used for flushing

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No 3640 My Commission Expires 25 Sept 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDI

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
			(17.00 KLD), gardening (9.00 KLD) & car washing (3.00 KLD). Sewage generated from Existing Structures is disposed to sewerline. Excess treated sewage from "Sandhu Palace" will be disposed to municipal sewer line
1.16	Facilities for long term housing of operational workers?	No	No long-term housing facilities proposed as most of the skilled/unskilled manpower required for the construction /operational activities hired locally.
1.17	New road, rail or sea traffic during construction of operation?	No	The existing road near the site is been utilized.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc.?	No	No new Rail/road is required. The entire essential infrastructure is already available.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	There will be no diversion or closure of the existing transport routes and infrastructure.
1.20	New or diverted transmission lines or pipelines?	No	Not Envisaged
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not Envisaged, as infrastructure is already in place.
1.22	Stream crossings?	No	There is no stream passing through the site.
1.23	Abstraction or transfers of water from ground or surface waters?	No	Total water requirement 141.00 KLD will be met through supply from local authority / recycled eater from STP/RWH tank.
1.24	Changes in water bodies or the land surface affecting drainage or run-off	Yes	
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	The existing road network which is in good condition near the site is been utilized for the transportation of material and personal.
1.26	Long-term dismantling or decommissioning or restoration works?	No	NA
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	Yes	Noise pollution of short duration due to machineries and marginal air pollution because of dust may occur.
1.28	Influx of people to an area in either temporarily or permanently?	Yes	**Construction Phase** During the construction phase about 50-75 persons were deployed on the site from nearby places. Influx of these people was temporary in nature.

NOTARY S.M.H. ZAIDI Mumbai & Thane Dist Reg. No. 3940 My Commission Expires 25 Sept. 2026 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possibie) with source of information data
			Operation Phase On completion of the project, residents will occupy their property. Total population is expected to be 939 (out of which influx will be 560 Nos. only for "Sandhu Palace").
1.29	Introduction of alien species?	No	Not envisaged
1.30	Loss of native species or genetic diversity?	No	Not envisaged, as site was already encroached with some structures.
1.31	Any other actions?	No	-

2. Use of Natural resources for construction or operation of 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 specially undeveloped or agricultural land (ha)	No	--
2.2	Water (expected source & competing users) unit KLD	Yes	**Construction Phase** Total water requirement was 100 KLD The water demand met by local authority and water tankers. **Operation Phase** Total water requirement of 141.00 KLD will be met through local authority supply/ recycled water from STP/RWH tank.
2.3	Minerals (MT)	No	Not Applicable

SANDHU GROUP SDL

<table>
<tr><td>2.4</td><td>Construction material – stone, aggregates, and/soil (expected source-MT)</td><td>Yes</td><td>The construction materials, which are
<table><tr><th>Sr. No.</th><th>Description</th><th>Unit</th><th>Quantity</th></tr><tr><td>1</td><td>Cement</td><td>Bags</td><td>364688</td></tr><tr><td>2</td><td>Sand</td><td>cu.m</td><td>30456</td></tr><tr><td>3</td><td>Aggregates</td><td>cu.m</td><td>45293</td></tr><tr><td>4</td><td>Steel</td><td>MT</td><td>4475</td></tr><tr><td>5</td><td>Formwork</td><td>sq.m</td><td>498537</td></tr><tr><td>6</td><td>Concrete</td><td>cu.m</td><td>50681</td></tr><tr><td>7</td><td>Fly Ash (RMC) (% of fly ash in RMC 18-20 %)</td><td>MT</td><td>5068</td></tr><tr><td>8</td><td>Form work (Shuttering material servicable upto 8 times)</td><td>sq.m</td><td>62317</td></tr></table>being used in the project, are bought from authorized local dealers.</td></tr>
<tr><td>2.5</td><td>Forests and timber (source-MT)</td><td>Yes</td><td>Mostly timbers were used for construction of door frames. Timber was purchased from authorized vendors who provide timber for construction work. Around 50 MT of timber would be needed for the project.</td></tr>
<tr><td>2.6</td><td>Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)</td><td>Yes</td><td>Electricity Source:
Reliance
Power requirement (KW/h)for:
Construction phase – 100 KW</td></tr>
<tr><td>2.7</td><td>Any other natural resources (use appropriate standard units)</td><td>No</td><td>Not envisaged</td></tr>
</table>

SANDHU GROUP SDL

M/s. SANDHU BUILDERS MUMBAI

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)	Yes	The Hazardous substances used during different phases of project would be paints, solvents, varnishes and waste oil, paints, cleaners, batteries and pesticides and petroleum products, Glass, Plastics, steel are used. The quantities of waste generated will be very low. By considering maintenance once in a year, the waste oil generated will be stored in sealed containers and will finally be sold to authorized recycling agency. Other hazardous waste will be handled as per Hazardous Waste Handling (2003) rules
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	Not envisaged
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	Positive impact will be created due to enhanced and hygienic living conditions. Aesthetic value of area will be improved. It generated employment opportunities to the local people in terms of skilled and unskilled labor during construction and service personnel during operational phase.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	Noise and Air Pollution control measures were implemented so as to cause no harm to nearby residents, during construction phase.
3.5	Any other causes	No	No other causes identified.

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

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3840 M/ Commission Exp. 25 ... 2028

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

4.2	Municipal waste (domestic and or commercial wastes)	Yes	**Construction Phase** During the construction phase, soak pits and septic tanks were provided for disposal of waste water. Temporary sanitary toilets were also provided during peak labor force. **Operation Phase** Solid waste generated from the project will be segregated at source. The total quantities of solid waste that will be generated in the project will be 527.00 Kg/day. Out of which 214.00 Kg/day will be non-biodegradable and 313.00 Kg/day will be biodegradable. Biodegradable waste will be treated in OWC. Non Bio-degradable waste will be handed over to authorized local vendor for recycling. Sludge generated from the project will be 12 .00 Kg/day will be used as manure. Total 115.00 KLD of wastewater will be generated from the project site. Out of which 47 KLD will be treated in Sewage Treatment Plant (STP). After recycling treated sewage will be used for flushing (17.00 KLD), gardening (9.00 KLD) & car washing (3.00 KLD). Sewage generated from Existing Structures is disposed to sewerline. Excess treated sewage from "Sandhu Palace" will be disposed to municipal sewer line

SANDHU GROUP SDL

4.3	Hazardous wastes (as per hazardous waste management rules)	Yes	The hazardous substances used during construction phase would be mainly varnishes, solvents and paints from finishing works and Oil and Diesel from construction machinery. During operation period hazardous waste would be D. G Set maintenance oil. The quantity of hazardous waste is considered to be negligible. By considering maintenance once in a year, the waste oil generated would be Negligible. Also the waste oil from DG set will be stored in sealed containers and will finally be sold to authorize recycling agency. Other hazardous waste will be handled as per Hazardous Waste (Management & Handling) Rules.
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	Dewatered / dried sludge from STP will be used as manure in horticulture.
4.7	Construction or demolition wastes	Yes	All construction waste were collected and segregated properly. Most of it will were reused, including wood. Balance waste was disposed on approved dumping 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	Yes	Emissions form DG set only in case of emergency. The operation of proposed project does not envisage any major source of air pollution.
5.2	Emission from production processes	No	There is no production as the proposed project comprises of residential buildings.
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive emissions generated, while handling and transportation of materials to site. this will be marginal and temporary in nature.

SANDHU GROUP SDL

M/S. SANDHU BUILDERS MUMBAI

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
5.4	Emissions from construction activities including plant and equipment	Yes	During the Operation Phase, DG sets will be operated only as a backup power at project site. Adequate measures will be taken to mitigate any problem due to pollution.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	**Construction Phase** Fugitive dust emissions will be generated due to movement of vehicles and material handling, which will be temporary and marginal. **Operation Phase** During Operation Phase, emissions will be generated only from operation of DG sets, on rare occasions, since power is supplied by Local Authority. Minimal emissions will be generated from movement of vehicles as fugitive dust as the roads will be paved roads. Odour can be from STP. However, the STP will be working on appropriate technology, so as to minimize odour problems; it will be strategically located so that no adverse impact is caused.
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
6.1	From operation of equipment e.g. engines. ventilation plant, crushers	Yes	Noise generation from construction equipments used for drilling, cutting operations. During Operation Phase. Noise will be generated due to operation of DG sets. This will be about 90-105 dB (A). All DG sets will be per rules and will confirm to noise standards
6.2	From industrial or similar processes	No	Not Applicable

6.3	From construction or demolition	Yes	The construction noise localized, intermittent in nature. This has subsided with the completion of the foundation work. The resultant ambient air noise levels will be within the tolerable levels. The operation will be restricted to day time. Adequate measures taken to keep noise and vibrations under control. No heat or light emission.
6.4	From blasting or piling	No	Not Applicable.
6.5	From construction or operational traffic	Yes	Workers were provided with protective equipment such as earmuffs etc. The noise levels will be < 70 dB (A).
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)	No	Total water requirement 141.00 KL D will be met through supply from local authority / recycled eater from STP/RWH tank. Treatment Plant (STP).
7.3	By deposition of pollutants emitted to air into the land or into water	No	The DG sets will be provided with stacks of sufficient height to disperse the pollutants effectively so that the flue gas emissions will be strictly within the norms stipulated by CPCB. There will not be any deposition of pollutants emitted to air into the land or into water.
7.4	From any other sources	No	Not Envisaged
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	D.G sets will be used as a backup source only.

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	Only 'HSD' from DG set is involved but still Fire Fighting System will be provided.

SANDHU GROUP SDL

M/S. SANDHU BUILDERS MUMBAI

8.2	From any other causes	No	Not Envisaged
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, could burst etc)?	No	The project falls under seismic zone-III as per IS1893 (Part-1):2002, care has been taken in designs to withstand earthquake of maximum possible Richter scale in that area. Further it is not flood prone or landslide prone areas. Hence, no risk due to natural hazards is envisaged.

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, lities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:	Yes	Supporting and ancillary development will take place. The project provides a well designed residential housing
	Supporting infrastructure (roads, power supply, waste or waste water treatment, etc)	Yes	Internal Roads, Rainwater Harvesting, STP etc will be provided
	Housing development	Yes	The proposed redevelopment residential project.
	Extractive industries	No	
	Supply industries	No	
	Other		
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	Already many such projects are on the way
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	Not Applicable.

GOVT. OF INDIA NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No 3640 My Commission Expires 25 Sept. 2028

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

(iii) Environmental Sensitivity

S.No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Arabian Sea Mangroves Near Carter Road Mithi River Powai Lake Sanjay Gandhi National Park	Approx.1.12 Km Approx.1.00 Km Approx.2.37 Km Approx.9.45 Km Approx.11.00 Km
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Arabian Sea Mangroves Near Carter Road Mithi River Powai Lake Sanjay Gandhi National Park	Approx.1.12 Km Approx.1.00 Km Approx.2.37 Km Approx.9.45 Km Approx.11.00 Km
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Arabian Sea Mangroves Near Carter Road Mithi River Powai Lake Sanjay Gandhi National Park	Approx.1.12 Km Approx.1.00 Km Approx.2.37 Km Approx.9.45 Km Approx.11.00 Km
4	Inland, coastal, marine or underground waters	Arabian Sea Mangroves Near Carter Road Mithi River Powai Lake	Approx.1.12 Km Approx.1.00 Km Approx.2.37 Km Approx.9.45 Km
5	State, National boundaries	No	Not Applicable
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	Not Applicable
7	Defense installations	No	Not Applicable
8	Densely populated or built-up area	The site is located in the densely populated Mumbai city. The nearest towns from the project site are, • Bandra • Khar	

SANDHU GROUP SDL

M/s. SANDHU BUILDERS MUMBAI

9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	Beams Hospital SMC Medical Centre Tulip Women's Health Care Shah Educational Academy Rizvi College of Engineering Bai Avabai Framji Petit Girls High School	Approx.0.20 Km. Approx.0.70 Km. Approx.0.50 Km. Approx.0.60 Km. Approx.0.20 Km. Approx.0.40 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
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (*earthquakes, subsidence, landslides, erosion, floodingor extreme or adverse climatic conditions*)	Yes	The project site lies in Seismic Zone III as per the seismic zone map of India and is susceptible to earthquake.

(IV) Proposed Terms of Reference for EIA studies

Not applicable since it is a construction sector project.

SANDHU GROUP SDL

M/S. SANDHU BUILDERS NUMBAI

APPENDIX II

(See paragraph 6)

FORM-1 A (only for construction projects listed under item 8 of the Schedule)

CHECK LIST OF ENVIRONMENTAL IMPACTS

[Project proponents are required to provide full information and wherever necessary attach explanatory notes with the Form and submit along with proposed environmental management plan & monitoring programme]

1 LAND ENVIRONMENT [Attach panoramic view of the project site and the vicinity]

Will the existing land use get significantly altered from the project that is not consistent with the surroundings? (Proposed land use must conform to the approved Master Plan / Development Plan of the area. Change of land use if any and the statutory approval from the competent authority to be submitted). Attach Maps of (i) site location, (ii) surrounding features of the proposed site (within 500 meters) and (iii) The site (indicating levels & contours) to appropriate scales. If not available attach only conceptual plans.

Land Use Pattern:

The Residential development at 41, Pali Hill bearing C.T.S Nos. 1381, 1382/C, 1378/A, 1629 A/1-10 of Village Bandra, Mumbai-400050, Maharashtra, India.

Existing land use of the site is residential purpose. As the project involves development of residential buildings, it will not change the existing land use pattern of the site.

The surrounding features of the proposed site are as follows:

No.	Amenities	Name	Road Distance (in Km)
1.	Airport	Chhatrapati Shivaji Airport	Approx. 3.00
2.	Nearest Railway Station	Khar Railway Station Bandra Railway Sattion	Approx. 1.16 Approx. 1.30
3.	Hospital	Beams Hospital	Approx.0.20
4.	School	Rizvi College of Engineering Bai Avabai Framji Petit Girls High School	Approx.0.20 Approx.0.40

Agriculture / Livestock:

There is no agricultural activity in the vicinity of the proposed area.

I. PROJECT DETAILS :

A. Name & Location: The Residential development at 41, Pali Hill bearing C.T.S Nos. 1381, 1382/C, 1378/A, 1629 A/1-10 of Village Bandra, Mumbai-400050, Maharashtra, India.

B. Proposed Building Details:

Table No.1: Building details

Existing Structures to be Retained: **Manju Mahal:** 4 Wing A,B,C,D of Gr+8 **Tejas Bunglow:** Gr Flr **Row Houses:** Gr+1
New Structures Constructed "Sandhu Palace": 1 Residential Building with 2 Wings of A&B. **Wing A:** 2 basements + Ground + 18 + 19(Part). **Wing B:** 2 basements+Gr+5

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

1008

C. Area Statement:

Table No.2: Area Statement

Sr. No.	Description	Existing Structures To Be Retained (Area in Sq.mt)	New Structures Constructed "Sandhu Palace" (Area in Sq.mt)	Total (Area in Sq.mt)
1.	Plot area	----		12703.90
2.	Deduction	----		2522.38
3.	Net plot Area	----		10181.52
4.	Permissible FSI	----		2.00
5.	FSI Consumed	----		1.92
6.	Non FSI area	676.96	25244.11	25921.07
7.	Total Built up Area	9222.86	38422.76	47645.62
8.	RG area	----		1796.73
9.	Ground Coverage	1896.73	1418.64	3315.36
10.	Roof Area	1808.00	1418.64	3226.64
11.	Amenity area (proposed)		1133.31	1133.31
12.	Swimming Pool area	----	170.60	170.60
13.	No. of basement, Basement area	----	2 Nos. Area:10005.70	10005.70
14.	No. of podium, Podium area	----	----	----
15.	Total no. of residential units	112 Nos.	43 Nos.	155 Nos.
16.	Building Configuration	**Manju Mahal:** 4 Wing A,B,C,D of Gr+8 **Tejas Bunglow:** Gr Flr **Row Houses:** Gr+1	**Wing A:** 2 basements + Ground +18 + 19(Part). **Wing B:** 2 basements+Gr+5flrs.	

D. Parking Statement:

Table No.3: Parking Statement

Sr. No.	Description	Existing Structures To Be Retained (Area in Sq.mt)	New Structures Constructed "Sandhu Palace" (Area in Sq.mt)	Total
1.	Parking Proposed	71	239	310
2.	Parking Area	3709.00	9109.59	12818.59

E. Occupancy load:

Table No.4: Occupancy Load

Description	Total
Existing Structures To Be Retained	
Manju Mahal	560
Tejas Bunglow	
Row Houses	
New Structures Constructed "Sandhu Palace"	379
Total	939

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

F. Water requirement for the project:

1. During Construction Phase:

- From LOCAL AUTHORITY: 12 KLD.(For workers)
- From Water Tankers: 10 – 20 KLD. (Depending on construction activity)

2. During Operational Phase:

➢ **Water Consumption: (Domestic and flushing requirement)**

Table No.5: Water requirement (Domestic and flushing requirement)

Sr. No.	Building	Occupancy	Domestic & flushing Requirement (KLD)	
			Domestic	Flushing
1.	Existing Structures To Be Retained	560	50.00	25.00
2.	New Structures Constructed "Sandhu Palace"	379	34.00	17.00
	Total	939	84.00	42.00

Reference: National Building Code (NBC) -2005 – Part 9, Page 19, Water Requirement

The amount of water demand is calculated based on the occupancy of the building and the per capita consumption as given in MoEF Manual on norms and standards for EC of large construction projects i.e.

Total quantity of water used (LPCD) = Occupancy x Quantity (LPCD)

Then Total quantity of water used for Domestic and Flushing in KLD is calculated.

➢ **Total water requirement for the project and source:**

Table No.6: Total water requirement for the project and source

Sr. No.	Description	Quantity of water required KLD			Source of water supply
1.	Construction phase				
a.	For Workers	12			Local Authority
b.	For Construction	10 - 20 (Depending upon the construction activity)			Water Tankers
2.	Operation phase				
		Total			Source of water supply
		Existing Structures To Be Retained	New Structures Constructed "Sandhu Palace"	Total	
a.	Domestic	50.00	34.00	84.00	Local Authority/RWH
b.	Flushing	25.00	17.00	42.00	Treated sewage from STP
c.	Gardening	10.00		9.00	Treated sewage from STP
d.	Car Washing	1.00	2.00	3.00	Treated sewage from STP
e.	Swimming pool Makeup		3.00	3.00	Tanker
	Total			141.00	

*Water requirement for gardening purpose is considered as total quantity of water used (LPCD) =Gardening Area (Sq. Mt.) x Quantity (Lit /Sq. Mt.)

Then total quantity of water for gardening in KLD is calculated.

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

G. Sewage Generation

Table No.7: Sewage Generation

Sr. No	Description	Quantity of Sewage generated(KLD)			Treatment/ Disposal
1.	Construction Phase	11.00			
2.	Operation Phase	Existing Structures To Be Retained	New Structures Constructed "Sandhu Palace"	Total	For "Sandhu Palace" generated sewage will be treated in STP & treated water will be reused in flushing, landscaping & car washing ; & for existing structures retained , the generated sewage is discharged to sewerline
		68.00	46.00	114.00	

Reference: Manual on norms and standards for EC of large construction projects MoEF

H. Solid Wastes:

During Construction Phase:

Table No.8: Solid Wastes During Construction Phase

No. of workers	Criteria for Solid Waste Generation			Solid Waste Generation Kg /day		
	Total (Kg/Person/day)	Non-bio degradable	Bio degradable	Non-bio degradable	Bio degradable	Total
150	0.25	30%	70%	11	26	37

The solid waste generation due to workers dwelling on the site will be segregated and will be disposed suitably.

During Operation Phase:

Table No.9: Solid Wastes During Operation Phase

Type of Waste	Total Waste Generated (Kg per day)		
	Existing Structures To Be Retained	New Structures Constructed "Sandhu Palace"	Total
Biodegradable			
Wet Municipal Waste	176.00	120.00	296.00
Garden Waste	--	5.00	5.00
STP Sludge	--	12.00	12.00
Non biodegradable	76.00	138.00	214.00
Total Bio Degradable			313.00
Total Non Bio Degradable			214.00

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

	Total Waste Generated (Kg per day)	**527.00**

Solid waste generated will be segregated at source. The total quantities of solid waste that will be generated in the project will be 527.00 Kg/day. Out of which 214.00 Kg/day will be non-biodegradable and 313.00 Kg/day will be biodegradable.
Biodegradable waste will be treated in OWC.
Non Bio-degradable waste will be handed over to authorized local vendor for recycling.
Dried sludge from STP will be used as manure within the premises for plants.

I. Power requirement:

During Construction Phase –

Local Authority:
D.G. Sets: as per requirement

During Operational Phase -

Source: Local authority

Table No.10: Power Requirement

Phase	Total (KW)
Existing Structures To Be Retained	Reliance is providing Power Supply
New Structures Constructed	
D.G	DG set provided for "Sandhu Palace"

1.3	**What are the likely impacts of the proposed activity on the existing facilities adjacent to the proposed site? (Such as open spaces, community facilities, details of the existing land use, disturbance to the local ecology).**
	The proposed project is a residential project. This area will be now converted into well organized complex which will have better living conditions. Also green features such as STP, Rain water harvesting, additional tree plantation, etc shall be practiced. Hence this project will have overall positive impact socio economy.
1.4	**Will there be any significant land disturbance resulting in erosion, subsidence & instability? (Details of soil type, slope analysis, vulnerability to subsidence, seismicity etc. may be given).**
	No, there will not be any significant land disturbance in erosion, subsidence & instability.
1.5	**Will the proposal involve alteration of natural drainage systems? (Give details on a contour map showing the natural drainage near the proposed project site)**
	No, the proposal will not involve alteration of natural drainage systems.
1.6	**What are the quantities of earthwork involved in the construction activity-cutting, filling, reclamation etc. (Give details of the quantities of earthwork involved, transport of fill materials from outside the site etc)**
	Debris, demolition waste and excavated material generated partly disposed. Excess soil shall be disposed to authorized site with permission from local authority.
1.7	**Give details regarding water supply, waste handling etc during the construction period.**
	Water Requirement during Construction Phase: From water tankers (For Construction): 10- 20 KLD. (Depending upon the construction activity). From local authority. (For Workers): 12 KLD. The sewage generated approximately 11 KLD .
1.8	**Will the low lying areas & wetlands get altered? (Provide details of how low lying and wetlands are getting modified from the proposed activity)**
	No.
1.9	**Whether construction debris & waste during construction cause health hazard? (Give quantities of various types of wastes generated during construction including the construction labour and the means of disposal)**
	Solid Waste Generation during Construction Phase: Debris, demolition waste and excavated material generated partly disposed. Excess soil shall be disposed to authorized site with permission from local authority Biodegradable garbage = 26kg/day Non-biodegradable garbage =11 kg/day

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

	Total = 37 kg/day This waste shall be segregated and handed over to local authority.
2	**WATER ENVIRONMENT**
2.1	**Give the total quantity of water requirement for the proposed project with the breakup of requirements for various uses. How will the water requirement be met? State the sources & quantities and furnish a water balance statement.**

Water Requirement & Source:

During Construction Phase –

For Workers : M.C.G.M : 12 KLD

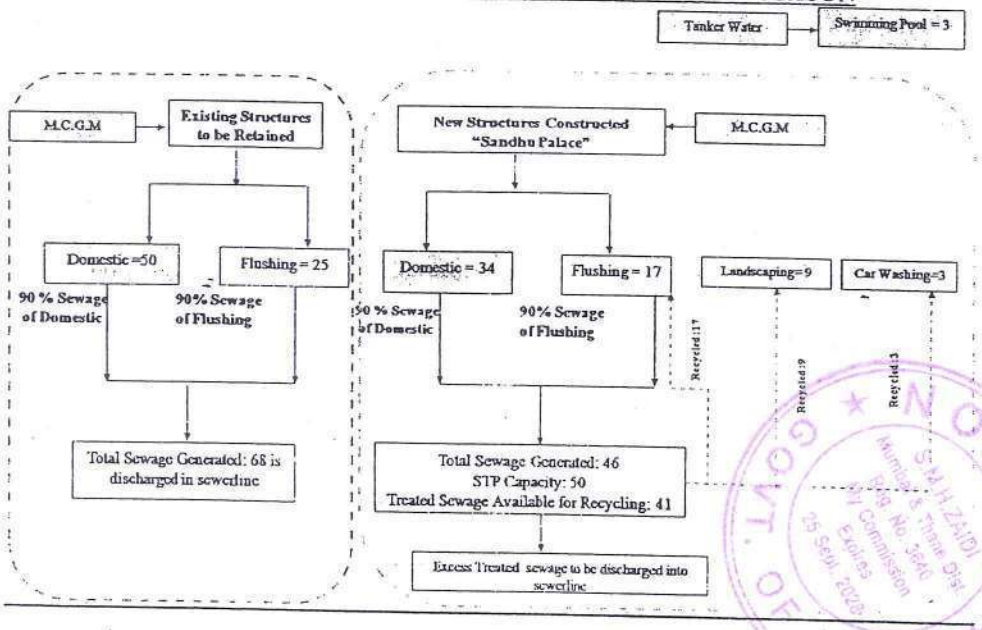
For Construction : From Water Tankers : 10 – 20 KLD

During Operational Phase

Table No.11: Total Water Requirement & Source

Sr. No.	Description	Quantity of water required KLD			Source of water supply
		Existing Structures To Be Retained	New Structures Constructed "Sandhu Palace"	Total	
a.	Domestic	50.00	34.00	84.00	Local Authority/RWH
b.	Flushing	25.00	17.00	42.00	Treated sewage from STP
c.	Gardening	10.00		9.00	Treated sewage from STP
d.	Car Washing	1.00	2.00	3.00	Treated sewage from STP
e.	Swimming pool Makeup		3.00	3.00	Tanker
	Total			Total	141.00

WATER BALANCE PER DAY BASIS – NON MONSOON SEASON



* Please Note:

We have considered 10 % less availability of sewage for recycling considering losses of sewage in evaporation and sludge formation.

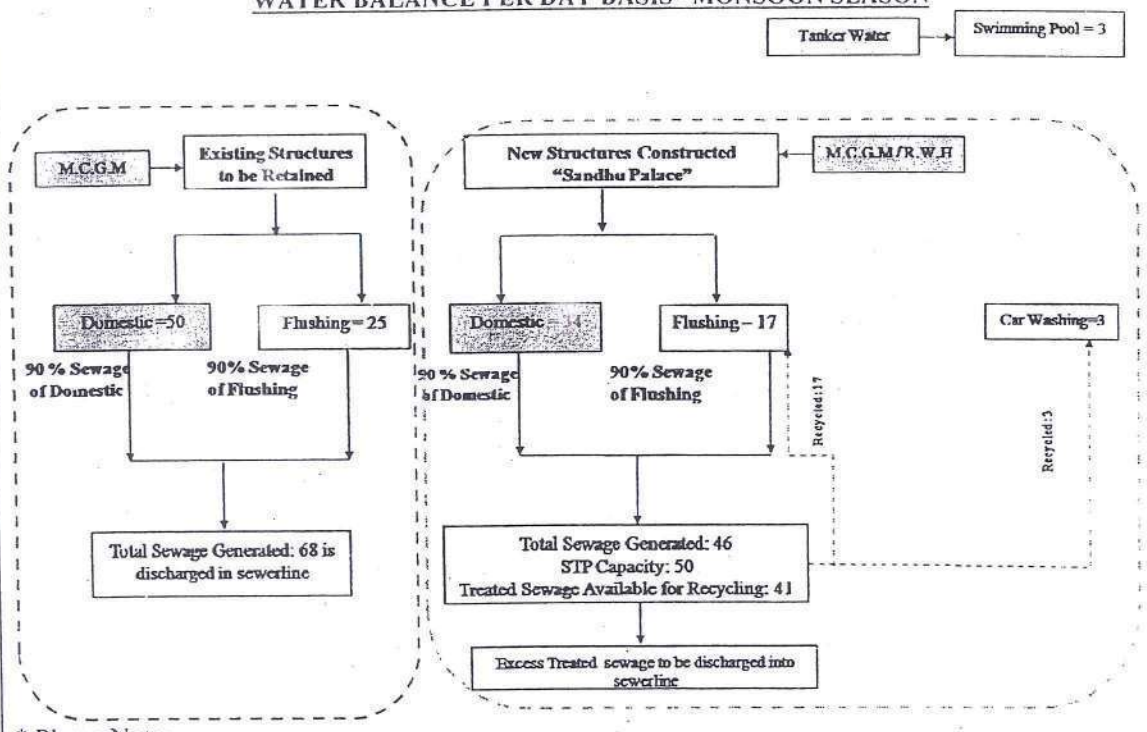
M/s. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

1013

Total water requirement = 141.00 KLD
Treated sewage available for recycling= 41.00 KLD (Only from "Sandhu Palace")
[Treated sewage only from proposed STP]
After recycling treated sewage will be used for flushing (17.00 KLD), gardening (9.00 KLD) & car washing (3.00 KLD).
Sewage generated from Existing Structures is disposed to sewerline.
Excess treated sewage from "Sandhu Palace" will be disposed to municipal sewer line.

WATER BALANCE PER DAY BASIS –MONSOON SEASON



* Please Note:
We have considered 10 % less availability of sewage for recycling considering losses of sewage in evaporation and sludge formation.
Total water requirement = 141.00 KLD
Treated sewage available for recycling= 41.00 KLD (Only from "Sandhu Palace")
[Treated sewage only from proposed STP]
After recycling treated sewage will be used for flushing (17.00 KLD), & car washing (3.00 KLD).
Sewage generated from Existing Structures is disposed to sewerline.
Excess treated sewage from "Sandhu Palace" will be disposed to municipal sewer line.

2.2	**What is the capacity (dependable flow or yield) of the proposed source of Water?**
	Domestic Water Supply from local authority
2.3	**What is the quality of water required, in case, the supply is not from a municipal source? (Provide physical, chemical, biological characteristics with class of water quality)**
	Drinking water quality of Class A as per Indian Standard: 10500, 2004 from local authority
2.4	**How much of the water requirement can be met from the recycling of treated wastewater? (Give the details of quantities, sources and usage)**
	After recycling treated sewage will be used for flushing (17.00 KLD), gardening (9.00 KLD) & car washing (3.00 KLD). Sewage generated from Existing Structures is disposed to sewerline. Excess treated sewage from "Sandhu Palace" will be disposed to municipal sewer line. The dried sludge will be used as manure.
2.5	**Will there be diversion of water from other users? (Please assess the impacts of the project on other existing uses and quantities of consumption)**
	Local Authority has common water supply.

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

1014

2.6	**What is the incremental pollution load from wastewater generated from the proposed activity? (Give details of the quantities and composition of wastewater generated from the proposed activity)**

After recycling treated sewage will be used for flushing (17.00 KLD), gardening (9.00 KLD) & car washing (3.00 KLD).
Sewage generated from Existing Structures is disposed to sewerline.
Excess treated sewage from "Sandhu Palace" will be disposed to municipal sewer line. The dried sludge will be used as manure.

UNTREATED AND TREATED SEWAGE QUALITY:

Table No.12: Untreated & Treated Sewage Quality

Sr. No	Parameters	Units	Inlet	Outlet
1.	pH	-	7-8	7 to 8.5
2.	BOD	mg/L	250 mg/l. - 300 mg/l.	Less than 10 mg/l.
3.	COD	mg/L	500 mg/l. - 600 mg/l.	250 300 mg/l.
4.	TSS	mg/L	300 mg/l. - 350 mg/l.	Less than 20 mg/l.
5.	Oil & Grease	mg/L	20-25 mg/l.	Less than 10 mg/l.
6.	Total Nitrogen	mg/L as N	40-50 mg/l.	Less than 10 mg/l.
7.	Ammoniacal Nitrogen	mg/L	6-8 mg/l.	Less than 1 mg/l.
8.	Phosphate	mg/L	5-7 mg/l.	Less than 2 mg/l.
9.	Faecal Coliform	MPN/100ml	10^6/100	N.D.

2.7	**Give details of the water requirements met from water harvesting? Furnish details of the facilities created.**

It is proposed to provide open collecting well.
This being residential project proponents shall be responsible for the operation and maintenance till he does the convergence of property to the members. All further maintenance will be done by the Society.

2.8	**What would be the impact of the land use changes occurring due to the proposed project on the runoff characteristics (quantitative as well as qualitative) of the area in the post construction phase on a long term basis? Would it aggravate the problems of flooding or water logging in any way?**

Management plan for Flood is as follows :

- Storm water drain shall be cleaned at regular interval.
- Mapping the areas within or leading in or out of the building that will be water logged, flooded or isolated due to the flood. The areas will be marked after completion of the project (as final ground levels etc. will be available after completion).

2.9	**What are the impacts of the proposal on the ground water? (Will there be tapping of ground water; give the details of ground water table, recharging capacity, and approvals obtained from competent authority, if any)**

It is proposed to provide open collecting well.
This being residential project proponents shall be responsible for the operation and maintenance till he does the convergence of property to the members. All further maintenance will be done by the Society.

2.10	**What precautions/measures are taken to prevent the run-off from construction activities polluting land & aquifers? (Give details of quantities and the measures taken to avoid the adverse impacts).**

The runoff from the site during construction phase would be very negligible.
This will be prevented as under :

i) Use of wet jute cloth covering the walls and soaking the same with minimum quantity of water to avoid dripping. This will also help in conserving water.
ii) By collecting the running water in an impervious pit and using the same again for curing purpose.

2.11	**How is the storm water from within the site managed?(State the provisions made to avoid flooding of the area, details of the drainage facilities provided along with a site layout indication contour levels).**

NOTARY GOVT. OF INDIA Regd. No. 3540 Thane Dist. Expires 25 Sept. 2028

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

	Internal storm water drains will be constructed strictly in accordance to the governing authority regulations. The storm water collected through the storm water drains.
2.12	**Will the deployment of construction laborers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation)**
	• During construction phase, temporary mobile toilets shall be used. Hence there will not be unsanitary conditions around the project site. • Regular segregation and disposal of solid waste generated by these workers shall be as per local practices. • First aid and medical facilities will be provided to all the concerned people working on the site. • Proper housekeeping will be maintained throughout the premises.
2.13	**What on-site facilities are provided for the collection, treatment & safe disposal of sewage? (Give details of the quantities of wastewater generation, treatment capacities with technology & facilities for recycling and disposal).**
	After recycling treated sewage will be used for flushing (17.00 KLD), gardening (9.00 KLD) & car washing (3.00 KLD). Sewage generated from Existing Structures is disposed to sewerline. Excess treated sewage from "Sandhu Palace" will be disposed to municipal sewer line. The dried sludge will be used as manure.

Table No.13: Untreated & Treated Sewage Quality

Sr. No	Parameters	Units	Inlet	Outlet
1.	pH	-	7-8	7 to 8.5
2.	BOD	mg/L	250 mg/l. - 300 mg/l.	Less than 10 mg/l.
3.	COD	mg/L	500 mg/l. - 600 mg/l.	250 300 mg/l.
4.	TSS	mg/L	300 mg/l. - 350 mg/l.	Less than 20 mg/l.
5.	Oil & Grease	mg/L	20-25 mg/l.	Less than 10 mg/l.
6.	Total Nitrogen	mg/L as N	40-50 mg/l.	Less than 10 mg/l.
7.	Ammoniacal Nitrogen	mg/L	6-8 mg/l.	Less than 1 mg/l.
8.	Phosphate	mg/L	5-7 mg/l.	Less than 2 mg/l.
9.	Faecal Coliform	MPN/100ml	10^6/100	N.D.

2.14	**Give details of dual plumbing system if treated waste used is used for flushing of toilets or any other use.**
	Recycling of treated sewage for flushing, AC makeup and gardening. Color coding for dual plumbing system shall be done as per standard practices.
3	**VEGETATION**
3.1	**Is there any threat of the project to the biodiversity? (Give a description of the local ecosystem with its unique features, if any)**
	There is no threat to the biodiversity due to the project under reference.
3.2	**Will the construction involve extensive clearing or modification of vegetation? (Provide a detailed account of the trees & vegetation affected by the project).**
	There are 32 nos. of trees existing on site which are going to be retained. Project proponents have proposed tree plantation on ground & on R.G area The proponent has proposed to plant 218 nos. of new tree species on the RG as well as open area.
3.3	**What are the measures proposed to be taken to minimize the likely impacts on important site features (Give details of proposal for tree plantation, landscaping, creation of water bodies etc along with a layout plan to an appropriate scale)**

	There are 32 nos. of trees existing on site which are going to be retained. Project proponents have proposed tree plantation on ground & on R.G area The proponent has proposed to plant 218 nos. of new tree species on the RG as well as open area.
4	**FAUNA**
4.1	**Is there likely to be any displacement of fauna- both terrestrial and aquatic or creation of barriers for their movement? Provide the details.**
	No
4.2	**Any direct or indirect impacts on the avifauna of the area? Provide details.**
	No
4.3	**Prescribe measures such as corridors, fish ladders etc to mitigate adverse impacts on fauna.**
	Not applicable.
5	**AIR ENVIRONMENT**
5.1	**Will the project increase atmospheric concentration of gases & result in heat islands? (Give details of background air quality levels with predicted values based on dispersion models taking into account the increased traffic generation as a result of the proposed constructions)**
	The project will result in negligible increase in the atmospheric concentrations of gases like PM, SO2, NOX & CO due to D.G. sets operation (backup power only) and the increased traffic activity. The proposed activity will not result in the formation of any heat island, as the building will be covered with high solar reflective index materials. Though three and four wheelers movement is expected during operation phase, its impact would be negligible. Construction and demolition activities generate the emission of toxic substances like magnesium, limestone and dust. Although the increase is not much high, general trend at Bharat IV & V vehicles and use of community transport will help to lower the values of CO, posing less of an impact on-site and at receptor locations.
5.2	**What are the impacts on generation of dust, smoke, odorous fumes or other hazardous gases? Give details in relation to all the meteorological parameters.**
	During construction phase, Dust, Particulate Matter is the main pollutant, which may be generated during construction activities. Other emission sources are intermittent and include emissions of SO_2 NOx and CO from materials transport of heavy vehicles on site etc. Proper upkeep and maintenance of vehicles, sprinkling of water on roads and construction site are some of the measures that would reduce the impact during construction phase. **Sources of Air pollution During Operational phase :** The gaseous emissions from vehicles. Emissions from DG set while in operation only during power failure. **Mitigation Measures:** ➢ The traffic congestion will be avoided by proper parking arrangement and maintaining smooth traffic flow. ➢ Regular PUC checkup for vehicles. ➢ CPCB approved DG sets only will be used. ➢ Proper maintenance of DG sets shall be done and Low sulphur fuel shall be used. **The proposed project will not have any direct impact on air environment after completion.**
5.3	**Will the proposal create shortage of parking space for vehicles? Furnish details of the present level of transport infrastructure and measures proposed for improvement including the traffic management at the entry & exit to the project site.**
	The project proponents have proposed to provide well organized parking arrangement. **Table No.14: Parking Statement**

Sr. No.	Description	Existing Structures To Be Retained (Area in Sq.mt)	New Structures Constructed "Sandhu Palace" (Area in Sq.mt)	Total
1.	Parking Proposed	71	239	310
2.	Parking Area	3709.00	9109.59	12818.59

5.4	**Provide details of the movement patterns with internal roads, bicycle tracks, pedestrian pathways,**

	footpaths etc., with areas under each category.
	There will be sufficient wide entries & exits points and separate service road for service vehicles and fire tenders proposed in the project with sufficiently wide internal roads and pedestrian pathways.
5.5	**Will there be significant increase in traffic noise & vibrations? Give details of the sources and the measures proposed for mitigation of the above.**
	The project being residential & commercial project, the source of noise is mainly vehicular noise. The project proponents have proposed to provide well organized parking arrangement and maintaining smooth traffic flow which would help in reducing traffic congestion and noise levels. Trees would act as noise barrier and will reduce the noise level. During power failure to mitigate the noise due to D.G. sets while in operation D.G. sets will be enclosed in acoustic enclosures.
5.6	**What will be the impact of DG sets & other equipment on noise levels & vibration in & ambient air quality around the project site? Provide details.**
	D.G. Sets will be operated only in case of power failures during operational phase. The Pollutants like RSPM, SO_2 that may arise from emissions from D.G. Sets will be discharged through vent of proper height. D.G. sets are with inbuilt acoustic enclosures to reduce the noise of D.G. sets while in operation. Plantation of trees would act as noise barrier and will reduce the noise level.
6	**AESTHETICS**
6.1	**Will the proposed constructions in any way result in the obstruction of a view, scenic amenity or landscapes? Are these considerations taken into account by the proponents?**
	No.
6.2	**Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?**
	All precautions will be taken to mitigate the impact due to water, air and noise pollution during construction and operation phase. Environmental Management Plan is prepared and shall be implemented along with Environmental Monitoring Programme.
6.3	**Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.**
	No, there are no such local considerations.
6.4	**Are there any anthropological or archaeological sites or artifacts nearby? State if any other significant features in the vicinity of the proposed site have been considered.**
	No.
7	SOCIO-ECONOMIC ASPECTS:
7.1	**Will the proposal result in any changes to the demographic structure of local population? Provide the details.**
	There will be influx of about ~ 379 people ("Sandhu Palace" only).
7.2	**Give details of the existing social infrastructure around the proposed project.**
	The proposed project site and its surrounding area lie at Bandra. The area is well served by electricity, telephone, and water and transportation infrastructure. The locality is equipped with government schools, colleges within the locality.
7.3	**Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?**
	No, the project will not cause any adverse effects on local communities, disturbance to sacred sites or other cultural value.
8	BUILDING MATERIALS
8.1	**May involve the use of building materials with high-embodied energy. Are the construction materials produced with energy efficient processes? (Give details of energy conservation measures in the selection of building materials and their energy efficiency)**
	Cement, Bricks and steel are the main components of construction. For the purpose of paving, sun dried pavers will be used instead of baked pavers as they are manufactured from energy efficient processes. Instead of regular clay bricks, fly ash-cement bricks and laterite rock blocks available locally will be used. Also, ready mix concrete with 20% fly ash PPC cement and recyclable aluminum in door and windows

NOTARY GOVT. OF INDIA — Reg. No. 3640, Expires 25 Sept. 2028

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

	will be used to reduce environmental pollution at site.
8.2	**Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?**
	Transportation and handling of materials during construction phase results mainly in pollution of air &noise. The various steps proposed to mitigate the anticipated impacts are as under: • **To Control dust–** - Use of barricading the periphery - Dust mask will be provided to workers. • **To Control Gaseous emissions –** - Vehicle carrying materials to be transported must have PUC certificate. - Heavy vehicle movement will be allowed only during night time. - Construction equipments with idling control technologies will be used. - Regular maintenance of the equipments will be carried out. • **To control Noise generation –** - Barricade the site periphery by corrugated tin sheet so as to confine noise within site. - Ear muff/ ear plug will be provided to workers. - The construction activities will be carried out during the daytime only.
8.3	**Are recycled materials used in roads and structures? State the extent of savings achieved?**
	Yes, recycled materials will be used in roads and structures. Construction debris such as waste concrete and waste plaster can be used as sub base of drives way and footing. The excavated soil will be used for leveling the site and top soil will be conserved for landscaping.
8.4	**Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.**
	➢ Segregation of two types of garbage i.e. biodegradable and non-biodegradable shall be done by means of provision of two garbage bins with different color. ➢ This would ensure that waste segregation is done at source itself. ➢ The non-biodegradable garbage shall be put into separate bins and shall be handed over to local authority ➢ Biodegradable garbage shall be treated in Organic Waste Converter and shall be used as manure.
9	**ENERGY CONSERVATION**
9.1	**Give details of the power requirements, source of supply, backup source etc. What is the energy consumption assumed per square foot of built-up area? How have you tried to minimize energy consumption?**

Power requirement:
During Construction Phase –
Local Authority:
D.G. Sets: as per requirement
During Operational Phase -
Source: Local authority

Table No.18: Power Requirement

Phase	Total (KW)
Existing Structures To Be Retained	Reliance is providing Power Supply
New Structures Constructed	
D.G	DG set provided for "Sandhu Palace"

Following Energy conservation measures are proposed for Energy Saving :

➢ CFL & LED based lighting will be done in the common areas, landscape areas, signage's, Entry gates and boundary compound walls etc..
➢ Auto Timer Switches Will Be Done for Street lights, Garden lights, Parking & staircase Lights & Other Common Area Lights, for saving electrical energy.
➢ Multiple Circuits for lighting.

	➢ Automatic Power Factor Correction Panel For Power Quality Improvement. ➢ Water Level Controllers With Timers Are Used Water Pumps.
9.2	**What type of, and capacity of, power back-up to you plan to provide?**
	Adequate nos. of DG shall be provided.
9.3	**What are the characteristics of the glass you plan to use? Provide specifications of its characteristics related to both short wave and long wave radiation?**
	Glass shall be used in residential.
9.4	**What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project.**
	➢ Maximize the use of natural lighting though design. ➢ The roof shall be insulated so that there will not be direct heat gain due to sunlight.
9.5	**Does the layout of streets & buildings maximize the potential for solar energy devices? Have you considered the use of street lighting, emergency lighting and solar hot water systems for use in the building complex? Substantiate with details.**
	Solar energy will be used.
9.6	**Is shading effectively used to reduce cooling/heating loads? What principles have been used to maximize the shading of Walls on the East and the West and the Roof? How much energy saving has been effected?**
	It is proposed to insulate the roofs of these buildings to minimize the heat gain and intern saving the electricity.
9.7	**Do the structures use energy-efficient space conditioning, lighting and mechanical systems? Provide technical details. Provide details of the transformers and motor efficiencies, lighting intensity and air-conditioning load assumptions? Are you using CFC and HCFC free chillers? Provide specifications.**
	Following Energy conservation measures are proposed for Energy Saving: ➢ CFL & LED based lighting will be done in the common areas, landscape areas, signage's, Entry gates and boundary compound walls etc. ➢ Auto Timer Switches Will Be Done for Street lights, Garden lights, Parking & staircase Lights & Other Common Area Lights, for saving electrical energy. ➢ Multiple Circuits for lighting. ➢ Automatic Power Factor Correction Panel for Power Quality Improvement. ➢ Water Level Controllers With Timers Are Used Water Pumps.
9.8	**What are the likely effects of the building activity in altering the micro-climates? Provide a self assessment on the likely impacts of the proposed construction on creation of heat island & inversion effects?**
	It will not alter the microclimate. The construction will not cause inversion.
9.9	**What are the thermal characteristics of the building envelope? (a) roof; (b) external walls; and (c) fenestration? Give details of the material used and the U-values or the R values of the individual components.**
	The project is not centrally air conditioned thus the ECBC guidelines will not be applicable to this project. To reduce heat intake use of insulation or other materials will be decided by the occupants of the building.
9.10	**What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.**
	FIRE FIGHTING: ➢ As per the regulations of CFO NOC ➢ Provision of Fire Protection System. ➢ Provision of Fire Alarm System as per I.S code. ➢ Provision of Fire detection system. ➢ Provision of Fire hydrants. Fire pumps, booster pumps, sprinkler pumps: Electric, supply independent circuit & fire hydrant line. ➢ Provision of portable fire extinguishers of IS specification. ➢ Adequate underground and overhead separate water storage tanks. Complete Disaster Management Plan (DMP) is made by considering all the factors responsible for

	management of any minor or major disaster.
9.11	**If you are using glass as wall material provides details and specifications including emissivity and thermal characteristics.**
	Glass shall be used in residential only for windows.
9.12	**What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.**
	It has not been studied.
9.13	**To what extent the non-conventional energy technologies are utilized in the overall energy consumption? Provide details of the renewable energy technologies used.**
	Will be provided.
10	**Environment Management Plan**

The Environment Management Plan would consist of all mitigation measures for each activity to be undertaken during the construction, operation and the entire life cycle to minimize adverse environmental impacts as a result of the activities of the project. It would also delineate the environmental monitoring plan for compliance of various environmental regulations. It will state the steps to be taken in case of emergency such as accidents at the site including fire.

ENVIRONMENTAL IMPACT AND MANAGEMENT PLAN FOR THE PROJECT

EMP for Construction Phase

Sr. no.	Environmental Component	Activity	Impacts	Precautionary measures
1	Ambient Air Quality & Noise level	• Site Clearance • Excavation • Construction of Structures • Heavy vehicle traffic • Use of DG Set • Open burning of waste	• Increased level of dust & other air pollutants • Increased noise level.	**For controlling air pollution :** • Water Sprinkling • Cover on trucks • Use of RMC instead of preparing concrete at site • Vehicles with valid PUC • **DG sets:** CPCB approved low sulphur fuel. **For controlling noise pollution :** • Barricades along the periphery of the site. • Ear Plugs for Labourers • D.G. sets CPCB approved • No noisy work in night shifts. • Using electrically operated construction equipment.

M/s. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

2	Water	• Use of fresh • water for Construction activity / labors • Wastewater • generation • Disposal of site • Run off into SWD • Water logging	• Stress on the water supply in the vicinity • Sedimentation, • Pollution of nearby water courses. • Unhygienic condition for surrounding residents.	• Use of tanker water for construction. No burden on municipal supply • Provision of temporary toilets for labors. • Precaution to avoid water logging during construction
3	Soil	• Preconstruction and excavation debris • Storage of construction material / chemicals • Transportation of hazardous material • Residual paints Solvents/bituminous material etc. operation / maintenance Generation of garbage by labor	• Loss of good fertile soil • Soil erosion, Soil contamination due to mixing of construction material/ accidental spillage of chemicals /oils	• Proper and Separate storage of construction material • Storage of all petroleum products on impervious layers viz. concrete. • Transportation, storage and handling, disposal of HW as per their guidelines and handing it over to authorized agencies. • Use of electrically operated machinery. • Segregation of waste at Source
	Even after taking precautions if soil is found to be contaminated, it shall be removed and disposed off to authorized site.			
4	Ecology	• Site clearance, Construction of structures, cutting of trees	• Disturbing natural flora and fauna • Loss of vegetation from chemical spills from vehicles	• Plantation of local tree species on the Periphery of site • Plantation of trees will start in middle of construction phase. • Regulation of vehicular trips and speed and proper maintenance of machinery.
5	Safety & Hygienic Measures	Construction work Labor	• Positive impact : Employment generation • Safety and hygiene at site may be affected during construction	• Adequate drinking water, toilet and bathing facilities. • Regular analysis of drinking water. • Personal protective and safety equipment will be provided.

NOTARY GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

1022

				• First aid facility. • Regular health check up • Regular pest control at site. • Educational and awareness programme for safety measures.

EMP for Operation Phase

Sr. no.	Environmental Component	Activity	Impacts	Precautionary measures
1	Ambient Air Quality& Noise level	Increased vehicular trips, Use of DG sets	• Traffic • congestion • Air pollution • Increase in • noise level	• Adequate parking provision; well organized traffic management plan for Smooth flow of vehicles. • Regular PUC check-up for vehicles. • DG sets: As per CPCB norms, Proper Maintenance, Use of Low sulphur fuel. • Acoustic Enclosures for DG sets • Plantation of tress will reduce air pollution and also act as noise buffer.
2	Water	• Increased Demand of natural water, • Generation of waste water • Increased paved structure	• Stress on existing water supply, • Pollution of water bodies • Increased run off from site.	• Use of water saving practices • Adoption of dual flush system • Rain water harvesting • Plantation of less water consuming trees. • STP is planned and treated sewage will be used for secondary requirements like flushing and gardening.
3	Land	• Solid waste generation, • Transportation of hazardous material • Increased paved structure	• Improper disposal of waste, • accidental spillage of hazardous chemicals leads to soil	• Waste minimization recovery and reuse • Segregation at source for all solid waste streams • Recycling of non biodegradable

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

			contamination • Increased run off from site.	garbage • Treatment of biodegradable garbage by Organic waste converter and its use as manure • Use of dried STP sludge as manure • Transportation, storage and handling, disposal of HW as per their guidelines and handling it over to authorized agencies. • Strom water drainage of adequate capacity.
	Even after taking precautions if soil is found to be contaminated, it shall be removed and disposed off to authorized site			
4	Ecology	Introduction of new tree species	• Disturbing natural flora and fauna • Increased exposure to anthropogenic activities.	• Plantation of local tree species.
5	Safety & Hygienic Measures	Influx of people	• Stress on all utilities, risk and danger due to natural and manmade disaster • Positive impact: Employment generation	• Emergency preparedness plan and Disaster management plan will be Prepared and explained with the help of local NGO's and surrounding people and authority.

Note: Environmental monitoring plan will be prepared based on Environmental management Plan. All environmental parameters will be studied as and when required and based on analysis result mitigation measures will be implemented.

Hazardous Waste Management Plan:

Construction Phase:

Environmental Management Plan for Hazardous Waste Generation

Sr. No.	Source of Hazardous Waste Generation	Mitigation Measures
1	Leakages and spillage oil or fuel	* Contaminated soil if any shall be disposed off to Authorized Disposal Site. * Bituminous materials /any other chemicals shall not be allowed to leach into the soil.
2	Residual Paints/Solvents	--do--

Other hazardous wastes, if any, shall also be handled in the similar way through authorized dealers only.

NOTARY GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

Operational Phase

Sr. No.	Source of Hazardous Waste Generation	Mitigation Measures	Disposal
1.	Waste Oil from D.G Sets	--	Waste oil will be handed over to authorized recyclers.

Environmental Monitoring Plan:

DURING CONSTRUCTION PHASE				
	ITEM	**PARAMETERS**	**FREQUENCY**	**LOCATION**
1.	Ambient Air Quality	RSPM,SO_2 NO_X	Quarterly	At major construction area.
2.	Noise Level	Equivalent noise Level dB(A)	Daily	At major construction area.
3.	Water Analysis	Physical, chemical and Biological parameters	Quarterly	Tankers / Municipal supply

DURING OPERATION PHASE				
	ITEM	**PARAMETERS**	**FREQUENCY**	**LOCATION**
1.	Ambient Air Quality	RSPM,SO_2, NO_X	Quarterly	Total 4 locations around periphery of the site.
2.	Noise Level	Equivalent noise level	Daily	Near DG sets, Near STP, Near parking area.
3.	Exhaust from DG Set	SPM, SO_2	Quarterly	Stack of DG sets.
4.	Rain water harvesting system	Physico- chemical and biological parameters as per the source and utilization of water	Daily	RWH Tank
5.	Wastewater Analysis	pH, BOD, COD, TSS, TDS. O & G	Daily	STP.

NOTARY GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

1025

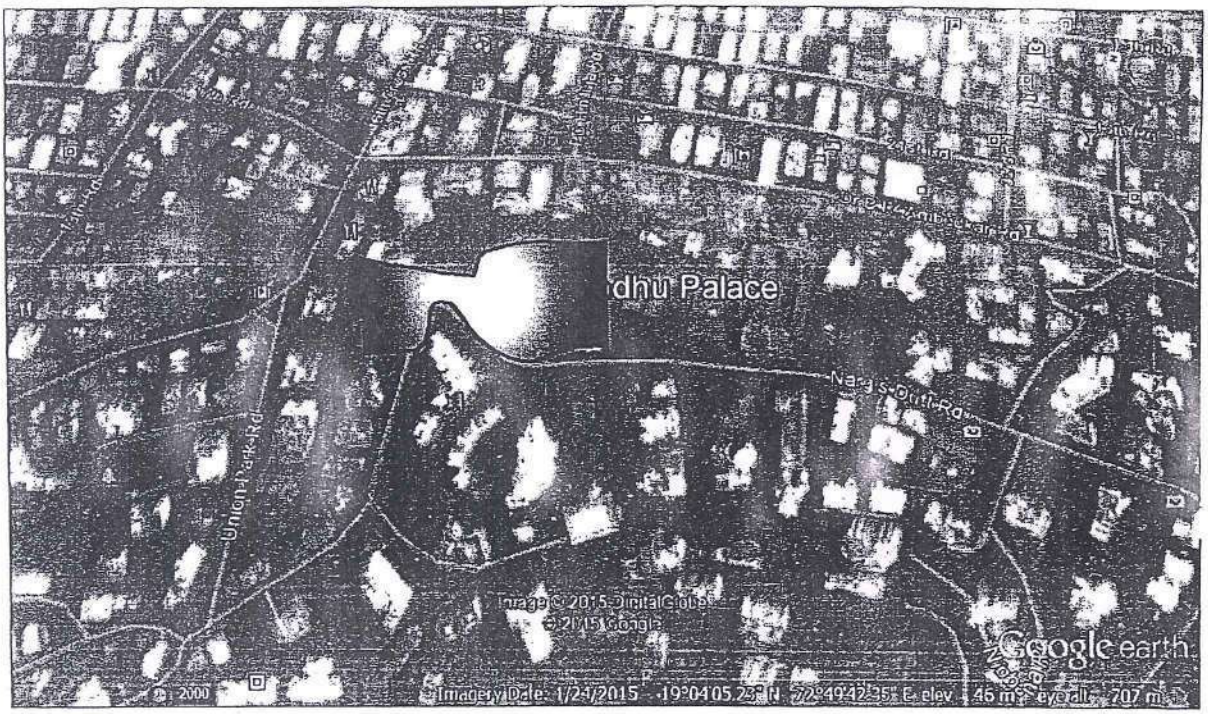
ANNEXURE

M/s. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

1026

ANNEXURE I: GOOGLE IMAGE

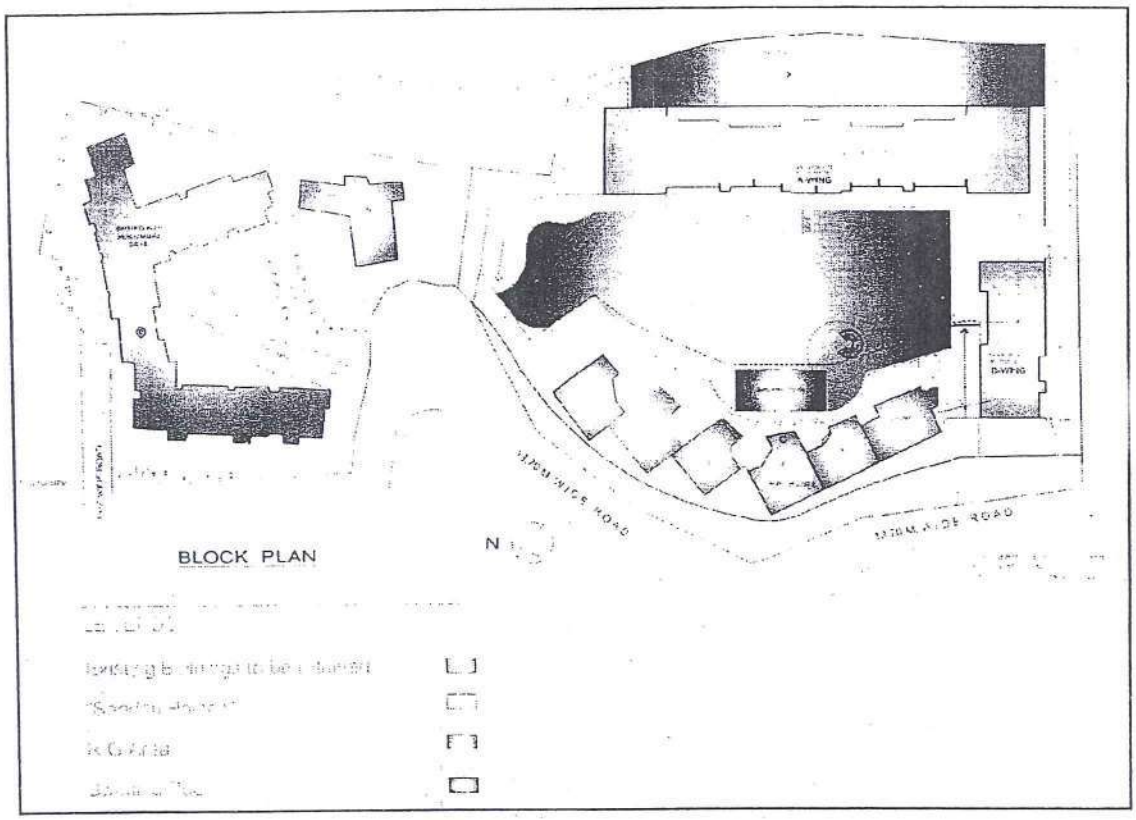


M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

 1027

ANNEXURE II: MASTER LAYOUT



NOTARY GOVT. OF INDIA
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission Expires
25 Sept. 2023

M/S. SANDHU BUILDERS MUMBAI

SANDHU GROUP SDL

1028

O/C

SANDHU BUILDERS

SANDHU GROUP
SDL

Regd off. & Admn. Off.: Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai - 400050
Tel : 26051177 / 1277 / 1377 Fax : 2605 1477
E-Mail: sandhugroup@hotmail.com Website :www.sandhugroup.net

Date: Thursday, May 19, 2016

To,
State Environmental Impact Assessment Authority (SEIAA)
Environment Department,
Mantralaya,
Mumbai, 400032
State: Maharashtra

Subject : **Submission of hard copy of Application for Environmental Clearance (EC) for our Project "Sandhu Palace" at CTS No 1381, 1382/C, 1378/A, 1629 A/1-10 of village Bandra (West),Pali Hill, Mumbai, Maharashtra-400 050.**

Reference : Online submission of our project on MoEF website
Our Proposal No. SIA/MH/NCP/73937/2016 dt. 2015/16

Respected Sir,

With reference to the above mentioned subject we are submitting herewith the hard copy of our application for Environmental Clearance with necessary enclosure for your kind consideration.

Kindly acknowledge the same.

Thanking you,

Yours faithfully,

For SANDHU BUILDERS

AUTHORIZED SIGNATORY

19/5/16

NOTARY GOVT OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Regd. No. 3670 My Commission Expires 25 Sept. 2018

Encl:
1. Online submission report
2. Form 1 & 1A

M/s. SANDHU BUILDERS MUMBAI

Gmail

Hitendra Patel <hitenpatel16@gmail.com>

Acknowledgement Slip for EC application

monitoring-ec@nic.in <monitoring-ec@nic.in>
To: hitenpatel16@gmail.com
Cc: monitoring-ec@nic.in

Fri, May 20, 2016 at 12:45 PM

Acknowledgement Slip for EC application

This is to acknowledge that the proposal has been successfully uploaded on the State portal. The proposal shall be examined in the state authority to ensure that required information has been submitted. An email will be sent seeking additional information , if any, within 20 working days. Once verified, an acceptance letter shall be issued to the project proponent .

Following should be mentioned in further correspondence

1. Proposal No.	:	SIA/MH/NCP/53937/2016
2. Category of the Proposal	:	New Construction Projects and Industrial Estates
3. Name of the proposal	:	Sandhu Palace, CST No. 1381,1382/C, 1378/A, 1629 A/1-10 of Village Bandra (W), Pali Hill, Mumbai - 400050 by M/s. Sandhu Builders
4. Date of submission for EC	:	20 May 2016

5. Name of the Project proponent along with contact details

a) Name of the proponent	:	MS SANDHU BUILDERS
b) State	:	Maharashtra
c) District	:	Mumbai (Suburban)
d) Pincode	:	400050

NOTARY GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

1030

Fwd: Acknowledgement Slip for EC application
Hitendra Patel
Today 12:52 PMYou

Acknowledgement Slip for EC application

This is to acknowledge that the proposal has been successfully uploaded on the State portal. The proposal shall be examined in the state authority to ensure that required information has been submitted. An email will be sent seeking additional information , if any, within 20 working days. Once verified, an acceptance letter shall be issued to the project proponent .

Following should be mentioned in further correspondence

1. Proposal No.	:	SIA/MH/NCP/53937/2016
2. Category of the Proposal	:	New Construction Projects and Industrial Estates
3. Name of the proposal	:	Sandhu Palace, CST No. 1381,1382/C, 1378/A, 1629 A/1-10 of Village Bandra (W), Pali Hill, Mumbai - 400050 by M/s. Sandhu Builders
4. Date of submission for EC	:	20 May 2016

5. Name of the Project proponent along with contact details

a) Name of the proponent	:	MS SANDHU BUILDERS
b) State	:	Maharashtra
c) District	:	Mumbai (Suburban)
d) Pincode	:	400050

M/S. SANDHU BUILDERS MUMBAI

1031

SANDHU BUILDERS

SANDHU GROUP
SDL

Regd off. & Admn. Off.: Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai - 400050
Tel. 26051177 / 1277 / 1377 Fax 2605 1477
E Mail: sandhugroup@hotmail.com Website :www.sandhugroup.net

Date: Thursday, May 19, 2016

To,
State Environmental Impact Assessment Authority (SEIAA)
Environment Department,
Mantralaya,
Mumbai, 400032
State: Maharashtra

Subject : **Submission of hard copy of Application for Environmental Clearance (EC) for our Project "Sandhu Palace" at CTS No 1381, 1382/C, 1378/A, 1629 A/1-10 of village Bandra (West),Pali Hill, Mumbai, Maharashtra-400 050.**

Reference : Online submission of our project on MoEF website
Our Proposal No. SIA/MH/NCP/53937/2016 dt. 20/5/16

Respected Sir,

With reference to the above mentioned subject we are submitting herewith the hard copy of our application for Environmental Clearance with necessary enclosure for your kind consideration.

Kindly acknowledge the same.

Thanking you,

Yours faithfully,

For SANDHU BUILDERS

AUTHORIZED SIGNATORY

20/5/16

NOTARY GOVT. OF INDIA
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission
Expires
25 Sept. 2020

Encl:
1. Online submission report
2. Form 1 & 1A

M/S. SANDHU BUILDERS MUMBAI

1032

SANDHU BUILDERS

SANDHU GROUP
SDL

Regd off. & Admn. Off.: Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai - 400050
Tel : - 26051177 / 1277 / 1377 Fax : 2605 1477
E-Mail: sandhugroup@hotmail.com Website :www.sandhugroup.net

Date: 29/07/2016.

To,
The Member Secretary,
State Level Expert Appraisal Committee II
Environment Department,
Mantralaya, Mumbai-400032
State: Maharashtra

Subject : Submission of Revised Form-1&1A (Revision 1) and Consolidated statement (Revision 0) for Environment Clearance (EC) of project "Sandhu Palace" at CTS No 1381, 1382/C,1378/A,1629/A/1-10 of Bandra (West), Pali Hill, Mumbai.

Reference :
1. **Submission of Form 1 and 1A to SEAC II dt. 20.05.2016**
2. **Agenda of 49th SEAC II meeting (Item No.37)**

Respected Sir,

With reference to above mentioned subject we would like to inform that we have submitted the Form-1 &1A to SEAC II on 20.05.2016.

Please note that in the forms submitted there are some changes in the parking provision. Comparison of the same is given below:

No.	Details	Details as per Form 1 & 1A submitted to SEACII dated 20.05.2016	Revised details
1.	Parking Requirement(nos.)	4W-108 2W-Nil	4W-108 2W-Nil
2.	Parking Provision (nos.)	4W-239 2W-Nil	4W-226 2W-43

Hence submitting herewith the Revised Form-1 & 1A (Revision 1) and Consolidated Statement (Revision 0) as mentioned in agenda of 49th SEAC II meeting for your record.

Kindly acknowledge the same.

Thanking you,
For SANDHU BUILDERS

AUTHORIZED SIGNATORY

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3649 My Commission Expires 25 Sept. 2018

M/S. SANDHU BUILDERS MUMBAI

1033

SANDHU BUILDERS

SANDHU GROUP
SDL

Regd off. & Admn. Off.: Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai - 400050
Tel : - 26051177 / 1277 / 1377 Fax : 2605 1477
E-Mail: sandhugroup@hotmail.com Website :www.sandhugroup.net

Date : Wednesday, August 10, 2016,

To,
State Environmental Impact Assessment Authority (SEIAA)
Environment Department,
Mantralaya,
Mumbai, 400032
State: Maharashtra

Subject : Regarding submission of hard copy of Application (Form 1 & 1A) for Environmental Clearance (EC) for our Project "Sandhu Palace" at CTS No 1381,1382/C,1378/A, 1629 A/1-10 of village Bandra (West), Pali Hill, Mumbai-400 050 State- Maharashtra.

Reference :
- Online submission of our project dated 20.05.2016.
- Hard Copy Submission of Form 1 and 1A to SEAC-II dt. 20.05.2016
- Received mail dt. 04.08.2016 from SEIAA regarding Acceptance Letter for EC

Respected Sir,

With reference to the above mentioned subject we would like to mention that we have already submitted the signed hard copy of our application for Environmental Clearance (Form 1 & 1A) with necessary enclosure to SEIAA on 20.05.2016 after online application of above said project. Acknowledgement copy of the same is attached as **Annexure-1.**

However as per mail dt. 04.08.2016 from SEIAA regarding Acceptance Letter for EC we are once again submitting herewith signed hard copy of Form 1 & 1A including all enclosures for your record and same is attached as **Annexure-2.**

Kindly acknowledge the same.

Thanking you,

Yours faithfully,

For SANDHU BUILDERS

M/s. SANDHU BUILDERS MUMBAI

AUTHORIZED SIGNATORY

Annexures:

1. Acknowledge copy of hard copy submission & Acceptance Letter for EC from SEIAA dt. 04.08.2016
2. Form 1 & 1A

M/s. SANDHU BUILDERS MUMBAI

CONSOLIDATED STATEMENT: SEIAA-STATEMENT-0000000051	
Subject: Environment Clearance for "Sandhu Palace", Bandra (West), Pali Hill, Mumbai	
1.Name of Project	"Sandhu Palace", Bandra (West), Pali Hill, Mumbai
2.Type of institution	Private
3.Name of Project Proponent	Mr. Diler Sandhu (Owner)
4.Name of Consultant	Ultra-Tech
5.Type of project	Housing Project
6.New project/expansion in existing project/modernization/diversification in existing project	New Project
7.If expansion/diversification, whether environmental clearance has been obtained for existing project	Not applicable
8.Location of the project	CTS No 1381, 1382/C, 1378/A, 1629 A/1-10 of village Bandra (West), Pali Hill, Mumbai-400 050.
9.Taluka	Kurla
10.Village	Bandra (West)
11.Area of the project	Municipal Corporation of Greater Mumbai (M.C.G.M.)
12.IOD/IOA/Concession/Plan Approval Number	IOD / Plans Approved on 24/02/2006 and CC upto top of basement on 22/06/2006. **IOD/IOA/Concession/Plan Approval Number:** CE/2157/WS/AH dated 24/02/2006 **Approved Built-up Area:** 13178.65
13.Note on the initiated work (If applicable)	Total constructed work (FSI + Non FSI): Building prior to EIA notification 2004: 9222.04 Sq.mt. Buildings after EIA notification dt. 14.09.2006: 40,317.33 Sq.mt. IOD / Plans Approved on 24/02/2006 and CC upto top of basement on 22/06/2006. The IOD / Plan /CC was granted much before the 14th September, 2006 Notification of MOEF and the complete construction was carried out as per MCGM sanctions, without insishing of MOEF clearance by MCGM at any stage.
14.LOI / NOC / IOD from MHADA/ Other approvals (If applicable)	NA
15.Total Plot Area (sq. m.)	13,592.50 Sq.mt.
16.Deductions	725.65 Sq.mt.
17.Net Plot area	12,866.85 Sq.mt.
18.Proposed Built-up Area (FSI & Non-FSI)	**FSI area (sq. m.):** 13,178.65 Sq.mt. **Non FSI area (sq. m.):** 27,138.68 Sq.mt. **Total BUA area (sq. m.):** 40,317.33 Sq.mt.
19.Total ground coverage (m2)	1377.22 Sq.mt.
20.Ground-coverage Percentage (%) (Note: Percentage of plot not open to sky)	11 %
21.Estimated cost of the project	2062600000

22.Number of buildings & its configuration

Serial number	Building Name & number	Number of floors	Height of the building (Mtrs)
1	1 Building - Wing A	2 Basements + Ground + 18 Floors + 19 part Floor	69.02
2	1 Building - Wing B	2 Basements + Ground + 5 Upper Floors	22.24

23.Number of tenants and shops	Flats: 43 nos.
24.Number of expected residents / users	Total Occupancy: 215 nos.
25.Tenant density per hectare	34/Hector
26.Height of the building(s)	
27.Right of way (Width of the road from the nearest fire station to the proposed building(s)	13.70 mt. wide Road

M/s. SANDHU BUILDERS MUMBAI

28.Turning radius for easy access of fire tender movement from all around the building excluding the width for the plantation	7.5 mt.
29.Existing structure (s) if any	Total Construction completed as per approval from M.C.G.M.
30.Details of the demolition with disposal (If applicable)	NA

31.Production Details

Serial Number	Product	Existing (MT/M)	Proposed (MT/M)	Total (MT/M)
1	Not applicable	Not applicable	Not applicable	Not applicable

32.Total Water Requirement

Dry season:	Source of water	M.C.G.M.
	Fresh water (CMD):	19
	Recycled water - Flushing (CMD):	10
	Recycled water - Gardening (CMD):	10
	Swimming pool make up (Cum):	2
	Total Water Requirement (CMD) :	41
	Fire fighting - Underground water tank(CMD):	100
	Fire fighting - Overhead water tank(CMD):	40
	Excess treated water	3
Wet season:	Source of water	M.C.G.M. & Rainwater Harvesting tank
	Fresh water (CMD):	19
	Recycled water - Flushing (CMD):	10
	Recycled water - Gardening (CMD):	NA
	Swimming pool make up (Cum):	2
	Total Water Requirement (CMD) :	31
	Fire fighting - Underground water tank(CMD):	100
	Fire fighting - Overhead water tank(CMD):	40
	Excess treated water	13
Details of Swimming pool (If any)	Swimming pool make up : 2 KLD (from Tanker Water of Potable Quality)	

33.Details of Total water consumed

Particulars	Consumption (CMD)			Loss (CMD)			Effluent (CMD)		
Water Requirement	Existing	Proposed	Total	Existing	Proposed	Total	Existing	Proposed	Total
Domestic	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

34.Rain Water Harvesting (RWH)	Level of the Ground water table:	Not encountered
	Size and no of RWH tank(s) and Quantity:	1 RWH tank of capacity 34 KL
	Location of the RWH tank(s):	Lower Basement Level
	Quantity of recharge pits:	2 nos. of recharge pits
	Size of recharge pits :	2 nos. of recharge pits
	Budgetary allocation (Capital cost) :	Rs.15.00 Lacs
	Budgetary allocation (O & M cost) :	Rs. 0.26 Lacs/annum
	Details of UGT tanks if any :	Location(s) of the UGT tank(s): Lower Basement Level
35.Storm water drainage	Natural water drainage pattern:	Towards external storm water drain situated at 13.70 m wide road
	Quantity of storm water:	0.53 m3/sec
	Size of SWD:	0.75m x 0.70m deep with the slope of 1: 300
36.Sewage and Waste water	Sewage generation in KLD:	25 KLD
	STP technology:	Rotating Bio-disk Contactor (RBC)
	Capacity of STP (CMD):	1 STP of 40 KL
	Location & area of the STP:	Lower Basement Level
	Budgetary allocation (Capital cost):	Rs. 38.00 Lacs
	Budgetary allocation (O & M cost):	Rs. 7.03 Lacs /annum

37.Solid waste Management

Waste generation in the Pre Construction and Construction phase:	Waste generation:	NA
	Disposal of the construction waste debris:	NA
Waste generation in the operation Phase:	Dry waste:	29 Kg/day
	Wet waste:	68 Kg/day
	Hazardous waste:	NA
	Biomedical waste (If applicable):	NA
	STP Sludge (Dry sludge):	4 Kg/day
	Others if any:	NA
Mode of Disposal of waste:	Dry waste:	M.C.G.M.
	Wet waste:	Organic Waste Converter
	Hazardous waste:	NA
	Biomedical waste (If applicable):	NA
	STP Sludge (Dry sludge):	Use as manure
	Others if any:	NA
Area requirement:	Location(s):	Ground Level
	Area for the storage of waste & other material:	24 Sq.mt.
	Area for machinery:	12 Sq.mt.
Budgetary allocation (Capital cost and O&M cost):	Capital cost:	Rs. 9.00 Lacs (Cost for treatment of biodegradable garbage by OWC)
	O & M cost:	Rs. 1.81 Lacs/annum (Cost for treatment of biodegradable garbage by OWC)

38.Effluent Charecterestics

Serial Number	Parameters	Unit	Inlet Effluent Charecterestics	Outlet Effluent Charecterestics	Effluent discharge standards (MPCB)
1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Amount of effluent generation (CMD):	Not applicable
Capacity of the ETP:	Not applicable
Amount of treated effluent recycled :	Not applicable
Amount of water send to the CETP:	Not applicable
Membership of CETP (if require):	Not applicable
Note on ETP technology to be used	Not applicable
Disposal of the ETP sludge	Not applicable

1038

39.Hazardous Waste Details

Serial Number	Description	Cat	UOM	Existing	Proposed	Total	Method of Disposal
1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

40.Stacks emission Details

Serial Number	Section & units	Fuel Used with Quantity	Stack No.	Height from ground level (m)	Internal diameter (m)	Temp. of Exhaust Gases
1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

41.Details of Fuel to be used

Serial Number	Type of Fuel	Existing	Proposed	Total
1	Not applicable	Not applicable	Not applicable	Not applicable

42.Source of Fuel	Not applicable
43.Mode of Transportation of fuel to site	Not applicable

44.Green Belt Development	Total RG area :	3222.52 Sq.mt.
	No of trees to be cut :	NA
	Number of trees to be planted :	Already planted: 250 nos. and Existing tress- 32 nos.
	List of proposed native trees :	The list is given in List of proposed plantation on ground
	Timeline for completion of plantation :	Before occupation

45.Number and list of trees species to be planted in the ground

Serial Number	Name of the plant	Common Name	Quantity	Characteristics & ecological importance
1	Areca catechu	Supari	86	The areca nut is not a true nut, but rather a fruit categorized as a berry. It is commercially available in dried, cured and fresh forms. When the husk of the fresh fruit is green, the nut inside is soft enough to be cut with a typical knife. In the ripe fruit, the husk becomes yellow or orange and, as it dries, the fruit inside hardens to a wood-like consistency. At that stage, the areca nut can only be sliced using a special scissors-like cutter.
2	Alstonia scholaris	Devil Tree	1	Evergreen Shady Tree with fragrant flowers, Medicinal properties, white fragrant flowers
3	Polyalthia longifolia	False Ashoka	10	It is commonly planted due to its effectiveness in alleviating noise pollution.
4	Terminalia catappa	Badam	8	It's large tropical tree in the leadwood tree. The seed within the fruit is edible when fully ripe. As the tree gets older, its crown becomes more flattened to form a spreading, vase shape. Its leaves are known for medicinal properties. Shady tree.
5	Bauhinia acuminata	Bauhinia	5	Plant is attractive to bees, butterflies and/or birds. Inflorescence is white in color.
6	Callistemon viminalis	Bottle Brush	27	Callistemon species have commonly been referred to as bottlebrushes because of their cylindrical, brush like flowers resembling a traditional bottle brush.

7	Hyophorbe lagenicaulis	Bottle Palm	25	Bottle palm has a large swollen (sometimes bizarrely so) trunk. It is a myth that the trunk is a means by which the palm stores water. Bottle palm has only four to six leaves open at any time. The flowers of the palm arise from under the crownshaft.
8	Araucaria columnaris	Christmas Tree	2	mas Tree in India, is a tree native to the Cook Island, north-east of Australia in the South Pacific. The bark of the Cook pine peels off in thin paper like sheets. Can reach 60 m in natural habit. But more commonly grown as a house-plant in pots. The relatively short, mostly horizontal branches are in whorls around the slender, upright to slightly leaning trunk.
9	Caryota urens	Fishtail palm	57	Fishtail palm is a fast growing feather palm that makes a beautiful addition to the landscape. It has a gray trunk (grows to about 30') that is covered by regularly spaced leaf scar rings. Toddy palm has a leaf shape that resembles the lower fin of a fish.
10	Howea forsteriana	Kentia Palm	2	The palm is an elegant plant, and is popular for growing indoors, requiring little light.
11	Plumeria alba	White frangipani	13	Evergreen shrub has narrow elongated leaves, large and strongly perfumed white flowers with a yellow center, Planted as an ornamental plant Heart of the wood is part of a traditional medical preparation taken as a vermifuge or as a laxative.
12	Magnolia champaca	Sonchapa	4	Evergreen shrub has narrow elongated leaves, large and strongly perfumed white flowers with a yellow center, Planted as an ornamental plant Heart of the wood is part of a traditional medical preparation taken as a vermifuge or as a laxative.
46.Total quantity of plants on ground				

47.Number and list of shrubs and bushes species to be planted in the podium RG:

Serial Number	Name	C/C Distance	Area m2
1	NA	NA	NA

1040

48.Energy

Power requirement:	**Source of power supply :**	Reliance Energy
	During Construction Phase: (Demand Load)	NA
	DG set as Power back-up during construction phase	NA
	During Operation phase (Connected load):	1816 KW
	During Operation phase (Demand load):	1104 KW
	Transformer:	-
	DG set as Power back-up during operation phase:	1DG set of 630 kVA
	Fuel used:	Diesel
	Details of high tension line passing through the plot if any:	NA

49.Energy saving by non-conventional method:

Use of Solar water heating system.
Use of Solar lighting for Street, Landscape, Corridor & Staircase.
Use of LED lights in common areas and parking areas .
Use of electronic ballast .

50.Detail calculations & % of saving:

Serial Number	Energy Conservation Measures	Saving %
1	Use of Solar water heating system. Use of Solar lighting for Street, Landscape, Corridor & Staircase. Use of LED lights in common areas and parking areas . Use of electronic ballast .	Use of Solar water heating system. Use of Solar lighting for Street, Landscape, Corridor & Staircase. Use of LED lights in common areas and parking areas . Use of electronic ballast .

51.Details of pollution control Systems

Source	Existing pollution control system	Proposed to be installed
Not applicable	Not applicable	Not applicable

Budgetary allocation (Capital cost and O&M cost):	**Capital cost:**	Rs. 48.24 Lacs (Solar system)
	O & M cost:	Rs 1.45 Lacs/annum (Solar system)

52.Environmental Management plan Budgetary Allocation

a) Construction phase (with Break-up):

Serial Number	Attributes	Parameter	Total Cost per annum (Rs. In Lacs)
1	NA	NA	NA

M/S. SANDHU BUILDERS MUMBAI

b) Operation Phase (with Break-up):

Serial Number	Component	Description	Capital cost Rs. In Lacs	Operational and Maintenance cost (Rs. in Lacs/yr)
1	Air, Noise Environment & Biological Environment	Cost for Gardening, Cost for Ambient air & Noise Monitoring, Cost for DG Stack Exhaust Monitoring	17.72	1.47
2	Water Environment - Waste water treatment	Cost for Sewage Treatment Plant, Cost for STP sensors, Waste water monitoring	38.00	7.03
3	Water Environment - Water Conservation (Rain Water Harvesting System)	Cost for RWH details (Recharge Pits), Cost for RWH details (RWH tank), Cost for treatment unit for rain water tanks, Cost for Rainwater Monitoring	15.00	0.26
4	Land Environment (Solid Waste Management)	Cost for Treatment of biodegradable garbage in OWC, Cost for monitoring of organic manure	9.00	1.85
5	Energy Conservation	Solar system	48.24	1.45
6	Cost Towards Disaster management	--	429.80	30.53

52. Storage of chemicals (inflamable/explosive/hazardous/toxic substances)

Description	Status	Location	Storage Capacity in MT	Maximum Quantity of Storage at any point of time in MT	Consumption / Month in MT	Source of Supply	Means of transportation
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

53. Any Other Information

No Information Available

54. Traffic Management

	Nos. of the junction to the main road & design of confluence:	3 Entry and Exits.
Parking details:	Number and area of basement:	2 Basements
	Number and area of podia:	NA
	Total Parking area:	9,412.50 Sq.mt.
	Area per car:	As per NBC
	Area per car:	As per NBC
	Number of 2-Wheelers as approved by competent authority:	Required: Nil and Provision: 43 nos.
	Number of 4-Wheelers as approved by competent authority:	Required: 108 nos. and Provision: 226 nos.
	Public Transport:	NA
	Width of all Internal roads (m):	Minimum 6.0 m.

	CRZ/ RRZ clearance obtain, if any:	NA
	Distance from Protected Areas / Critically Polluted areas / Eco-sensitive areas/ inter-State boundaries	NA
	Category as per schedule of EIA Notification sheet	8 (a)
	Court cases pending if any	Yes , Appeal (L)/82/2014. Bombay High Court Suit No 109 of 2013, Suit No 345 of 2014
	Other Relevant Informations	NA
	Have you previously submitted Application online on MOEF Website	Yes
	Date of online submission	20-05-2016

M/S. SANDHU BUILDERS MUMBAI

1043

APPENDIX - I
(See paragraph - 6)
FORM 1

(I) Basic Information

Sr. No.	Item	Details
1.	Name of the project/s	"Sandhu Palace" at Pali Hill, Bandra (West), Mumbai
2.	S. No. in the schedule	8 (B2)
3.	Proposed capacity/area/length/tonnage to be handled/command area/lease area/number of wells to be drilled	**Total plot area**: 13,592.50 Sq.mt. **Deduction:** 725.65 Sq.mt. **Net plot area:** 12,866.85 Sq.mt. **Built up area as per FSI TDR:** 178.65 Sq.mt. **Total Construction Built-up area**: 40,317.33 Sq.mt. **Project Proposal:** **Residential: 1 Building with Wing A & B** **Wing A:** 2 Basements + Ground + 18 Floors + 19 part Floor — Flats: 38 Nos. **Wing B:** 2 Basements + Ground + 5 Upper Floors — Flats: 5 Nos.
4.	New/Expansion/Modernization	New
5.	Existing Capacity/ Area etc.	**Current status:** **Buildings not under purview of any EIA Notification:**

Building	Date of Occupation Certificate	Built-up Area (Sq.mt.)	Present Status
Building B (Patuck's Bungalow)	18.03.1978	253.09	Occupied
Building C (Row Houses)	18.03.1978	1391.021	Occupied
Building E (Manju Mahal)	18.03.1978	7577.93	Occupied

Hence, these buildings are not in purview of EIA notification

Details of chronological orders of permissions for Sandhu Palace (wing A & B) :

Sr. No.	Particulars	Date	FSI+ TDR (Sq.mt.)	Non-FSI (Sq.mt.)	Total BUA (Sq.mt.)
1	**Plan approval / I.O.D. & Chronological Amendments** IOD (Basement + Stilt + 13 Floors)	24 Feb 2006	10439.53	3574.19	14013.72
	Amendments				
a.	A wing-(2Basements + Ground Floor +19 Floors) B wing-(2Basements + Ground Floor + 5 Floors)	3 Oct 2008	13571.51	22338.58	35910.09
b.	A wing-(2Basements + Ground Floor +19 Floors) B wing-(2Basements +	4 May 2010	13571.51	27138.68	40710.19

M/s. SANDHU BUILDERS MUMBAI

		Ground Floor + 5 Floors)				
	c.	19th Floor part instead Of full floor in earlier Approved plan	11 May 2011	13178.65	27138.68	40317.33
	2	**Commencement Certificates and Chronological Amendments**				
	a	Top of 1st Basement (13 Floor Plan)	22 Jun 2006	Nil	1600	1600
	b	Upto upper basement (Awing-19, B wing-5 Floors)	6 Oct 2008	Nil	7509.62	7509.62
	c	A-wing Extension upto top of 3rd Floor	24 Oct 2008	1948.02	2810.11	4758.13
	d	A-Wing Further extension upto top of 6th floor	19 Jan 2009	1948.02	1743.06	3691.08
	e	Further Extension A wing – upto 14th Floor B-wing – upto 5th Floor	20 June 2009	6428.77	5770.69	12199.46
	f	Further Extension A-wing – upto top of 15th floor	15 Oct 2009	649.34	581.02	1230.36
	g	Further Extension A-wing upto top of 19th floor	22 Jan 2010	2597.36	2324.08	4921.44
	h	Reindorsed	7 May-2010			
	i	Reindorsed A wing 19 Part	18 May-2012	-392.86	4800.10	4407.24
		Total		**13178.65**	**27138.68**	**40317.33**

- **Total constructed work (FSI + Non FSI):**
- **Building prior to EIA notification 2004:** 9222.04 Sq.mt.
- **Sandhu palace (Wing A & B):** 40,317.33 Sq.mt.
- IOD / Plans Approved on 24/02/2006 and CC upto top of basement on 22/06/2006.
- The IOD / Plan /CC was granted much before the 14th September, 2006 Notification of MOEF and the complete construction was carried out as per MCGM sanctions, without insisting of MOEF clearance by MCGM at any stage.

Copies of all Approvals are attached as **Enclosure 1.**

6.	Category of project i.e.' A' or 'B'	8 (B2)
7.	Does it attract the general condition? If yes, please specify.	Not Applicable
8.	Does it attract the specific condition? If yes, please specify.	Not Applicable
9.	Location	Pali Hill, Bandra (West)
	Plot/Survey/Khasra No.	CTS No. 1381, 1382/C, 1378/A, 1629 A/1-10
	Village	Bandra 'C'

M/S. SANDHU BUILDERS MUMBAI

	Tehsil	Bandra (West)
	District	Mumbai Suburban
	State	Maharashtra
10.	Nearest railway station Nearest airport	Bandra Railway Station: Approx. 2.00 km (Road distance) Mumbai Chhatrapati Shivaji Terminals: Approx. 5.00 km (Road distance)
11.	Nearest Town, city, District headquarters along with distance in kms.	Mumbai Metropolitan Region (MMR)
12.	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal address with telephone nos. to be given)	Municipal Corporation of Greater Mumbai (M.C.G.M.)
13.	Name of the applicant	**M/s. Sandhu Builders**
14.	Registered Address	Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai
15.	Address for correspondence	Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai
	Name	Mr. Diler Sandhu
	Designation(Owner/Partner/CEO)	Owner
	Address	Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai
	Pin Code	400050
	E-mail	dilersandhu@gmail.com
	Telephone No.	022 – 26051177/1277/1377
	Fax No.	022 – 26051477
16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a topo-sheet.	Not Applicable
17.	Interlinked Projects	No
18.	Whether separate application of interlinked project has been submitted?	Not Applicable
19.	If yes, date of submission	Not applicable
20.	If no, reason	Not applicable
21.	Whether the proposal involves approval/clearance under: if yes, details of the same and their status to be given. (a) The Forest (Conservation) Act, 1980? (b) The Wildlife (Protection) Act, 1972? (c) The C.R.Z Notification, 1991?	 Not applicable Not applicable Not applicable
22.	Whether there is any Government Order/Policy relevant/ relating to the site?	No
23.	Forest land involved (hectares)	Not applicable
24.	Whether there is any litigation pending\ against the project and/or land in which the project is propose to be set up? (a) Name of the Court (b) Case No. (c) Order /directions of the Court, if any and its relevance with the proposed project.	Yes Appeal (L)/82/2014. Bombay High Court Suit No 109 of 2013, Suit No 345 of 2014 Order is attached as **Enclosure 2**

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3630 M/ Commission Expires 25 Sept. 2028

M/S. SANDHU BUILDERS MUMBAI

(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, etc.)**

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	The project site is in Residential Zone as per DP remarks DP remark is attached as **Enclosure 3.**
1.2	Clearance of existing land, vegetation and building?	No	There were two private bungalows which were already demolished.
1.3	Creation of new land uses?	No	--
1.4	Pre-construction investigation e.g. bore houses, soil testing?	Yes	Geotechnical Investigation has been carried out. Report is referred as **Enclosure 4.**
1.5	Construction works?	Yes	Residential development
1.6	Demolition works?	No	--
1.7	Temporary sites used for construction works or housing of construction workers?	No	--
1.8	Above ground building, structures or earthworks including linear structures, cut and fill or excavations	Yes	Excavation material and construction waste is already reused partly for backfilling and plot levelling, garden base preparation and partly disposed to the authorized landfill site with permission from Concerned authority.
1.9	Underground works including mining or Tunneling?	No	Construction of two basements only which are already constructed.
1.10	Reclamation works?	No	--
1.11	Dredging?	No	--
1.12	Offshore structures?	No	--
1.13	Production and manufacturing processes?	No	--
1.14	Facilities for storage of goods or materials?	No	--
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	• STP for treatment of sewage • Solid waste will be segregated into non biodegradable and biodegradable garbage • Biodegradable waste will be treated in Organic Waste Converter and the non-biodegradable waste will be segregated into recyclable & non recyclable. Non Recyclable waste will be handed over to M.C.G.M. and recyclable waste will be handed over to recyclers • Use of dried sludge from STP as manure for gardening
1.16	Facilities for long term housing of operational workers?	Yes	Cabins for Watchmen/gardener etc.
1.17	New road, rail, or sea traffic during construction or operation?	No	--
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	--
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic Movements?	No	--
1.20	New or diverted transmission lines or pipelines?	No	--

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.21	Impoundment, damming, culverting, realignment or other change to the hydrology of watercourses or aquifers?	No	--
1.22	Stream crossings?	No	--
1.23	Abstraction or transfers of water from ground or surface waters?	No	--
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	--
1.25	Transport of personnel or materials for construction, operation or decommissioning?	No	--
1.26	Long-term dismantling or decommissioning or restoration works?	No	--
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	--
1.28	Influx of people to an area in either temporarily or permanently?	Yes	Since this is a residential development there will be influx of ~ 215 persons
1.29	Introduction of alien species?	No	--
1.30	Loss of native species or genetic diversity?	No	--
1.31	Any other actions?	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	The land is in developed infrastructure area.
2.2	Water (expected source & competing users) unit : KLD	Yes	**During Construction Phase -** Not applicable as construction is already completed **During Operational Phase -** Fresh water from M.C.G.M. = 19 KLD (Domestic)
2.3	Minerals (MT)	No	--
2.4	Construction material – stone, aggregates, and / soil (expected source – MT)	Yes	• The entire construction work of the proposed building were carried out in reinforced concrete structure comprising of RCC foundation, RCC columns, RCC beams and RCC slabs. This involved uses of reinforcement steel and ready-mix concrete. The entire shuttering materials used were of M.S. Plates, Spans, Props, Cup locks, etc. • The walls are of concrete blocks, bricks, siporex blocks, etc • Cement mortar used for internal/external plaster works • Door frames fixed were made of wood and brought directly from readymade factory • Windows are of UPVC frames and glass.
2.5	Forests and timber (source – MT)	Yes	Use of Timbers for doors.
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	**During Operational Phase –** Source: Reliance Energy

Details	Total
Connected load	1816 KW
Maximum Demand	1104 KW

Sr. No.	Information/checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data		
			D.G sets (In case of emergency backup during power failure)	1 DG set of 630 kVA	
2.7	Any other natural resources (use appropriate standard units)	No	--		

3. **Use, storage, transport, handling or production of substances or materials, which could he 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	--
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	--
3.3	Affect the welfare of people e.g. by changing living conditions?	No	--
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	--
3.5	Any other causes	No	--

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	--
4.2	Municipal waste (domestic and or commercial wastes)	Yes	The total quantities of solid waste: 97 Kg /day. (Biodegradable and Non biodegradable)
4.3	Hazardous wastes (as per Hazardous waste Management Rules)	Yes	Waste oil generated from DG set shall be stored at separate location duly marked and will be sold to the CPCB authorized recyclers.
4.4	Other industrial process wastes	No	--
4.5	Surplus product	No	--
4.6	Sewage sludge or other sludge from effluent treatment.	Yes	Dried sludge from STP will be used as manure for plants within the premises.
4.7	Construction or demolition wastes.	No	Construction Waste material is already disposed to the authorized landfill site with the permission of concerned authority.
4.8	Redundant machinery or equipment.	No	--
4.9	Contaminated soils or other materials.	No	--
4.10	Agriculture wastes.	No	--
4.11	Other solid wastes.	No	--

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	Yes	Use of CPCB approved D.G. Sets during power failure.
5.2	Emissions from production processes	No	--
5.3	Emissions from materials handling	No	--

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
	including storage or transport		
5.4	Emissions from construction activities including plant and equipment	No	--
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	For odour control: Adequate natural and mechanical ventilation is provided around STP and solid waste management facilities
5.6	Emissions from incineration of waste	No	--
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	--
5.8	Emissions from any other sources	No	--

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.
6.1	From operation of equipment e.g. engines, ventilation plant, crushers.	Yes but negligible	For control of noise following measures shall be adopted: • Stack height as per CPCB norms • Tree plantation (250 Nos.) with retention of existing trees (32 Nos.) • DG sets with inbuilt acoustic enclosures
6.2	From industrial or similar processes.	No	--
6.3	From construction or demolition.	No	--
6.4	From blasting or piling.	No	--
6.5	From construction or operational traffic.	Yes	**During Construction phase:** Not applicable as construction is already completed **Operation Phase :** • Provision of adequate traffic signs and signages to notify residents • Install safety mirrors to aid visibility in conflict points • Prevent parking near the Entry and Exit Gate • Provision of speed humps to regulate speed of vehicles • Provision of pedestrian crossings and dedicated footpath to cater to the walking population • Assign traffic wardens to regulate flow of project traffic during peak hours
6.6	From lighting or cooling systems.	No	--
6.7	From any other sources	No	--

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	--
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge).	No	The treated sewage shall be reused for flushing and gardening within the premises. Excess treated sewage shall be disposed to municipal sewer line.
7.3	By deposition of pollutants emitted to air into the land or into water.	No	Stack height of DG sets shall be as per CPCB guidelines
7.4	From any other sources	No	--
7.5	Is there a risk of long term build up of	No	--

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
	pollutants in the environment from these sources?		

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	--
8.2	From any other causes.	No	--
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, and cloudburst)?	Yes	Landslides are not expected in the area. Management plan for flood and earthquake is as follows: **Flood :** • Minimizing the incremental runoff from the site with the help of rain water harvesting tank of capacity 34 KL • Proper management of channelization of storm water from site by using proper internal SWD system and discharge points of having adequate capacity ($0.59m^3$/sec) • Use of screens and silt traps to SWD • Proper maintenance of storm water drainage to avoid choking of drains and flooding on site • Ensure discharge of storm water from the site is clear of sediment and pollution • Provision of sump pump **Earthquake :** The structure of the building is designed as per IS code for earthquake resistant design of structure. Disaster Management Plan is referred as **Enclosure 5.**

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.:		
	• Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.)	No	Supporting infrastructure is already in existence
	• housing development	Yes	Residential development
	• extractive industries		
	• supply industries		
	• other		
9.2	Lead to after-use of the site, which could have an impact on the environment	No	--
9.3	Set a precedent for later developments	Yes	Job opportunities during operation phase for support staff like security, maintenance, household workers, shop keepers etc.

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	Impacts on water availability, storm water drainage, availability of electricity, traffic congestion etc.

(III) Environmental Sensitivity

Sr. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Sanjay Gandhi National Park	Approx. 11.00 km
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Arabian Sea Mithi River Bandra Talao Malad Creek	Approx. 0.71 km Approx. 2.00 km Approx. 2.00 km Approx. 11.00 km
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Sanjay Gandhi National Park Maharashtra Nature Park	Approx. 11.00 km Approx. 4.00 km
4	Inland ,coastal, marine or underground waters	Arabian Sea Mithi River Bandra Talao Malad Creek	Approx. 0.71 km Approx. 2.00 km Approx. 2.00 km Approx. 11.00 km
5	State, National boundaries	None	--
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Western Express Highway	Approx. 2.00 km
7	Defence installations	No	--
8	Densely populated or built-up area	Mumbai Metropolitan Region	--
9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	Mumbai Metropolitan Region	--
10	Areas containing important, high quality or scarce resources *(Ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	No	--
11	Areas already subjected to pollution or environmental damage. *(those where existing legal environmental standards are exceeded)*	No	--
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	--

(IV) Proposed Terms of Reference for EIA studies: Not Applicable

M/s. SANDHU BUILDERS MUMBAI

1052

APPENDIX II
(See paragraph 6)

FORM-1 A (only for construction projects listed under item 8 of the Schedule)

CHECK LIST OF ENVIRONMENTAL IMPACTS
[Project proponents are required to provide full information and wherever necessary attach explanatory notes with the Form and submit along with proposed environmental management plan & monitoring programme]

1	**LAND ENVIRONMENT [Attach panoramic view of the project site and the vicinity]**
1.1	**Will the existing land use get significantly altered from the project that is not consistent with the surroundings? (Proposed land use must conform to the approved Master Plan / Development Plan of the area. Change of land use if any and the statutory approval from the competent authority to be submitted). Attach Maps of (i) site location, (ii) surrounding features of the proposed site (within 500 meters) and (iii) The site (indicating levels & contours) to appropriate scales. If not available attach only conceptual plans.**

Site Location:
The project site under reference is located at CTS No. 1381, 1382/C, 1378/A, 1629 A/1-10 Bandra (West), Pali Hill, Mumbai – 400050.

Land Use Pattern:
The plot under reference is in Residential Zone as per DP remarks.

Site Level
The site is contoured land with level difference of 6.00 mt.

The following details are enclosed:

1.	Site Location Map	Enclosure 6
2.	Google image -Surrounding features of the proposed site (within 500 meters)	Enclosure 7
3.	Layout Plan	Enclosure 8

Current status:
Buildings not under purview of any EIA Notification :

Building	Date of Occupation Certificate	Built-up Area (Sq.mt)	Present Status
Building B (Patuck's Bungalow)	18.03.1978	253.09	Occupied
Building C (Row Houses)	18.03.1978	1391.021	Occupied
Building E (Manju Mahal)	18.03.1978	7577.93	Occupied

Hence, these buildings are not in purview of EIA notification

Details of chronological orders of permissions for Sandhu Palace (wing A & B) :

No.	Particulars	Date	FSI + TDR (Sq.mt.)	Non-FSI (Sq.mt.)	Total BUA (Sq.mt.)
1	**Plan approval / I.O.D. & Chronological Amendments** IOD (Basement + Stilt + 13 Floors)	24 Feb 2006	10439.53	3574.19	14013.72
	Amendments				
a.	A wing- (2Basements + Ground Floor +19 Floors) B wing-(2Basements + Ground Floor + 5 Floors)	3 Oct 2008	13571.51	22338.58	35910.09
b.	A wing- (2Basements + Ground Floor +19 Floors) B wing- (2Basements + Ground Floor + 5 Floors)	4 May 2010	13571.51	27138.68	40710.19

GOVT OF INDIA NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3540 My Commission Expires 25 Sept. 2026

M/S. SANDHU BUILDERS MUMBAI

c.	19th Floor part instead of full floor in earlier Approved plan	11 May 2011	13178.65	27138.68	40317.33
2	**Commencement Certificates and Chronological Amendments**				
a	Top of 1st Basement (13 Floor Plan)	22 Jun 2006	Nil	1600	1600
b	Upto upper basement (Awing-19, B wing-5 Floors)	6 Oct 2008	Nil	7509.62	7509.62
c	A-wing Extension upto top of 3rd Floor	24 Oct 2008	1948.02	2810.11	4758.13
d	A-Wing Further extension upto top of 6th floor	19 Jan 2009	1948.02	1743.06	3691.08
e	Further Extension A wing – upto 14th Floor B-wing – upto 5th Floor	20 June 2009	6428.77	5770.69	12199.46
f	Further Extension A-wing – upto top of 15th floor	15 Oct 2009	649.34	581.02	1230.36
g	Further Extension A-wing upto top of 19th floor	22 Jan 2010	2597.36	2324.08	4921.44
h	Reindorsed	7 May-2010			
i	Reindorsed A wing 19 Part	18 May-2012	-392.86	4800.10	4407.24
	Total		**13178.65**	**27138.68**	**40317.33**

- **Total constructed work (FSI + Non FSI):**
- **Building prior to EIA notification 2004:** 9222.04 Sq.mt.
- **Sandhu Palace:** 40,317.33 Sq.mt.
- IOD / Plans Approved on 24/02/2006 and CC upto top of basement on 22/06/2006.
- The IOD / Plan /CC was granted much before the 14th September, 2006 Notification of MOEF and the complete construction was carried out as per MCGM sanctions, without insisting of MOEF clearance by MCGM at any stage.

Copies of all Approvals are attached as **Enclosure 1.**

1.2 **List out all the major project requirements in terms of the land area, built up area, water consumption, power requirement, connectivity, community facilities, parking needs etc.**

A. Connectivity and community facilities

The project is residential development. It will be well connected to 13.70 m wide road. Nearby railway station is Bandra Railway station on Western Railway Line. Basic amenities like shopping, schools, hospitals etc. are nearby the project site.

B. Building Details:

Table 1: Building details

Residential: 1 Building with Wing A & B	
Wing A: 2 Basements + Ground + 18 floors + 19 part floor	Flats: 38 Nos.
Wing B: 2 Basements + Ground + 5 upper floors	Flats: 5 Nos.

C. Area Statement:

Table 2: Area Statement

No.	Description	Area (Sq. Mt.)
1	Total plot area	13,592.50
2	Deduction (Road set back)	725.65
3	Net plot area	12,866.85
4	Ground Coverage Area (11%)	1,377.22
5	RG Area	3,222.52
6	Permissible Built - up Area as per FSI	23,374.37
7	**Built up area as per FSI + TDR**	**13,178.65**

8	Total Construction area (FSI + Non FSI)	40,317.33

D. Parking Statement:

Table 3: Parking Statement

Type	Parking Required as per DCR of MCGM	Parking Provision
4 Wheeler	108	226
2 Wheeler	Nil	43

E. Occupancy load:

Table 4: Occupancy Load

No. of Flats	Criteria for Occupancy	Occupancy (Nos.)
43 Flats	5 persons /flat	215

Reference: National Building Code (NBC) -2005 – Part 4, Page 27, Occupant Load

F. Water requirement for the project:

1. **During Construction Phase:** Not applicable as construction already completed
2. **During Operational Phase:**

Table 5: Water requirement (Domestic and flushing requirement)

Occupancy	Water Requirement (KLD)		
	Domestic	Flushing	Total
215	19	10	29

Reference: National Building Code (NBC) -2005 – Part 9, Page 19, Water Requirement

The amount of water demand is calculated based on the occupancy of the building and the per capita consumption as given in MOEF Manual on norms and standards for EC of large construction projects i.e.

Total quantity of water used (LPCD) = Occupancy x Quantity (LPCD)

Then Total quantity of water used for Domestic and Flushing in KLD is calculated.

M/S. SANDHU BUILDERS MUMBAI

1055

➢ **Total water requirement for the project and source:**

Table 6: Total water requirement for the project and source (Operation phase)

No.	Description	Quantity of water required in KLD	Source of water supply
1	Domestic	19	M.C.G.M.
2	Flushing	10	Treated sewage from STP
3	Gardening	*10	Treated sewage from STP
4	Swimming pool make up	2	Tanker water of potable quality

*Water requirement for gardening purpose is considered as 3 liters per square meter of gardening area
Total quantity of water used (LPCD) = Gardening Area (Sq. mt.) x Quantity (Lit /Sq. mt.)
Then Total quantity of water for gardening in KLD is calculated.

G. Sewage Generation

Table 7: Sewage Generation

Description	Quantity of Sewage (KLD)	Treatment/ Disposal
Operation Phase	25	Treatment in STP and reuse of treated sewage (available for recycling – 21 KLD) for flushing – 10 KLD and gardening – 10 KLD. Excess treated sewage will be disposed off to the existing sewer line (during Non monsoon and Monsoon). The dried sludge will be used as manure.

Reference: Manual on norms and standards for EC of large construction projects MoEF

H. Solid Wastes:

During Operation Phase:

Table 8: Solid Wastes During Operation Phase

Occupancy Load	Solid waste generation (kg/day)		
	Non-biodegradable	Biodegradable	Total
215	29	68	97

Considerations for solid waste generation:

For Residential: 70 % Biodegradable garbage and 30 % Non-biodegradable garbage out of total 0.45 Kg/person /day

The total quantities of solid waste that will be generated in the project will be 97 kg/day. Out of which 29 kg/day will be non-biodegradable and 68 kg/day will be biodegradable

- STP for treatment of sewage
- Solid waste will be segregated into non-biodegradable and biodegradable garbage
- Biodegradable waste will be treated in Organic Waste Converter and the non-biodegradable waste will be segregated into recyclable & non-recyclable. Non-Recyclable waste will be handed over to M.C.G.M. and recyclable waste will be handed over to recyclers
- Use of dried sludge from STP as manure for gardening

I. Power requirement:

During Operational Phase -

Source: Reliance Energy

Table 9: Power Requirement

Connected load	1816 KW
Maximum demand	1104 KW
D.G. Set (In case of emergency backup during power failure)	1 DG set of 630 kVA

NOTARY GOVT OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No 3640 M. Commission Expires 23 Sept. 2028

1.3	**What are the likely impacts of the proposed activity on the existing facilities adjacent to the proposed site? (Such as open spaces, community facilities, details of the existing land use, disturbance to the local ecology).**
	There are some impacts on water, air environment, power requirement but it is mitigated by providing proper pollution control facilities. STP is provided for treatment of recycling of sewage there by reducing fresh water demand. Also for water conservation, rain water harvesting is done. Power consumption shall be reduced by using energy saving practices. Impact on air quality is reduced by plantation of trees on green area. Employment generation during operation phase for support staff which shall have a positive impact on socio economy.
1.4	**Will there be any significant land disturbance resulting in erosion, subsidence & instability? (Details of soil type, slope analysis, vulnerability to subsidence, seismicity etc. may be given).**
	As per the Seismic Zoning Map of India Mumbai, region falls under Zone- III. Structural design is as per prevalent IS Code for these buildings.
1.5	**Will the proposal involve alteration of natural drainage systems? (Give details on a contour map showing the natural drainage near the proposed project site)**
	No
1.6	**What are the quantities of earthwork involved in the construction activity-cutting, filling, reclamation etc. (Give details of the quantities of earthwork involved, transport of fill materials from outside the site etc)**
	Excavated material and construction waste is already reused partly for backfilling and plot leveling, garden base preparation and partly disposed to the authorized landfill site with permission from Concerned authority. Construction Waste material is already disposed to the authorized landfill site with the permission of concerned authority.
1.7	**Give details regarding water supply, waste handling etc during the construction period.**
	Not applicable as construction is already completed.
1.8	**Will the low lying areas & wetlands get altered? (Provide details of how low lying and wetlands are getting modified from the proposed activity)**
	No.
1.9	**Whether construction debris & waste during construction cause health hazard? (Give quantities of various types of wastes generated during construction including the construction labour and the means of disposal)**
	Excavation material and construction waste is already reused partly for backfilling and plot leveling, garden base preparation and partly disposed to the authorized landfill site with permission from Concerned authority. Construction Waste material is already disposed to the authorized landfill site with the permission of concerned authority.
2	**WATER ENVIRONMENT**
2.1	**Give the total quantity of water requirement for the proposed project with the breakup of requirements for various uses. How will the water requirement be met? State the sources & quantities and furnish a water balance statement.** **Water Requirement & Source:** **During Operational Phase**

Table 10: Total Water Requirement & Source

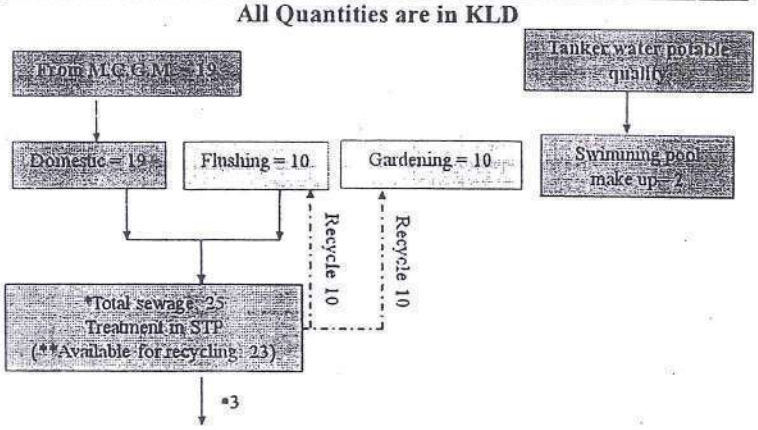
Use	Quantity KLD	Source
Domestic	19	M.C.G.M./RWH
Flushing	10	STP treated sewage
Gardening	10	STP treated sewage
Swimming pool make up	2	Tanker water of potable quality

M/s. SANDHU BUILDERS MUMBAI

1057

WATER BALANCE PER DAY BASIS DURING NON MONSOON

All Quantities are in KLD



Please Note:

*Considered 80 % sewage of total of domestic and 100 % of flushing requirement hence total sewage generation is 25 KLD

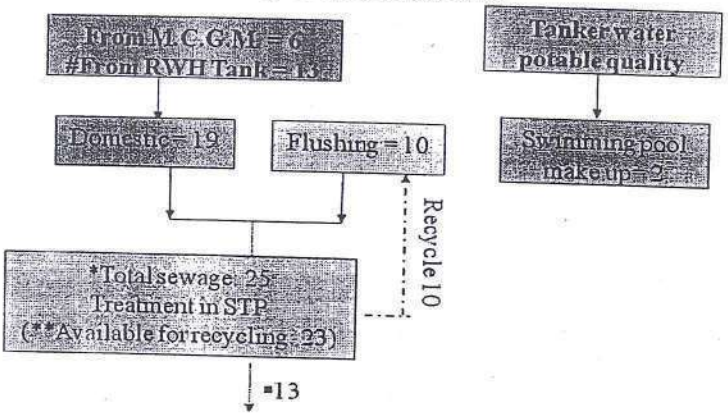
**Considered 10 % less availability of sewage for recycling considering losses of sewage in evaporation and sludge formation hence sewage available for recycling is 23 KLD

- Sewage generated: 3 KLD shall be disposed to sewer line

Total water requirement = **41 KLD**
Recycling of treated Sewage **(20 KLD)** shall be done for flushing **(10 KLD)** and gardening **(10 KLD)**
Hence Net water requirement: **41 – 20 = 21 KLD [i.e. for Domestic purpose = 19 KLD (Source: M.C.G.M.) and for Swimming pool = 2 KLD (From: Tanker Water of Potable Quality)]]**
Reduction in Net water demand = **49 %**

1058

WATER BALANCE PER DAY BASIS DURING MONSOON
All Quantities are in KLD



Please Note:
*Considered 80 % sewage of total of domestic and 100 % of flushing requirement hence total sewage generation is 25 KLD
**Considered 10 % less availability of sewage for recycling considering losses of sewage in evaporation and sludge formation hence sewage available for recycling is 23 KLD
- Sewage generated: 13 KLD shall be disposed to sewer line

 # Daily rain water availability is calculated as per Av. 20 mm rainfall/day considering only 50 rainy days (half of season)

Total water requirement = **31 KLD**
Recycling of Sewage **(10 KLD)** shall be done for flushing
From RWH tank = **13 KLD** (For domestic purpose)
Hence Net water requirement = 31 – 10 – 13 = **8 KLD [For Domestic purpose: 6 KLD (Source: M.C.G.M.) and for Swimming pool = 2 KLD (Source: Tanker Water of Potable Quality)]**
Reduction in water Demand = **74 %**

2.2	**What is the capacity (dependable flow or yield) of the proposed source of Water?**
	Domestic Water Supply from Municipal Corporation of Greater Mumbai (M.C.G.M.)
2.3	**What is the quality of water required, in case, the supply is not from a municipal source? (Provide physical, chemical, biological characteristics with class of water quality)**
	Domestic Water Supply from Municipal Corporation of Greater Mumbai (M.C.G.M.)
2.4	**How much of the water requirement can be met from the recycling of treated wastewater? (Give the details of quantities, sources and usage)**
	All secondary requirements like flushing (10 KLD) and gardening (10 KLD) would be fulfilled by treated sewage 23 KLD from STP. Excess treated sewage i.e. for non-monsoon is 3 KLD and for monsoon is 13 KLD shall be disposed off to the existing sewer line.
2.5	**Will there be diversion of water from other users? (Please assess the impacts of the project on other existing uses and quantities of consumption)**
	M.C.G.M. has common water supply.

M/S. SANDHU BUILDERS MUMBAI

2.6	**What is the incremental pollution load from wastewater generated from the proposed activity? (Give details of the quantities and composition of wastewater generated from the proposed activity)**
	Sewage generation from buildings will be 23 KLD and will be treated in full-fledged Sewage Treatment Plant of capacity 40 KL. Treated sewage will be reused for flushing and gardening. Excess treated sewage i.e. for non-monsoon 3 KLD and for monsoon 13 KLD shall be disposed off to the existing sewer line. **UNTREATED AND TREATED SEWAGE QUALITY:**

Table 11: Untreated & Treated Sewage Quality

SR. NO.	DETAILS	VALUES		UNITS
		UNTREATED	TREATED	
1.	**pH**	7.0 – 8.0	6.5 – 7.5	--
2.	**Total Suspended solids**	250	<10	mg/lit
3.	**Chemical Oxygen Demand**	400	< 50	mg/lit
4.	**BOD,3days,27^{0}C**	250	<5	mg/lit
5.	**Oil & Grease**	50	<5	mg/lit

2.7	**Give details of the water requirements met from water harvesting? Furnish details of the facilities created.**
	Provision of RWH tank of capacity 34 KL
2.8	**What would be the impact of the land use changes occurring due to the proposed project on the runoff characteristics (quantitative as well as qualitative) of the area in the post construction phase on a long term basis? Would it aggravate the problems of flooding or water logging in any way?**
	Total Runoff from the project site: After development = 0.53 m^3/sec (Considering different coefficients for paved area, unpaved area and terrace) **Precaution to avoid water logging on site:** • Minimizing the incremental runoff from the site with the help of rain water harvesting tank of capacity 34 KL • Proper management of channelization of storm water from site by using proper internal SWD system and discharge points of having adequate capacity (0.59 m^3/sec) • Use of screens and silt traps to SWD • Proper maintenance of storm water drainage to avoid choking of drains and flooding on site • Ensure discharge of storm water from the site is clear of sediment and pollution • Provision of sump pump SWD layout is attached **Enclosure 9.**
2.9	**What are the impacts of the proposal on the ground water? (Will there be tapping of ground water; give the details of ground water table, recharging capacity, and approvals obtained from competent authority, if any)**
	Ground water was not encountered in the project site, hence 2 nos. of recharge pits is provided.
2.10	**What precautions/measures are taken to prevent the run-off from construction activities polluting land & aquifers? (Give details of quantities and the measures taken to avoid the adverse impacts).**
	Not applicable, as construction is already completed
2.11	**How is the storm water from within the site managed?(State the provisions made to avoid flooding of the area, details of the drainage facilities provided along with a site layout indication contour levels).**
	Internal storm water drains are already constructed strictly in accordance to the governing authority regulations. (MCGM NOC received for SWD completion). **Peak runoff after development = 0.53 m^3/sec** **SWD completion certificate is attached as Enclosure 10.**
2.12	**Will the deployment of construction labourers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation)**
	Not applicable, as construction is already completed.

1060

2.13 **What on-site facilities are provided for the collection, treatment & safe disposal of sewage? (Give details of the quantities of wastewater generation, treatment capacities with technology & facilities for recycling and disposal).**

UNTREATED AND TREATED SEWAGE QUALITY:

Table 11: Untreated & Treated Sewage Quality

NO.	DETAILS	VALUES		UNITS
		UNTREATED	TREATED	
1.	**pH**	7.0 – 8.0	6.5 – 7.5	--
2.	**Total Suspended solids**	250	<10	mg/lit
3.	**Chemical Oxygen Demand**	400	< 50	mg/lit
4.	**BOD,3days,27^{0}C**	250	<5	mg/lit
5.	**Oil & Grease**	50	<5	mg/lit

Design Basis of Treatment plant – RBC (Rotating Bio-disk Contactor)

DESCRIPTION OF TREATMENT FACILITY

The treatment plant is based on the rotating media aerobic attached growth process, i.e. The Rotating Bio-disk Contactor, which is the heart of the system. Raw Wastewater passes through a rotating disk screen of opening size 10 mm. A cutting edge scrapes away screenings into a trolley through a chute. The trolley has a screenings washing facility in the form of spray nozzles fed by the treated wastewater line. The system is automatically controlled and wash-water flows back into the raw wastewater sump.

Screened wastewater is pumped to the Rotating Bio-disk Contactor (RBC). The RBC brings about an intimate contact between the substrate in the wastewater and the active biomass in the presence of air. Here, organic matter in the wastewater comes into intimate contact with a very large area of Bio-film residing on polyethylene disks. The disks have a very high specific surface, typically 125 sq. meters per cubic meter of disk module volume.

The pack of disks is gently rotated in a tank up to 40% submerge and at a very low speed, typically 2-3 rpm. Thus the Bio-film comes into contact with the wastewater and the atmospheric oxygen alternately thus ensuring a rich aerobic environment. As the film grows in thickness it sloughs off and a new film takes its place.

Substrate is bio-chemically oxidized to simple inorganic products like carbon dioxide and water. It may be stated here that the RBC is based on identical biochemistry as the activated sludge process and the only differences being the method of supporting the microbes and the oxygen supply mechanism. As in case of the aeration tank, the microbial concentration (measured as Mixed Liquor Volatile Suspended Solids or MLVSS) in the tank is limited to a range of 2000-3500 PPM, the aeration tank needs to have a large volume to accommodate the requisite microbial mass. Again, the entire contents of the aeration tank need to be kept well mixed thereby requiring a high input of power, typically 20-30 HP per 1000 cum of aeration tank volume. In case of the RBC, the microbial mass adheres as a film (similar to the trickling filter process) to the support media. As the area of the media is very large, a huge mass of microbial film can be supported on the media. Thus, a significantly larger (5-10 times) of biomass can be supported per unit volume of reactor compared to the activated sludge process.

Further, in order to aerate the microbial film, all that is needed is a gentle rotation of the media at 40% submergence so that 40% of the time of a single rotation provides a pickup of the effluent and 60% of the time in a rotation is for diffusion of atmospheric oxygen through the thin film of effluent into the Bio-film. This requires far less energy in comparison with the conventional aeration system.

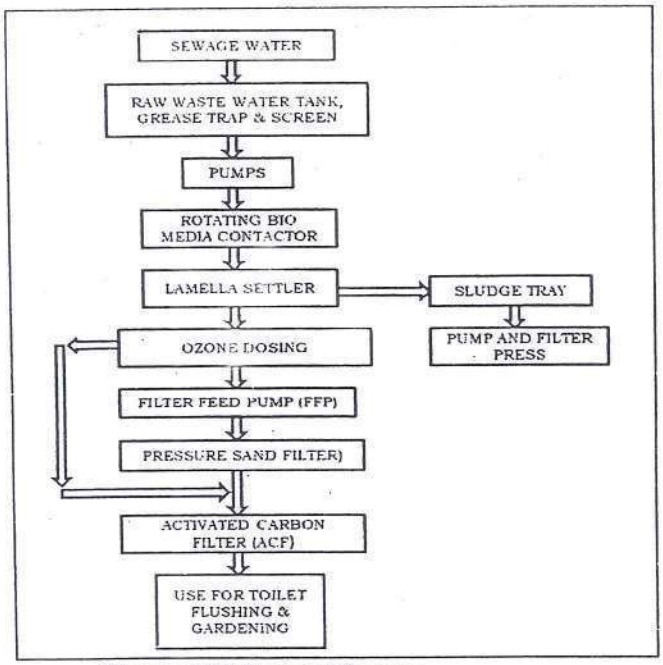
The RBC is thus an eco friendly process due to its lower energy consumption and complete absence of contaminated aerosol generation.

Wastewater then flows into a secondary lamella settler in which the insolubles are separated from the liquid. The lamella settler is based on the widely used principle of shallow depth sedimentation using lamella modules inclined at 60 degrees with the horizontal. Extremely efficient sedimentation takes place due to a shallow settling depth of the order of 60 mm. Sludge settles on the corrugated lamella plates and slides down into the hopper below while the clarified liquid flows upwards. Sludge formed in the lamella settler has a better solids consistency than that obtained in conventional sedimentation tanks.

Clear treated sewage will be passed through Ozone dosing for disinfection. Disinfected wastewater is pumped through the tertiary treatment columns.

The pressure sand filter which contains a specially designed bed of graded quartz sand removes residual

M/s. SANDHU BUILDERS MUMBAI

	colloids while the activated carbon column removes the residual dissolved trace organic compounds thereby rendering the water almost free of organic contamination. Sludge from the lamella settler is dewatered in a filter press. Flow measurement is done at the tail end of the system.  **Figure: STP Process Diagram**
2.14	**Give details of dual plumbing system if treated waste used is used for flushing of toilets or any other use.**
	Recycling of treated sewage for flushing and gardening. Color coding for dual plumbing system done as per standard practices.
3	**VEGETATION**
3.1	**Is there any threat of the project to the biodiversity? (Give a description of the local ecosystem with its unique features, if any)**
	No.
3.2	**Will the construction involve extensive clearing or modification of vegetation? (Provide a detailed account of the trees & vegetation affected by the project).**
	Retained Trees: 32 Nos.
3.3	**What are the measures proposed to be taken to minimize the likely impacts on important site features (Give details of proposal for tree plantation, landscaping, creation of water bodies etc along with a layout plan to an appropriate scale)**
	Total 250 Nos. of new trees are already planted as per norms. Tree plantation layout showing already planted and retained trees is attached as **Enclosure 11.**
4	**FAUNA**
4.1	**Is there likely to be any displacement of fauna- both terrestrial and aquatic or creation of barriers for their movement? Provide the details.**
	No
4.2	**Any direct or indirect impacts on the avifauna of the area? Provide details.**
	No
4.3	**Prescribe measures such as corridors, fish ladders etc to mitigate adverse impacts on fauna.**
	Not applicable

5	AIR ENVIRONMENT
5.1	**Will the project increase atmospheric concentration of gases & result in heat islands? (Give details of background air quality levels with predicted values based on dispersion models taking into account the increased traffic generation as a result of the proposed constructions)**
	All the predicted values of the pollutants in the operation scenario are within the National Ambient Air Quality Standards (NAAQS), issued by Central Pollution Control Board (CPCB) dated November 18, 2009. Detailed report for background air quality with predicted values based on Air Quality Modeling is submitted. And attached as **Enclosure 14.**
5.2	**What are the impacts on generation of dust, smoke, odorous fumes or other hazardous gases? Give details in relation to all the meteorological parameters.**

Sources of Air pollution During Operational phase :

- The gaseous emissions from vehicles.
- Emissions from DG set while in operation only during power failure.

Mitigation Measures:

- The traffic congestion will be avoided by proper parking arrangement and maintaining smooth traffic flow
- Regular PUC checkup for vehicles
- CPCB approved DG sets only will be used
- Proper maintenance of DG sets shall be done and Low sulphur fuel shall be used
- Plantation of trees which will act as noise and dust buffers

AVERAGE/ MAXIMUM AND MINIMUM METEOROLOGICAL DATA
Period: Year 2015

Table 15: Average/ Maximum and Minimum Meteorological Data

Study period	Temp (□C)		Predominant Wind direction	Wind speed (km/h)		elative Humidity (%)	
	Max.	Min.		Max.	Min.	Max.	Min.
January	34.0	15.2	N	18	0	26	23
February	37.8	17.0	NW	14	0	94	17
March	38.4	15.8	NNW	22	0	63	19
April	34.6	20.8	W	22	0	81	34
May	35.4	25.6	W	22	0	92	46
June	36.0	24.4	SW	32	0	98	47
July	32.8	25.2	SW	24	0	95	63
August	32.0	20.8	W	18	0	95	62
September	37.0	22.6	W	22	0	95	41
October	36.4	21.2	W	14	0	93	34
November	36.4	20.6	N	18	0	91	25
December	35.4	14.0	N	18	0	77	18

Source: Meteorological data for the year 2015

The proposed project will not have any direct impact on air environment after completion.

5.3	**Will the proposal create shortage of parking space for vehicles? Furnish details of the present level of transport infrastructure and measures proposed for improvement including the traffic management at the entry & exit to the project site.**

The project proponents have proposed to provide well organized parking arrangement.

Table 13: Parking Statement

Type	Parking Required as per DCR of MCGM	Parking Provision
4 Wheeler	108	226
2 Wheeler	Nil	43

Detailed Traffic Study Report giving present level of transport infrastructure and measures proposed for improvement including the traffic management at the entry & exit to the project site is attached as **Enclosure 12.**

5.4	**Provide details of the movement patterns with internal roads, bicycle tracks, pedestrian pathways, footpaths etc., with areas under each category.**
	• Adequate driveway for parking movement • Proper parking arrangement at each levels • Three entry & exits • 7.5 mt. turning radius for easy access of fire tender movement Traffic movement plan showing internal roads, pedestrian pathway is attached as **Enclosure 13.**
5.5	**Will there be significant increase in traffic noise & vibrations? Give details of the sources and the measures proposed for mitigation of the above.**
	The source of noise is mainly vehicular noise. The project proponents have provided well organized parking arrangement and maintaining smooth traffic flow which would help in reducing traffic congestion and noise levels. Trees would act as noise barrier and will reduce the noise level.
5.6	**What will be the impact of DG sets & other equipment on noise levels & vibration in & ambient air quality around the project site? Provide details.**
	D.G. Sets is operated only in case of power failures during operational phase. The Pollutants like SPM, SO_2 that may arise from emissions from D.G. Sets is discharged through vent of proper height. D.G. sets are with inbuilt acoustic enclosures to reduce the noise of D.G. sets while in operation. Plantation of trees would act as noise barrier and will reduce the noise level.
6	**AESTHETICS**
6.1	**Will the proposed constructions in any way result in the obstruction of a view, scenic amenity or landscapes? Are these considerations taken into account by the proponents?**
	No
6.2	**Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?**
	Not applicable as construction is already completed
6.3	**Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.**
	No.
6.4	**Are there any anthropological or archaeological sites or artifacts nearby? State if any other significant features in the vicinity of the proposed site have been considered.**
	Not Applicable
7	**SOCIO-ECONOMIC ASPECTS:**
7.1	**Will the proposal result in any changes to the demographic structure of local population? Provide the details.**
	There will be influx of about 215 people.
7.2	**Give details of the existing social infrastructure around the proposed project.**
	It is a well developed town of India, having all modern amenities. Civil structures, School, Colleges, Hospitals, Recreation facilities, Markets, etc. are available in the area to a reasonable degree.
7.3	**Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?**
	Project will not cause adverse effects on local communities, disturbance to sacred sites or other cultural values.
8	**BUILDING MATERIALS**
8.1	**May involve the use of building materials with high-embodied energy. Are the construction materials produced with energy efficient processes? (Give details of energy conservation measures in the selection of building materials and their energy efficiency)**
	Use of Cement containing fly ash.
8.2	**Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?**
	Not applicable as construction is already completed
8.3	**Are recycled materials used in roads and structures? State the extent of savings achieved?**
	Use of Cement containing fly ash.

8.4	**Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.**

	• Segregation of non-biodegradable and biodegradable garbage on site
	• Biodegradable garbage: Treatment in Organic Waste Converter (OWC)
	• Non- biodegradable garbage: Segregation into recyclable and non-recyclable waste
	  o Recyclable waste: To recyclers
	  o Non-recyclable waste: To M.C.G.M.
	• STP Sludge (Dry sludge): Use as manure within the premises for plants.

9	**ENERGY CONSERVATION**
9.1	**Give details of the power requirements, source of supply, backup source etc. What is the energy consumption assumed per square foot of built-up area? How have you tried to minimize energy consumption?**
	Power Requirement **During Operational Phase -** Source: Reliance Energy **Table 14: Power Requirement** Connected load: 1816 KW Maximum demand: 1104 KW D.G. Set (In case of emergency backup during power failure): 1 DG set of 630 kVA **Following Energy conservation measures are proposed for Energy Saving:** ➢ Use of Solar water heating. ➢ Use of Solar lighting for Street, Landscape, Corridor & Staircase ➢ Use of LED lights in common areas and parking areas ➢ Use of electronic ballast
9.2	**What type of, and capacity of, power back-up to you plan to provide?**
	1 DG set of 630 kVA capacity for emergency backup during power failure.
9.3	**What are the characteristics of the glass you plan to use? Provide specifications of its characteristics related to both short wave and long wave radiation?**
	Use of glass only for windows
9.4	**What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project.**
	• Maximize the use of natural lighting though design • Insulation of roof to avoid direct heat gain due to sunlight
9.5	**Does the layout of streets & buildings maximize the potential for solar energy devices? Have you considered the use of street lighting, emergency lighting and solar hot water systems for use in the building complex? Substantiate with details.**
	➢ Use of Solar water heating. ➢ Use of Solar lighting for Street, Landscape, Corridor & Staircase
9.6	**Is shading effectively used to reduce cooling/heating loads? What principles have been used to maximize the shading of Walls on the East and the West and the Roof? How much energy saving has been effected?**
	Roofs are insulated to minimize the heat gain and in turn saving the electricity.
9.7	**Do the structures use energy-efficient space conditioning, lighting and mechanical systems? Provide technical details. Provide details of the transformers and motor efficiencies, lighting intensity and air-conditioning load assumptions? Are you using CFC and HCFC free chillers? Provide specifications.**
	a. Details of Ventilation: • Provision of 1 Ceiling Suspended Cabinet type Centrifugal Exhaust Air Fan of 3,500 CFM & 25 mm static pressure • Provision of Ceiling Suspended Cabinet type Centrifugal fans • Provision of Fresh Air Fan of 3,400 CFM & 20 mm static pressure • Provision of Louvers on the fresh air Shaft opening at ground floor level • The Exhaust Air from the Basement is thrown out into the atmosphere from the Louvers on exhaust air shaft at the Ground Level

M/s. SANDHU BUILDERS MUMBAI

	b. Details of Transformers and motor efficiencies, lighting intensity: • Use of energy efficient equipments **c. This is not a centrally air conditioned building, hence not applicable.**
9.8	**What are the likely effects of the building activity in altering the micro-climates? Provide a self-assessment on the likely impacts of the proposed construction on creation of heat island & inversion effects?**
	Not Applicable as construction is already completed.
9.9	**What are the thermal characteristics of the building envelope? (a) roof; (b) external walls; and (c) fenestration? Give details of the material used and the U-values or the R values of the individual components.**
	Insulation of roof to minimize the heat gain and in turn saving the electricity.
9.10	**What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.**
	Firefighting measures: • Provision of UG and OH tank of adequate capacity • Provision of Refuge Floor as per CFO Norms • Provision of Wet Riser cum down comer • Provision of fire pumps • Provision of booster pumps • Provision of automatic sprinkler system in car parking area • Provision of fire hydrant system • Provision of manual fire alarm system • Provision of Refuge floor as per norm Disaster Management plan enclosed.
9.11	**If you are using glass as wall material provides details and specifications including emissivity and thermal characteristics.**
	Use of glass only for windows
9.12	**What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.**
	This is not a centrally air conditioned building hence it has not been studied.
9.13	**To what extent the non-conventional energy technologies are utilized in the overall energy consumption? Provide details of the renewable energy technologies used.**
	➢ Use of Solar water heating. ➢ Use of Solar lighting for Street, Landscape, Corridor & Staircase
10	**Environment Management Plan**

The Environment Management Plan would consist of all mitigation measures for each activity to be undertaken during the construction, operation and the entire life cycle to minimize adverse environmental impacts as a result of the activities of the project. It would also delineate the environmental monitoring plan for compliance of various environmental regulations. It will state the steps to be taken in case of emergency such as accidents at the site including fire.

ENVIRONMENT MANAGEMENT PLAN

No.	Environmental Issues/ Impacts	Mitigation measures	Responsibility	Legal & Other Requirements
		OPERATION PHASE		
1.	Increase in water demand (19 KLD)	•Use of treated sewage for flushing (10 KLD) and gardening (10 KLD) •Use of Treated Waste Water for flushing and gardening resulting in reduction of Net water demand by 49 %. •Use of harvested rain water for non-drinking domestic purpose (13 KLD) and	Project Proponents/ Society/ Facility Management system	Water Act 1974 as amended

		its reuse thereby reducing the fresh water demand up to 6 KLD in monsoon season i.e. 74 %.		
2.	Sewage generation (25 KLD)	•Provision of STP of 40 KL capacity for treatment of sewage up to tertiary level. •Proper operation and maintenance of STP and Daily analysis of general parameters like pH, BOD, COD and TSS & O & G of the STP outlet to ensure good treatment of waste water with the help of sensors •Ventilation around the STP •Proper arrangements for sludge handling and disposal	Project Proponents/ Society/ Facility Management system	--
3.	Increment in Runoff from site	• Minimizing the incremental runoff from the site with the help of rain water harvesting tank of capacity 34 KL • Proper management of channelization of storm water from site by using proper internal SWD system and discharge points of having adequate capacity (0.59m3/sec) • Use of screens and silt traps to SWD • Proper maintenance of storm water drainage to avoid choking of drains and flooding on site • Ensure discharge of storm water from the site is clear of sediment and pollution • Provision of sump pump	Project Proponents/ Society/ Facility Management system	SWD NOC from M.C.G.M.
4.	Increase in Power Demand	• Provision of energy saving measures ➢ Use of Solar water heating. ➢ Use of Solar lighting for Street, Landscape, Corridor & Staircase ➢ Use of LED lights in common areas and parking areas ➢ Use of electronic ballast • Energy Saving: 23 %	Project Proponents/ Society/ Facility Management system	ECBC norms
5.	Use of DG sets may lead to air and noise pollution	• Tree plantation (250 nos.) which are already planted on site • DG sets with inbuilt acoustic enclosures	Project Proponents/ Society/ Facility Management system	CPCB specification
6.	Vehicular movement • Increase in traffic • Air emissions & Noise • Contamination of soil leads to Oil leaks	• Provide adequate traffic signs and signages to notify residents • Install safety mirrors to aid visibility in conflict points • Prevent parking near the Entry and Exit Gate • Provide speed humps to regulate speed of vehicles • Provide pedestrian crossings and dedicated footpath to cater to the walking population • Assign traffic wardens to regulate flow of project traffic during peak hours	Project Proponents/ Society/Facility Management system	--

	7.	Odour and unsanitary conditions due to STP and Composting of biodegradable garbage	• Natural and Mechanical Ventilation around STP and OWC area • Proper housekeeping and maintenance	Project Proponents/ Society/Facility Management system	Air act 1981, as amended
	8.	Municipal waste & other solid waste generation	• Informing and educating occupants for solid waste management • Provision of total adequate space (36 Sq.mt.) for solid waste management • Proper segregation on site to biodegradable and non biodegradable garbage. • Recyclable waste (10Kg/day): to recyclers • Non-recyclable waste (19Kg/day): to M.C.G.M. • Biodegradable waste (68Kg/day): Treatment in Organic Waste Convertors (OWC) • End product from OWC and sludge generated from STP shall be used as manure on site • Quarterly monitoring of manure	Project Proponents/ Society/ Facility Management system	--
	9	Disasters like Fire, lightning, Earthquake etc.	• Preparation of Disaster Management Plan • Provision of Safety officer, Security and First aid team • Regular review of DMP and mock drill • Effective implementation of DMP	Safety Officer	CFO NOC from M.C.G.M.

1068

महाराष्ट्र प्रादेशिक नियोजन व नगर रचना अधिनियम, १९६६ चे कलम २० (३) अन्वये सूचना प्रसिध्द करण्याबाबत...
राज्यातील नियोजन प्राधिकरणांच्या मंजूर विकास नियंत्रण नियामावलीमध्ये (Streamlining Building Plan Approvals and Environment Clearances) संदर्भात नवीन विनियम अंतर्भूत करण्याबाबत.....

महाराष्ट्र शासन
नगर विकास विभाग,
मंत्रालय, मुंबई-३२
शासन निर्णय क्रमांक: टिपीएस-१८१६/प्र.क्र.४४३/१६/प्रायो/नवि-१३
दिनांक : १३/०४/२०१७

शासन निर्णय :- सोबतची शासकिय सूचना महाराष्ट्र शासनाच्या **साधारण राजपत्रामध्ये** प्रसिध्द करावी.

महाराष्ट्राचे राज्यपाल यांचे आदेशानुसार व नांवाने,

(संजय सावजी)
उप सचिव, महाराष्ट्र शासन

प्रत,
१) मा.मुख्यमंत्री यांचे सचिव, मंत्रालय, मुंबई.
२) मा.राज्यमंत्री, (नगर विकास) यांचे खाजगी सचिव, मंत्रालय, मुंबई.
३) प्रधान सचिव (नवि-१), नगर विकास विभाग, मंत्रालय, मुंबई.
४) प्रधान सचिव, महसूल विभाग, मंत्रालय, मुंबई.
५) प्रधान सचिव, ग्रामविकास विभाग, मंत्रालय, मुंबई.

प्रति,
१) संचालक, नगर रचना, महाराष्ट्र राज्य, पुणे.
२) संचालक, नगर रचना तथा सह सचिव, नगर विकास विभाग, मंत्रालय, मुंबई.
३) सह संचालक, नगर रचना तथा सह सचिव, नगर विकास विभाग, मंत्रालय, मुंबई.
४) सह संचालक, नगर रचना, अंमलबजावणी कक्ष / मुल्यांकन / पुणे / कोकण / नाशिक / नागपूर / औरंगाबाद / अमरावती विभाग.

त्यांना विनंती करण्यात येते की, सोबतची सुचना शासनाच्या दि.१३/०९/२०१० रोजीच्या परिपत्रकातील निदेशानुसार व खालील सूचनांप्रमाणे जाहिरात म्हणून प्रसिध्द करुन घेणेबाबत सत्वर कार्यवाही करावी.

M/s. SANDHU BUILDERS MUMBAI

१	जाहिरात देणा-या कार्यालयाचे नांव	नगर विकास विभाग, मंत्रालय, मुंबई-३२.
२	जाहिरात कोणत्या दिनांकापर्यंत द्यावयाची आहे.	तात्काळ
३	प्रसिध्दीचे स्वरुप	स्थानिक
४	कोणत्या जिल्ह्यामध्ये	सोबतच्या अनुसूची-अ मध्ये-नमूद राज्यातील जिल्ह्यांमध्ये.
५	किती वृत्तपत्रात	एका मराठी व एका इंग्रजी वृत्तपत्रात
६	वृत्तपत्राचे नांव	सर्वाधिक खपाच्या वृत्तपत्रात
७	कितीवेळा	एकदा
८	जाहिरात खर्चाचे देयक कोणत्या अधिका-याकडे पाठवावयाचे त्या कार्यालयाचे नांव व संपूर्ण पत्ता	संचालक, नगर रचना, महाराष्ट्र राज्य, मध्यवर्ती इमारत, पुणे-४११ ००१.

५) विभागीय आयुक्त, पुणे / कोकण / नाशिक /नागपूर / औरंगाबाद / अमरावती विभाग.

६) जिल्हाधिकारी, पुणे, कोल्हापूर, सांगली, नागपूर, चंद्रपूर, नाशिक, अहमदनगर, जळगाव, औरंगाबाद, जालना, अमरावती, रत्नागिरी, सिंधुदुर्ग, रायगड, मुंबई, अकोला, वाशिम.

७) सहायक संचालक, नगर रचना / नगर रचनाकार, सर्व शाखा कार्यालये, नगर रचना विभाग.

८) व्यवस्थापक, शासकीय मध्यवर्ती मुद्रणालय, चर्नी रोड, मुंबई.

त्यांना विनंती करण्यात येते की, सोबतची शासकीय सुचना महाराष्ट्र शासनाच्या, साधारण राजपत्रामध्ये राज्यस्तरावर प्रसिध्द करुन त्याच्या ५० प्रती नगर विकास विभागास पाठवाव्यात.

९) कक्ष अधिकारी (नवि-२९) नगर विकास विभाग, मंत्रालय, मुंबई.

त्यांना विनंती करण्यात येते की, सोबतची सूचना या विभागाच्या वेबसाईटवर प्रसिध्द करावी.

१०) कक्ष अधिकारी, माहिती व तंत्रज्ञान विभाग, मंत्रालय, मुंबई.

त्यांना विनंती करण्यात येते की, सदरची सूचना शासनाच्या वेबसाईटवर प्रसिध्द करावी.

११) निवड नस्ती (कार्यासन-१३).

****

GOVT. OF INDIA NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3840 My Commission Expires 25 Sept. 2028

M/S. SANDHU BUILDERS MUMBAI

1070

Consolidated Statement on various Environmental Aspects for Construction Projects
Consolidated statement No. : R0
Date of Submission: 17.04.2017

Sr. No.	Particular	Commitment On
1.	**Name of Project**	"**Sandhu Palace**", Bandra (West), Pali Hill, Mumbai
2.	**Name, contact number & address of Proponent**	•Name: Mr. Diler Sandhu (Owner) **M/s. Sandhu Builders** •**Address**: Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai-400050. •**Telephone number:** 022 – 26051177/1277/1377 •**Mobile number:** 9967177777 •**Email ID**:dilersandhu@gmail.com
3.	**Name, contact number & address of Consultant**	•**Name: Environmental Consultants :** **M/s. Ultra-Tech Environmental Consultancy & Laboratory (Laboratory - Gazetted by MoEF- Govt. of India)** •**Address:** Unit No. 206, 224, 225, Jai Commercial Complex, Eastern Express Highway, Opp. Cadbury Factory, Khopat, Thane (W) – 400601 •**Telephone number:** 91-22-25342776/ 25380198/25331438. •**Mobile number**: 9324029746/9820626017 •**Email ID**: deepa@ultratech.in, shekhartamhane@ultratech.in
4.	**Accreditation of consultant (NABET Accreditation)**	**Accorded Accreditation under the QCI-NABET scheme for Accreditation of EIA Consultant Organizations (Version 3)** **Certificate No: NABET/EIA/1417/SA0011**
5.	**Type of project:** Housing project / Industrial Estate / SRA scheme / MHADA / Township or others	Housing Project Category 8 (B2)
6.	**Location of the project**	CTS No 1381, 1382/C, 1378/A, 1629 A/1-10 of village Bandra (West), Pali Hill, Mumbai-400 050.
7.	**Whether in Corporation / Municipal / other area**	Municipal Corporation of Greater Mumbai (M.C.G.M.)
8	**Applicability of the DCR**	DCR 1991
9	**Note on the initiated work (If applicable)**	**Total constructed work (FSI + Non FSI):** Building prior to EIA notification 2004: 9222.04 Sq.mt. Sandhu Palace: 40,317.33 Sq.mt. **Date and area details in the necessary approvals issued by the competent authority (attach scan copies):** **Buildings not under purview of any EIA Notification:**

Building	Date of Occupation Certificate	Built-up Area (Sq.mt)	Present Status
Building B (Patuck's Bungalow)	18.03.1978	253.09	Occupied
Building C (Row Houses)	18.03.1978	1391.021	Occupied
Building E (Manju Mahal)	18.03.1978	7577.93	Occupied

NOTARY GOVT. OF INDIA S.M. ZAIDI

M/s. SANDHU BUILDERS MUMBAI

1077

Details of chronological orders of permissions for Sandhu Palace (wing A & B) :

Sr. No.	Particulars	Date	FSI (Sq.mt)	Non-FSI (Sq.mt)	Total BUA (Sq.mt)
1	**Plan approval / I.O.D. & Chronological Amendments** IOD (2Basements + Stilt + 13 Floors)	24 Feb 2006	10439.53	3574.19	14013.72
	Amendments				
a.	A wing- (2Basements + Ground Floor +19 Floors) B wing- (2Basements + Ground Floor + 5 Floors)	3 Oct 2008	13571.51	22338.58	35910.09
b.	A wing- (2Basements + Ground Floor +19 Floors) B wing- (2Basements + Ground Floor + 5 Floors)	4 May 2010	13571.51	27138.68	40710.19
c.	19th Floor part instead Of full floor in earlier Approved plan	11 May 2011	13178.65	27138.68	40317.33
	Total				
2	**Commencement Certificates and Chronological Amendments**				
a	Top of 1st Basement (13 Floor Plan)	22 Jun 2006	Nil	1600	1600
b	Upto upper basement (Awing-19, B wing-5 Floors)	6 Oct 2008	Nil	7509.62	7509.62
c	A-wing Extension upto top of 3rd Floor	24 Oct 2008	1948.02	2810.11	4758.13
d	A-Wing Further extension upto top of 6th floor	19 Jan 2009	1948.02	1743.06	3691.08
e	Further Extension A wing – upto 14th Floor B-wing – upto 5th Floor	20 June 2009	6428.77	5770.69	12199.46
f	Further Extension A-wing – upto top of 15th floor	15 Oct 2009	649.34	581.02	1230.36

M/S. SANDHU BUILDERS MUMBAI

1072

		g	Further Extension A-wing upto top of 19th floor	22 Jan 2010	2597.36	2324.08	4921.44
		h	Reindorsed	7 May-2010			
		i	Reindorsed A wing 19 Part	18 May-2012	-392.86	4800.10	4407.24
			Total		**13178.65**	**27138.68**	**40317.33**
		• IOD / Plans Approved on 24/02/2006 and CC upto top of basement on 22/06/2006. • The IOD / Plan /CC was granted much before the 14th September, 2006 Notification of MOEF and the complete construction was carried out as per MCGM sanctions, without insisting of MOEF clearance by MCGM at any stage.				
10	**LOI / NOC from MHADA / Other approvals (If applicable)**	**Date and construction area details mentioned in the approved letter:** As mentioned above				
11	**Total Plot Area** **Deductions** **Net Plot area**	13,592.50 Sq.mt. 725.65 Sq.mt. 12,866.85 Sq.mt.				
12	**Permissible FSI (including TDR etc.)**	23,374.37 Sq.mt. (Existing Area: 9,222.88Sq. mt. + Proposed Area: 13,178.65Sq. mt.)				
13	**Proposed Built-up Area (FSI & Non-FSI)**	• **FSI area (sq. m.):** 13,178.65 Sq.mt. • **Non FSI area (sq. m.):** 27,138.68 Sq.mt. • **Total BUA area (sq. m.):** 40,317.33 Sq.mt.				
14	**Ground-coverage Percentage (%)** ***(Note: Percentage of plot not open to sky)***	1377.22 Sq.mt. (11 %)				
15	**Estimated cost of the project**	Rs. 206.26 Cr				
16	**No. of building & its configuration(s)**	**1 Building with Wing A & B** **Wing A:** 2 Basements + Ground + 18 Floors + 19 part Floor **Wing B:** 2 Basements + Ground + 5 Upper Floors				
17	**Number of tenants and shops**	Flats: 43 nos.				
18	**Number of expected residents / users**	Total Occupancy: 215Nos.				
19	**Tenant density per hector**	34/Hector				
20	**Height of the building(s)**	Building : Height (up to terrace level) Wing A : 69.02 m. Wing B : 22.24 m.				
21	**Right of way (Width of the road from the nearest fire station to the proposed building(s)**	13.70 m wide Road				
22	**Turning radius for easy access of fire tender movement from all around the building excluding the width for**	7.5 m				

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 Nr Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1073

	the plantation	
23	**Existing structure(s)**	Total Construction completed as per approval from M.C.G.M.
24	**Details of the demolition with disposal (If applicable)**	Not Applicable
25	**Total Water Requirement**	**Dry season:** •**Fresh water (CMD): 21KLD** ▪ Domestic: 19 KLD from M.C.G.M. ▪ Swimming Pool: 2 KLD from Tanker Water of Potable Quality •**Recycled water (CMD):** 20 KLD (STP Treated sewage) ▪ Flushing = 10 KLD ▪ Gardening = 10 KLD •**Total Water Requirement (CMD) : 41KLD** •**Swimming pool make up (CMD):** As Mentioned Above •**Fire fighting (CMD):** 100 KL (One Time Requirement) **Wet Season:** •**Fresh water (CMD): 21 KLD** ▪ Domestic: 19 KLD (From M.C.G.M.: 06 KLD + From RWH Tank: 13 KLD) ▪ Swimming Pool: 2 KLD from Tanker Water of Potable Quality •**Recycled water (CMD):** 10 (STP Treated sewage for flushing) •**Total Water Requirement (CMD): 31KLD** •**Swimming pool make up (CMD):** As Mentioned Above •**Fire fighting (CMD):** 100 KL (One Time Requirement)
26	**Rain Water Harvesting (RWH)**	•**Level of the Ground water table:** Not encountered •**Size and no of RWH tank(s) and Quantity**: 1 RWH tank of capacity 34 KL •**Location of the RWH tank(s):** Lower Basement Level •**Size, no of recharge pits and Quantity:** 2 nos. of recharge pits • **Budgetary allocation (Capital cost and O&M cost):** Capital cost: Rs.15.00 Lakh O & M cost: Rs. 0.26 Lakh/annum
27	**UGT tanks**	• **Location(s) of the UGT tank(s):** Lower Basement Level
28	**Storm water drainage**	•**Natural water drainage pattern: Towards external storm water drain situated at 13.70 m wide road** •**Quantity of storm water:** 0.53 m^3/sec •**Size of SWD :** 0.75m x 0.70m deep with the slope of 1: 300
29	**Sewage and Waste water**	•**Sewage generation (CMD):** 25KLD •**STP technology:** Rotating Bio-disk Contactor (RBC) •**Capacity of STP (CMD):** 40 KL •**Location of the STP:** Lower Basement Level •**DG sets (during emergency): For essential backup** (Total DG capacity of the project including load of STP.) 1DG set of 630 kVA •**Budgetary allocation (Capital cost and O&M cost)** Capital cost: Rs. 38.00 Lakh O & M cost: Rs. 7.03 Lakh /annum

NOTARY GOVT. OF INDIA S.M. ZAIDI Mumbai & Thane Dist. Reg. No. 3690 My Commission Expires 25 Sept. 2028

M/s. SANDHU BUILDERS MUMBAI

1074

30	Solid waste Management	**Waste generation in the Pre Construction and Construction phase:** • **Waste generation:** -- •**Quantity of the top soil to be preserved:** Used for Landscaping •**Disposal of the construction waste debris:** Not Applicable **Waste generation in the operation Phase:** • **Dry waste (Kg/day)**: 29 • **Wet waste (Kg/day):** 68 • **E – waste (Kg/month):** -- • **Hazardous waste (Kg/month):** Not applicable • **Biomedical waste (Kg/month) *(If applicable):*** Not Applicable • **STP Sludge (Dry sludge) (Kg/day):** 4 **Mode of Disposal** of waste: •**Dry waste:** To M.C.G.M. •**Wet waste**: Organic Waste Converter. •**E - waste:** To recyclers •**Hazardous waste:** Not applicable •**Biomedical waste *(If applicable)*:** Not applicable •**STP Sludge (Dry sludge):** Use as manure **Area requirement:** **Location(s) and total area provided for the storage and treatment of the solid waste:** **Location:** Ground Level **Area:** 36.00 Sq.mt. **Budgetary allocation (Capital cost and O&M cost)** Capital cost: Rs 9.00 Lakh (Cost for treatment of biodegradable garbage by OWC) O & M cost: Rs 1.81 Lakh/annum (Cost for treatment of biodegradable garbage by OWC)
31	Green Belt Development	**Total RG area:** 1. **RG area other than green belt (Please specify for playground, etc.) -** Not Applicable 2. **RG area under green belt (Sq. mt.):** • **RG on the ground (Sq. mt.):** 3222.52 • **RG on the podium (Sq. mt.):** 3. **Plantation:** • **Number and list of trees species to be planted in the ground RG:** Nil • **Number and list of shrubs and bushes species to be planted in the podium RG:** Nil • **Number and list of trees species to be planted around the border of nallah / stream / pond *(If any):*** Not applicable • Number, size, age and species of trees to be cut, trees to be transplanted: Existing Trees: 32 Nos. Already planted Trees: 250 Nos.

M/s. SANDHU BUILDERS MUMBAI

		<table><tr><th>Sr. No.</th><th>Common Name</th><th>Botanical Name</th></tr><tr><td>1.</td><td>Supari</td><td>Areca catechu</td></tr><tr><td>2.</td><td>Devil Tree</td><td>Alstonia scholaris</td></tr><tr><td>3.</td><td>False Ashoka</td><td>Polyalthia longifolia</td></tr><tr><td>4.</td><td>Badam</td><td>Terminalia catappa</td></tr><tr><td>5.</td><td>Bauhinia</td><td>Bauhinia acuminata</td></tr><tr><td>6.</td><td>Bottle Brush</td><td>Callistemon viminalis</td></tr><tr><td>7.</td><td>Bottle Palm</td><td>Hyophorbe lagenicaulis</td></tr><tr><td>8.</td><td>Christmas Tree</td><td>Araucaria columnaris</td></tr><tr><td>9.</td><td>Fox tail palm</td><td>Caryota urens</td></tr><tr><td>10.</td><td>Kentia Palm</td><td>Howea forsteriana</td></tr><tr><td>11.</td><td>White frangipani</td><td>Plumeria alba</td></tr><tr><td>12.</td><td>Sonchapa</td><td>Magnolia champaca</td></tr></table> • **NOC for the Tree cutting / transplantation/ compensatory plantation, if any :** Received **3. Budgetary allocation (Capital cost and O&M cost)** Capital cost: Rs. 17.72 Lakh O & M cost: Rs 1.20 Lakh/annum
32	**Energy**	**Power supply:** • **Connected Load:** 1816 KW • **Maximum Demand:** 1104 KW • **Source:** Reliance Energy • **Energy saving by non-conventional method** **Energy savings measures:** ➢ Use of Solar water heating system ➢ Use of Solar lighting for Street, Landscape, Corridor & Staircase ➢ Use of LED lights in common areas and parking areas ➢ Use of electronic ballast • **Detail calculations & % of saving:** 23% • **Compliance of the ECBC guidelines: (Yes / No) (If yes then submit compliance in tabular form):** Yes • **Budgetary allocation (Capital cost and O&M cost):** Capital cost: Rs. 48.24 Lakh (Solar system) O & M cost: Rs 1.45 Lakh/annum (Solar system) **DG Set:** •**Number and capacity of the DG sets to be used** 1DG set of 630 kVA •**Type of fuel used**: Diesel

M/S. SANDHU BUILDERS MUMBAI

33	**Environmental Management plan Budgetary Allocation**	**Construction phase (with Break-up):** Not applicable as construction is completed • Capital cost • O & M cost (Please ensure manpower and other details) • Total cost incurred for EMP **Operation Phase (with Break-up)-** • Capital cost • O&M cost (Please ensure manpower and other details)

Sr. No.	Component	Description		Capital cost Rs. in Lakh.	Operational and Maintenance cost (Rs. in Lakh/yr)
1	Air, Noise Environment & Biological Environment	Cost for Gardening		17.72	1.20
		Cost for Ambient air & Noise Monitoring		*No set up cost is involved	0.22
		Cost for DG Stack Exhaust Monitoring		*No set up cost is involved	0.05
2	Water Environment	Waste water treatment	Cost for Sewage Treatment Plant	20.00	6.00
			Cost for STP sensors	18.00	1.00
			Waste water monitoring	*No set up cost is involved	0.03
		Water Conservation (Rain Water Harvesting System)	Cost for RWH details (Recharge Pits)	7.00	0.10
			Cost for RWH details (RWH tank)	5.00	0.10
			Cost for treatment unit for rain water tanks	3.00	0.01
			Cost for Rainwater Monitoring	*No set up cost is involved	0.05
3	Land Environment (Solid Waste Management)	Cost for Treatment of biodegradable garbage in OWC		9.00	1.81
		Cost for monitoring of organic manure		*No set up cost is involved	0.04

GOVT. OF INDIA NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2023

M/S. SANDHU BUILDERS MUMBAI

		4	Energy Conservation	Solar system	48.24	1.45
		5	Cost Towards Disaster management	--	429.80	30.53
			Total Cost		**557.76**	**42.59**
		***No set up cost is involved as monitoring contract shall be given to Private MoEF Approved Laboratory** • **Quantum and generation of Corpus fund and Commitment:** At present Environmental Management Facilities (EMF) are operated and maintained by Project proponents. At the time of handing over of EMF to the society corpus fund for 5 years shall be given to societies for further operation and maintenance of **Rs. 212.45 Lakh (i.e. 42.49Lakh x 5** years). • **Responsibility for further O &M:** While handing over Environmental Management Facilities M.O.U. shall be made with society to accept responsibility of further O & M of EMF.			
34	**Traffic Management**	**Nos. of the junction to the main road & design of confluence:** 3 Entry and Exits. **Parking details:** • **Number and area of basement:** 2 Basements • **Number and area of podia:** Nil • **Total Parking area:** 9,412.50 Sq.mt. • **Area per car:** • **2-Wheeler:** 43 Nos. • **4-Wheeler:** 226 Nos. • **Public Transport:** Nil • **Width of all internal roads (m):** Minimum 6.0 m.				
35	**CRZ/RRZ clearance obtain, if any**	Not Applicable				
36	**Distance from Protected Areas / Critically Polluted areas / Eco-sensitive areas / inter-State boundaries**	Not Applicable				

1078

Check list for the other necessary approvals				
		Status of the Approval	**Name of the competent Authority**	**Date of the issued letter**
37	**CFO NOC for the above said building structure(s)**	Received Completion NOC	MCGM Mumbai Fire Brigade	16.03.2013
38	**HRC NOC for the above said building structure(s)** ***(If applicable)***	Not Applicable	--	--
39	**NOC for the above said building structure(s) from the Aviation authority (If** ***applicable)***	Received	Airport Authority of India (AAI)	25.03.2008
40	**Consent for the water for the above said detail(s)**	Received	M.C.G.M.	22.03.2016
41	**Consent for the drainage for the above said detail(s)**	Received	M.C.G.M.	20.02.2016
42	**Consent for the electric supply for the proposed demand**	Received	Reliance Energy	22.06.2012
43	**Precertification for Green Building from Indian Green Building Council and other recognized institutes (If** ***applicable)***	Not Applicable	--	--
44	**Court Order (If** ***applicable)***	Applicable (In process)	High court order Suit/109/2013	29.01.2014
45	**Other approvals (If any):**			
d	SWD Completion Certificate	Received	M.C.G.M.	16.10.2012

GOVT. OF INDIA NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 Nil Commission Expires 23 Sept. 2026

M/S. SANDHU BUILDERS MUMBAI

1079

Declaration

- Old existing buildings (B, C & E) are not in purview of any EIA Notification as were occupied in 1978.
- For Sandhu Palace (Wing A & B) we received the plan approval from MCGM on 24th February, 2006 and Commencement Certificate on 22nd June, 2006 i.e. prior to the EIA Notification,2006 and even was not attracting the provisions of EIA Notification,1994 as amended in 7th July,2004 .(not crossing any of the 3 criteria)
- The IOD / Plans /CC were granted from MCGM before the EIA Notification 14th September, 2006 and the complete construction was carried out as per MCGM sanctions time to time, without insisting for Environmental Clearance at any stage by MCGM.
- The building construction was completed in January, 2015.
- As per discussions with MCGM the application for Environment Clearance was submitted on 25th March,2015
- The application to MCGM for part occupation permission was submitted on 23.03.2016.
- All compliances required for occupation were submitted on 09.05.2016
- BCC refusal letter from MCGM insisting for Environmental Clearance was received on 09.08.2016

Date:

Name & Signature
of the project proponent

Name & Signature
of the consultant

GOVT. OF INDIA NOTARY S.M.HUZAIDI Mumbai & Thane Dist. Regn. No. 3640 My Commission Expires 29 Sept 2018

M/s. SANDHU BUILDERS MUMBAI

1080

Summary of project proposals

1	**Plot area**	Total Plot Area: 13,592.50 Sq.mt. Net Plot Area: 12,866.85 Sq.mt.
2	**Total built up area**	Total Construction Built-up Area: 40,317.33 Sq.mt.
3	**FSI consumed**	13,178.65 Sq.mt.
4	**Nos. of building**	One building
5	**Maximum height of building**	Wing A: 69.02 m. (up to terrace level)
6	**Area and nos. of the basement**	2 Basements (Total Area: 10,104.46 Sq. mt.)
7	**Area and nos. of podium**	Not applicable
8	**Area of amenity space**	1377.21 Sq. mt.
9	**Nos. of phases for project execution**	Not applicable
10	**Expected nos. of residents /users**	215 Nos.

M/s. SANDHU BUILDERS MUMBAI

1081

SANDHU BUILDERS

SANDHU GROUP
SDL

Regd off. & Admn. Off.: Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai - 400050
Tel : - 26051177 / 1277 / 1377 Fax : 2605 1477
E-Mail: sandhugroup@hotmail.com Website :www.sandhugroup.net

To,
Hon'ble Chairman / Secretary,
SEAC – II,
Mumbai.

12.5.17
भावक लिपिक
मंत्रालय, मुंबई-३२.

Date : Friday, May 12, 2017

Respected Sir,

Subject : Proposal No. SIA/MH/NCP/53937/2016 of Sandhu Palace, CTS No. 1381, 1382/C, 1378/A, 1629 A/1-10 of Village Bandra (West), Pali Hill, Mumbai – 400 050.

Date of Meeting : 21st April, 2017.

Request for referring the matter to MOEF Delhi on priority.

With reference to above cited subject matter, an application dated 25th March, 2015 was made to your office for Environment Clearance of the project known as " Sandhu Palace " being constructed at Pali Hill, Bandra (West), Mumbai – 400 050.

Personal hearing was granted on 21st April, 2017 and as per the decision of SEAC – II the committee decided to refer the matter of alleged violation to SEIAA for further necessary action.

You are aware that MOEF Delhi as per notification dated 14th March, 2017 has laid down certain guidelines for alleged violators to comply with the provisions of MOEF.

We understand that it is a fast track window for obtaining Environment Clearance which can be availed within (6) six months from the date of notification.

In view of the above it is requested that the matter may be directly referred to MOEF Delhi instead of to SEIAA/Environment Department, as our application for submission to MOEF Delhi is duly ready for submission.

We will highly obliged if our matter of alleged violation is sent to MOEF Delhi on priority in order to present our case with in the specified time limit for clearance

Thanking You

For Sandhu Builders

Partner.

M/s. SANDHU BUILDERS MUMBAI

GOVT. OF INDIA NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission
Expires
25 Sept. 2019

M/s. SANDHU BUILDERS MUMBAI

1082

12/12/2019

Acknowledgement Slip for Transfer

This is to inform you that the proposal has been transferred from cataegory A to category B. Now the proposal shall be examined by MS of SEIAA to ensure that required information has been submitted. An email will be sent for seeking additional information , if any. Once verified, an acceptance letter shall be issued to the project proponent .

Following should be mentioned in further correspondence

1. New Proposal No.	:	SIA/MH/NCP/30253/2018
2. Old Proposal No.	:	IA/MH/NCP/64841/2017
3. Category of the Proposal	:	New Construction Projects and Industrial Estates
4. Project/Activity applied for	:	8(a) Building and Construction projects
5. Name of the proposal	:	Group Housing Project "Sandhu Palace" At Pali Hill, Bandra (West), Mumbai
6. Date of submission for TOR	:	20 May 2017

7. Name of the Project proponent along with contact details

a) Name of the proponent	:	SANDHU BUILDERS
b) Mobile No.	:	9967177777
c) State	:	Maharashtra
d) District	:	Mumbai City
e) Pincode	:	400050

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028

M/s. SANDHU BUILDERS MUMBAI

1083

Acknowledgement Slip for EC application

This is to acknowledge that the proposal has been successfully uploaded on the portal of the Ministry. The proposal shall be examined in the Ministry to ensure that required information has been submitted. An email will be sent seeking additional information , if any. within 20 working days. Once verified, an acceptance letter shall be issued to the propject proponent .

Following should be mentioned in further correspondence

1. Proposal No.	:	IA/MH/NCP/64842/2017
2. Category of the Proposal	:	New Construction Projects and Industrial Estates
3. Name of the proposal	:	Group Housing Project "Sandhu Palace" At Pali Hill, Bandra (West), Mumbai
4. Date of Receipt of Proposal	:	20/05/2017

5. Name of the Project proponent along with contact details

a) Name of the proponent	:	SANDHU BUILDERS
b) State	:	Maharashtra
c) District	:	Mumbai City
d) Pincode	:	400050

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3540 My Commission Expires 25 Sept. 2026

M/S. SANDHU BUILDERS MUMBAI

1084

Environmental Clearance (For Violation) FOR GROUP HOUSING PROJECT "SANDHU PALACE" AT PALI HILL, BANDRA (WEST), MUMBAI, MAHARASHTRA

FORM 1, FORM 1A & CONCEPTUAL PLAN

Project Proponent:
M/S SANDHU BUILDERS

EIA Consultant:

Ind Tech House Consult
(An ISO 9001:2008 Certified Organization)
G-8/6, Ground Floor, Sector 11, Rohini
Delhi – 110 085
Tel: +91 11 2757 1410, 6460 7252
Fax: +91 11 2757 2241
Email: ithconsult@hotmail.com

May, 2017

NABCB JAS-ANZ VEXIL BPS MS

NOTARY GOVT OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1085

Environmental Clearance (For Violation) FOR GROUP HOUSING PROJECT

"SANDHU PALACE" AT PALI HILL, BANDRA (WEST), MUMBAI, MAHARASHTRA

Project Proponent:
M/S SANDHU BUILDERS

For and on behalf of:	Ind Tech House Consult
Approved by:	Mr. A.N. Devikar
Signed:	
Position:	EIA Coordinator
Date:	MAY, 2017

This report has been prepared by Ind Tech House Consult with all reasonable skill, care and diligence within the terms of the contract with the client, incorporating our general terms and conditions of business and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

The document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of Ind Tech House Consult being obtained. Ind Tech House Consult accepts no responsibility or liability for the consequences of this document being used for a purpose other than the purpose for which it was commissioned. Any person using or relying on the document for such other purpose agrees, and will by such use or reliance be taken to confirm his agreement to indemnify Ind Tech House Consult for all loss or damage resulting there from. Ind Tech House Consult accepts no responsibility or liability for this document to any party other than the person by whom it was commissioned.

M/S. SANDHU BUILDERS MUMBAI

1086

Team of Experts associated for the Project

Declaration By Experts Contributing to the EIA Of Environmental Clearance For Group Housing Project "Sandhu Palace" At Pali Hill, Bandra (West), Mumbai, Maharashtra

I, hereby, certify that I was a part of the EIA team in the following capacity that developed the above EIA.

EIA coordinator: A.N. Devikar
Associate Coordinator: Mr. Soumya Dwivedi

Signature and Date:

S. NO.	Functional areas	Name of the expert/s	Signature and date
1	WP	Mrs. Supriti Guha (FAE)	
		Mr. Soumya Dwivedi (Team Member)	
2	MSW	Mrs. Supriti Guha (FAE)	
		Mr. Soumya Dwivedi (Team Member)	
3	LU	Mr. Rajveer Singh (FAE)	
		Mr. Manish Shukla (AFAE)	
4	AP	Mr. Suman Banerjee (FAE)	
		Mr. Soumya Dwivedi (Team Member)	
5	NV	Dr. Manoj Kr. Mishra (FAE)	
		Mr. Suman Banerjee (AFAE)	
6	EB	Dr. Sameer DeshPande(FAE)	
		Dr. Bideh Shukla (Team Member)	
7	SE	Dr. Debashish Bhttacharya (FAE)	
8	HG	Mr. Manish Shukla (AFAE)	
9	SC	Mr. Shrikant Mishra (FAE)	
		Dr. Bideh Shukla (Team Member)	

Associate Staff		
1.	Mr. Anand Kumar Dubey	

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2023

M/S. SANDHU BUILDERS MUMBAI

1087

2.	Mr. Indra Sharma	Indra Sharma
3.	Ms Monika Singh	
4.	Saurabh Bharadwaj	
5.	Jay Singh	
6.	Satish Chandra Verma	
Monitoring Laboratory Involved		
Ind Research and Development House (NABL Approved Lab)		

Signature
For Ind Tech House Consult

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission
Expires
25 Sept. 2023
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

1088

TABLE OF CONTENTS

S. No.	Contents	Page No.
I	Form 1	1 to 13
II	Form 1 A	14 to 29
III	Conceptual Plan	30 to 41
IV	Annexure	
A	*DESCRIPTIVE*	
	Site Location Map	Annexure-A1
	500 mts Radius Map	Annexure-A2
	10 km Radius Map	Annexure-A3
	Water balance Diagram	Annexure-A4
	Rainwater Harvesting Calculation	Annexure-A5
	Schematic Diagram of STP	Annexure-A6
B	*DOCUMENTS*	
	Fire NoC	Annexure-B1
	IOD Letter	Annexure-B2
	Completion Certification	Annexure-B3
	Structural Stability Certificate	Annexure-B4
	Electrical supply Letter	Annexure-B5
	Water Supply NoC	Annexure-B6
C	*CONSULTANT DISCLOUSURE*	
	Consultant Disclosure	Annexure-C1
	NABET Accreditation letter	Annexure-C2
D	*DRAWINGS*	
	Site Plan With Area Statement	Annexure-D1
	Basement Plan	Annexure-D2
	Section of Towers	Annexure-D3
	Stilt Floor Plan	Annexure-D4

M/s. SANDHU BUILDERS MUMBAI

Application for Prior Environmental Clearance (EC)
FORM 1
(See Paragraph – 6 Notification dated14th September 2006)
as amended to EIA Notification, 2006 issued vide S.O. 3067(E) on dt. 01.12.2009.

Basic Information

SN	Item	Details
1.	Name of the project/s	Group Housing Project "Sandhu Palace" At Pali Hill, Bandra (West), Mumbai
2.	S. No. in the schedule	8(a)
3.	Proposed capacity/area/length /tonnage to be handled/ command area/lease area/ number of wells to be drilled	Total Plot area : **13,592.50** sq m Net Plot area: **12,866.85** sq m Total Built up area: **40,317.33** sq m No of Dwelling Units (Flats): **43 Nos.** No of building block: **2 Nos.**
4.	New/Expansion/Modernization	New
5.	Existing capacity/area etc.	Nil
6.	Category of the project i.e. 'A' or 'B'	B
7.	Does it attract the general condition? If yes, please specify.	No
8.	Does it attract the specific condition? If yes, please specify.	No
9.	Location	Pali Hill, Bandra (West)
	Plot/Survey/Khasra No.	CTS No. 1381, 1382/C, 1378/A, 1629 A/1-10
	Village	Bandra 'C'
	Tehsil	Bandra (West)
	District	Mumbai Suburban
	State	Maharashtra
10.	Nearest railway station/airport along with distance in kms.	Bandra Railway Station: Approx.2.00km(Road distance) Mumbai Chhatrapati Shivaji Terminals: Approx. 5.00km (Road distance)
11.	Nearest town, city, district Headquarters along with distance in Km	Mumbai Metropolitan Region (MMR)
12.	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal address with telephone nos. to be given)	Municipal Corporation of Greater Mumbai (M.C.G.M.)
13.	Name of the applicant	M/s. Sandhu Builders
14.	Registered Address	Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai
15.	Address for correspondence:	Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai
	Name	Mr. Diler Sandhu
	Designation (Owner/Partner/CEO)	Owner
	Address	Sandhu Palace, 41, Pali Hill Road, Bandra (W), Mumbai
	Pin Code	400050

NOTARY S.M.H. ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

	E-mail	dilersandhu@gmail.com
	Telephone No.	022 –26051177/1277/1377,9967177777
	Fax No.	022 –26051477
16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a topo sheet.	Not applicable.
17.	Interlinked Projects	Nil
18.	Whether separate application of interlinked project has been submitted?	Not Applicable
19.	If yes, date of submission	Not Applicable
20.	If no, reason.	Not Applicable
21.	Whether the proposal involves approval/ clearance under: if yes, details of the same and their status to be given. (a) The forest (Conservation) Act, 1980? (b) The wildlife (Protection) Act, 1972? (c) The C.R.Z. Notification, 1991?	No, Project proposal does not involves approval/clearance under subhead a, b & c.
22.	Whether there is any Government order/policy relevant/ relating to the site?	No
23.	Forest land involved (hectares)	No
24.	Whether there is any litigation pending against the project and/or land in which the project is proposed to be set up? (a) Name of the Court (b) Case No. (c) Orders/directions of the Court, if any and its relevance with the proposed project.	Bombay High Court Yes, Appeal (L)/82/2014 Suit No 109 of 2013, Suit No 345 of 2014

(I) 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, etc.)

SN	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	The site for project is in residential zone as per Master Plan (Development Plan) H/W ward.

NOTARY S.M.H ZAIDI Mumbai & Thane Dist. Reg. No. 2340 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

SN	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.2	Clearance of existing land, vegetation and buildings?	No	Not Applicable
1.3	Creation of new land uses?	No.	There was no creation of new land use. The site for project is in residential zone.
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Geotechnical Soil investigation had been carried out.
1.5	Construction works?	Yes	**The major construction works which had been carried out are given below:** Site **Development** **Road Development** • Internal roads **Utilities/Services** • Water Supply • Sewerage • Drainage • Rain Water Harvesting Structures and Pits • Power supply and back up facility, **Buildings** • Residential Blocks • Parking Provisions & water body
1.6	Demolition works?	Yes	There were two private bungalows which had already been demolished.
1.7	Temporary sites used for construction works or housing of construction workers?	No	Mostly, local labors were employed. All the construction activities including storage of raw materials were confined to the storage spaces earmarked on project site only.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Above ground building structures include 2 Nos. residential blocks. The earthwork was involved for foundation and laying of underground services etc. Excavated soil was used for site leveling, back filling/filling and road construction. Top 200 mm layer of soil was separately stored and has been used for landscaping/horticulture development work.
1.9	Underground works including mining or tunneling?	Yes	Underground works include excavation of earth for construction of foundation, basements, water storage tank, STP & services.
1.10	Reclamation works?	No	Not involved.
1.11	Dredging?	No	Not involved.
1.12	Offshore structures?	No	Not involved.
1.13	Production and manufacturing processes?	No	It is a Group Housing project (Residential). Hence no production or manufacturing activities involved.

M/s. SANDHU BUILDERS MUMBAI

SN	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.14	Facilities for storage of goods or materials?	Yes	Temporary storage facilities was created during construction phase for storage of construction materials.
1.15	Facilities for treatment or disposal of solid or liquid effluents?	Yes	**Solid Waste** ***Construction Stage*** **:** During construction stage generated solid waste was comprised mainly of construction waste. The construction waste was reused within the site for various constructions filling work. In addition to that there was generation of small quantity of municipal waste from construction labors & was sent to nearest designated waste storage bins. ***Operation Stage:*** Solid waste generation from the facility is approximately **0.15 TPD** including **0.09 TPD** bio-degradable. Solid waste generated from the residential block and other areas is being collected daily on door to door basis by the dedicated and trained housekeeping staff. Twin bin systems also been provided for segregation at sources. Recyclable wastes is being sold to vendors and non- recyclable wastes is being disposed through authorized agency to municipal waste disposal site. Biodegradable waste is being treated in organic waste converter and used as manure for horticulture development. MSW including horticulture waste is being handled as per the Municipal Solid Waste Management & Handling Rules, 2016. **Sewage sludge** **13** kg/day of sewage sludge is being generated which is being used as manure for plants. **Hazardous waste: 0.58** liters/ day of waste oil is being generated and sold to authorized recyclers. **E Waste :** The e-waste, about **0.7 kg/day** generated from the proposed project is being stored at a designated place. Waste will be disposed as per E waste management and handling rules, 2016.

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

SN	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			Liquid Effluent ***Construction Stage:*** During the construction stage domestic liquid effluent generation was nominal. Wastewater generated from construction site contains suspended materials, and washings from various areas. Construction wastewater was collected in a separate basin and was reused after primary treatment for sprinkling on roads. Mobile toilets and potable water facilities was provided at site during construction phase for labour and staff. ***Operation Stage:*** Approximately **27 KLD** of domestic waste water will be generated from the proposed facility. This effluent will be treated in Sewage Treatment Plant of **45 KLD**. The total treated water from STP will be reused for flushing & horticulture development.
1.16	Facilities for long term housing of operational workers?	No	Not applicable
1.17	New road, rail or sea traffic during construction or operation?	No	Not applicable
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	Not applicable
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Not applicable
1.20	New or diverted transmission lines or pipelines?	No	Not applicable
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not applicable.
1.22	Stream crossings?	No	Not applicable
1.23	Abstraction or transfers of water form ground or surface waters?	No	There was no ground water extraction activity during the construction of project. Water was sourced through treated water. Tanker supplies & BMC water supply for construction purpose will be used after testing and confirmation of fitness for construction. In operation phase, water will be supplied by M.C.G.M.

NOTARY S.M.H. ZAIDI Mumbai & Thane Dist. Reg. No. 3545 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

SN	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.24	Changes in water bodies or the land surface affecting drainage or run-off.	Yes	Surface drainage may affect due to construction of the project. By considering run off prior to development & run off after development there is some increment in storm water runoff. However runoff generated from the project site during monsoon season is being used to recharge ground aquifer. Network of drainage system developed in the site is being used to collect roof as well as surface runoff. Potential Quantity of runoff is 6351.7 CUM on annual basis which will be recharged to ground.
1.25	Transport of personnel or materials for construction, operation or decommissioning.	Yes	During construction phase transport of personnel as well as construction materials was required. The personnel were engaged from nearby areas. Precautions were taken to reduce the impact of vehicular movement by trying to avoid the vehicular trips during peak hours. For operation phase parking has been provided on surface, stilt and in basements.
1.26	Long-term dismantling or decommissioning or restoration works?	No	Not applicable
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not applicable
1.28	Influx of people to an area in either temporarily or permanently?	Yes	**Construction phase –** Temporary influx of people about 25 from the nearby areas was recorded. **Operation phase – 283 (215 Fixed +68 floating population)**
1.29	Introduction of alien species?	No	Not applicable
1.30	Loss of native species or genetic diversity?	No	Not applicable
1.31	Any other actions?	No	None

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028

M/S. SANDHU BUILDERS MUMBAI

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):**

SN	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)	Yes	The project site and its surrounding areas have been designated for residential development.
2.2	Water (expected source & competing users) unit:	Yes	There was no ground water extraction activity during the construction of project. Water was sourced through treated water. Tanker supplies & BMC water supply for construction purpose will be used after testing and confirmation of fitness for construction. In operation phase, water will be supplied by M.C.G.M. 20 KLD from treated water is being used within site premises from STP installed at site.
2.3	Minerals (MT)	No	Not applicable
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	Yes	Construction materials such as Cement, Steel, Bricks, Stone aggregates, and Sand were required for construction of the project. These were procured from local reputed licensed vendors.
2.5	Forests and timber (source – MT)	No	Limited use of timber was done.
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	Power for the project is being supplied by Reliance Energy. Power demand for the project is 1104 KW. DG set of 01 X 380 KVA is being used as power backup during power failure. HSD (low sulphur variety as per availability) fuel is being used for DG sets.
2.7	Any other natural resources (use appropriate standard units)	No	--

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.**

SN	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	Not applicable.

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 9540 No Commission Expires 25 Sept 2026

M/S. SANDHU BUILDERS MUMBAI

3.3	Affect the welfare of people e.g. by changing living conditions?	No	Not Applicable.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	Not applicable.
3.5	Any other causes	No	Not applicable

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

SN	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	Top soil generated during earth excavation was stacked, covered, preserved for reuse as top layer for horticulture development. Remaining soil was used for site leveling, back filling/filling in raft and road construction.
4.2	Municipal wastes (domestic and or commercial wastes)	Yes	Municipal solid wastes – **0.15 TPD.** The solid waste includes paper, card board, plastic cans etc. and kitchen wastes from houses. Recyclable wastes like card boards and plastic cans is being sold to vendors. As this is residential project, commercial activity is not involved in this project.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	Waste oil **0.58** Lts/Day from DG sets is only hazardous waste generation from the project. This waste oil is being carefully stored in HDPE drums in isolated covered space and sold to recyclers authorized by CPCB/SPCB. Suitable care is being taken so as to prevent spills/ leaks of used oil from storage.
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	Dried sludge from the STP is being used as manure for horticulture development.
4.7	Construction or demolition wastes	Yes	**Construction Work:** Excavated soil was used for landscaping and back filling. Other construction waste like bricks, concrete etc will be used in sundary / road works / manholes etc. Gunny bags, cardboards was sent to authorize recycler during construction phase.
4.8	Redundant machinery or equipment	No	Not applicable
4.9	Contaminated soils or other materials	No	Not applicable

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

SN	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
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)

SN	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	Yes	Emission will be from ▪ Stationary Sources: DG sets 380 KVA ▪ Mobile Sources: Vehicular emissions CPCB approved DG sets with acoustic canopy is being used only during power failure.
5.2	Emissions from production processes	No	Not applicable
5.3	Emissions from materials handling including storage or transport	No	Fugitive dust emission due to handling and loading - unloading activities was envisaged during construction phase. Frequent water sprinkling activity was done to minimize the fugitive emissions.
5.4	Emissions from construction activities including plant and equipment	Yes Marginal	During the construction phase, major emissions were in the form of fugitive dust, use of DG sets and transportation of construction material.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Water sprinkling was practiced at regular intervals to reduce dust emissions during construction phase. Sewage generated from project is being treated in onsite STP. Adequate natural and mechanical ventilation is provided around STP and solid waste management facilities
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	Burning of any substances including biomass, slash materials and/ or construction debris were prohibited during operation phase.
5.8	Emissions from any other sources	No	Nil

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

SN	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	Now in operation phase, noise from operation of DG sets is envisaged. However, the generator sets installed is operating at noise level less than 75 dB (A) as the generators has been placed in acoustic chambers.
6.2	From industrial or similar processes	No	Not applicable

NOTARY S.M.H ZAIDI Mumbai & Thane Dist. Reg. No. 3040 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

SN	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
6.3	From construction or demolition	Yes	**Noise Pollution Control**: Noise pollution was due to operation of machinery as well as transportation vehicles. However following precautions were taken to control noise pollution: • High noise generating construction activities were carried out only during day time. • Installation, use and maintenance of mufflers on equipment. • Workers working near high noise construction machinery were supplied with ear muffs/ear plugs.
6.4	From blasting or piling	No	Blasting & piling work was not involved in the project.
6.5	From construction or operational traffic	Yes	**Construction Phase:** Appropriate safety measures were taken as per I.S. code and CPWD work manual. Precautions were taken to reduce the impact of the vehicular movement such as vehicular trips were not be at peak traffic hours. **Operation Phase:** Car parking is being provided on surface, stilt and in basement. Vehicular movement is restricted to roads and parking areas. Soft green peripheral and road side plantation helps in reduction of noise level.
6.6	From lighting or cooling systems	No	Nil
6.7	From any other sources	No	Nil

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:

SN	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	Yes	The waste oil generated during operation phase from the DG sets is being collected and separately stored in HDPE drums over concrete floor within the premises before final disposal. All precautionary steps is being taken to avoid spillage
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Generated Sewage from the project is being treated in the STP installed onsite; and recycled within the project facility for gardening & flushing.
7.3	By deposition of pollutants emitted to air into the land or into water	No	Dust generation during construction phase from earthworks and movement of vehicles was temporary phenomenon and was had short term impact during construction phase. Appropriate fugitive dust control measures, including

M/S. SANDHU BUILDERS MUMBAI

SN	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			water sprinkling of exposed areas and dust covers for trucks, were provided to minimize any impacts.
7.4	From any other sources	No	Nil
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	No.

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

SN	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	During construction phase, no such risk was anticipated. Now in operation Phase, all precautionary and safety measures have been taken to minimize any accident hazard.
8.2	From any other causes	No	Nil
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. Floods, earthquakes, landslides, cloudburst etc)?	Yes	Management plan for flood and earthquake is as follows: **Flood :** • Minimizing the incremental runoff from the site with the help of rain water harvesting tank of capacity 34 KL • Proper management of channelization of storm water from site by using proper internal SWD system and discharge points of having adequate capacity (0.59m3/sec) • Use of screens and silt traps to SWD • Proper maintenance of storm water drainage to avoid choking of drains and flooding on site • Ensure discharge of storm water from the site is clear of sediment and pollution • Provision of sump pump **Earthquake :** The structure of the building is designed as per IS code for earthquake resistant design of structure. Mumbai falls in Earthquake Zone-III.

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

M/S. SANDHU BUILDERS MUMBAI

SN	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.:	Yes	The project shall be equipped with dedicated internal road, parking, internal water distribution system, fire fighting system, internal sewage collection network, lighting facilities, solar lighting, and power backup facility.
	• Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.)	Yes	Appropriate infrastructure like, roads, power supply and waste management facility has been developed within the site.
	• extractive industries	No	No
	• supply industries	No	No
	• other	No	No
9.2	Lead to after-use of the site, which could have an impact on the environment	No	No
9.3	Set a precedent for later developments	Yes	This is residential project; there will be generation of employment Job opportunities during operation phase for support staff like security, maintenance, household workers, shop keepers etc.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	Impacts on water availability, storm water. drainage, availability of electricity, traffic congestion etc.

(II) **Environmental Sensitivity**

SN	Areas	Name/ Identity	Aerial distance (within 15 km) of proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Yes	Sanjay GandhiNational Park, 11 km
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests.	Yes	Arabian Sea, 0.71km Mithi River, 2.0 km. Bandra Talaom, 2.0 km Malad Creek, 11.0 km
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Yes	Sanjay Gandhi National Park, 11.0 km Maharashtra Nature Park, 4.0 km
4	Inland, coastal, marine or underground waters	Yes	Arabian Sea, 0.71km Mithi River, 2.0 km Bandra Talaom, 2.0 km Malad Creek, 11.0 km

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S SANDHU BUILDERS MUMBAI

SN	Areas	Name/ Identity	Aerial distance (within 15 km) of proposed project location boundary
5	State, National boundaries	No	-
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Yes	Western Express Highway, 2.0 km
7	Defense installations	No	Does not fall within 15 Km radius.
8	Densely populated or built-up area	Yes	Mumbai Metropolitan Region
9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	Yes	Manmade community facilities such as, schools, places of worship not have any impact, as, they are not located in the vicinity of project.
10	Areas containing important, high quality or scarce resources *(ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	Yes	The project site falls in the notified areas for control and regulation of ground water. The ground water will be extracted by prior permission from competent authority.
11	Areas already subjected to pollution or environmental damage. *(those where existing legal environmental standards are exceeded)*	No	Nothing specific
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	-

"I hereby undertake that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance give, if any to the project will be revoked at our risk and cost."

Date:
Place:

Signature of the Proponent with Name and Full Address

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

FORM-1 A

1. LAND ENVIRONMENT

1.1. **Will the existing land use get significantly altered from the project that is not consistent with the surroundings? (Proposed land use must conform to the approved Master Plan / Development Plan of the area. Change of land use, if any and the statutory approval from the competent authority be submitted). Attach Maps of (i) site location, (ii) surrounding features of the proposed site (within 500 meters) and (iii) the site (indicating levels & contours) to appropriate scales. If not available attach only conceptual plans.**

The project site is located at CTS No. 1381, 1382/C, 1378/A, 1629 A/1-10, Pali Hill, Bandra (West), Mumbai, Maharashtra. The Land use of Project site is residential which is in conformity with master plan of city. The following maps are attached.

(i) 500 M Radius Map with location of site.
(ii) 10 KM Radius Map
(iii) Layout (Conceptual) plan.

1.2 **List out all the major project requirements in terms of the land area, built up area, water consumption, power requirement, connectivity, community facilities, parking needs etc.**

The project is of group housing. The, Brief description of the project is given below in **Table-1**:

Table 1.1: Building details

Residential: 1 Building with Wing A & B	
Wing A: 2 Basements + Ground + 18 floors + 19 part floor	Flats: 38 Nos.
Wing B: 2 Basements + Ground + 5 upper floors	Flats: 5 Nos.

Table 1.2: Area Statement

No.	Description	Area (Sq. Mt.)
1	Total plot area	13,592.50
2	Deduction (Road set back)	725.65
3	Net plot area	12,866.85
4	Ground Coverage Area (11%)	1,377.22
5	RG Area	3,222.52
6	**Proposed FSI Area**	**13,178.65**
7	**Proposed Non FSI Area**	**27,138.68**
8	**Total Construction area/Built up area**	**40,317.33**

Table 1.3: Parking Statement

Type	Parking Required as per DCR of MCGM	Parking Provision
4 Wheeler	**108**	**226**
2 Wheeler	**Nil**	**43**

Table 1.4: Population Details

POPULATION			
RESIDENTIAL	**DU'S**	**POP/DU**	**POPULATION**
SALEABLE DU'S	43	5	215

NOTARY GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

TOTAL			215
NON RESIDENTIAL			
Employees/Staff			
FACILITY MANAGEMENT STAFF	LS		25
VISITORS			
TOTAL VISITORS			43
TOTAL POPULATION			283

Table 1.5: Water requirement Details

WATER REQUIREMENT			
	POPULATION/ AREA/UNIT	RATE IN LTS	TOTAL QTY IN KL
RESIDENTIAL			
DOMESTIC	215	90	19.35
FLUSHING	215	45	9.68
NON RESIDENTIAL (Working)			
DOMESTIC	25	15	0.38
FLUSHING	25	30	0.75
VISITORS			
DOMESTIC	43	5	0.22
FLUSHING	43	10	0.43
TOTAL POPULATION	283		
GARDENING	2340.9	3.5	8.19
DG Cooling	380 KVA	0.9	0.68
SWIMMING POOL	1		3
TOTAL WATER REQUIREMENT			42.67
TOTAL TREATED WATER REQUIREMENT			19.73
TOTAL FRESH WATER			22.94
CAPACITY OF STP			
WATER FLOW TO STP (DOMESTIC) 80%			15.95
WATER FLOW TO STP (FLUSHING) 100%			10.86
TOTAL WASTE WATER GENERATION			26.81
REQUIRED CAPACITY OF STP - 120%			32
SAY			45
AVAILABLE TREATED WATER (80%)			21.45

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

REUSE OF TREATED WATER			19.73
SURPLUS WATER will be discharged in Municipal Drain			1.71

Table 1.6: Total water requirement for the project and source (Operation phase)

No.	Description	Quantity of water requiredin KLD	Source of water supply
1	Domestic	20	M.C.G.M.
2	Flushing	11.18	Treated sewage from STP
3	Gardening	8	Treated sewage from STP
4	Swimming pool make up	3	Tanker water of potable quality

Table 1.7: Solid Wastes During Operation Phase

Occupancy Load	Solid waste generation (TPD)		
	Non-biodegradable	Biodegradable	Total
283 (215+68)	0.06	0.09	0.15

Table 1.8: Power Requirement

Connected load	1816KW
Maximum demand	1104KW
D.G. Set (In case of emergency backup during power failure)	1 DG set of 380 KVA

1.3 **What are the likely impacts of the proposed activity on the existing facilities adjacent to the proposed site? (Such as open spaces, community facilities, details of the existing land use, disturbance to the local ecology).**

The project does not cause any disturbance to local ecology and surrounding establishments. Peripheral green belt also been developed.

Project has been provided all the basic utilities such as proper drainage, sewerage treatment & water supply system, Structures to recharge ground water aquifer, green area development and sufficient parking so that it will not have negative impact on the surroundings.

The project having a positive impact as the project site has been developed for residential purpose. The project has been organized open spaces and green areas adding to aesthetics and improvement of surrounding environment. Terraces have been used for installation of solar panels to generate energy/hot water.
The land use of area in the immediate surrounding is also residential. A number of residential project are located around the project.

1.4 **Will there be any significant land disturbance resulting in erosion, subsidence & instability? (Details of soil type, slope analysis, vulnerability to subsidence, seismicity etc may be given).**

The construction work involved cutting and filling operations due to level difference. Construction of paved green areas and development of green areas, which reduces the chances of erosion. Excavation carried out for foundation & basement was protected with strutting and shoring where ever required.

Structural engineer was engaged for design of structure . Soil investigation has already been done.

Seismo-Tectonic Appraisal of the Area: Bureau of Indian Standards (BIS) has prepared a seismic zoning map of India based on tectonic features and records of past earthquakes. The project site falls under Zone-III as per the Seismic Zoning map of India (IS 1893, Part I, 2002.) Necessary seismic factors as per codes have been incorporated suitably while designing the structures to safeguard against earthquake risks.

1.5 **Will the proposal involve alteration of natural drainage systems? (Give details on a contour map showing the natural drainage near the proposed project site)**

No, proposal was not involving alteration of natural drainage system. Due to this project there is increment in hard area & storm water runoff rates.

1.6 **What are the quantities of earthwork involved in the construction activity-cutting, filling, reclamation etc. (Give details of the quantities of earthwork involved, transport of fill materials from outside the site etc.)**

Cut and fill activity was involved for construction of project. Transport of filling material from outside was not involved in project.

1.7 **Give details regarding water supply, waste handling etc. during the construction period.**

Water Supply:

There was no ground water extraction activity during the construction of project. Water was sourced through treated water. Tanker supplies & BMC water supply for construction purpose will be used after testing and confirmation of fitness for construction.

Waste Generation and Handling:

Excavated soil was stored and covered at site and have been reused for site leveling, back filling/filling in raft and road construction. The fertile top soil will has been reused for landscaping purpose. Construction waste generated at site has been reused in road construction.

1.8 **Will the low lying areas and wetlands get altered? (Provide details of how low lying and wetlands are getting modified from the proposed activity)**

No, there is no low lying and wetland area observed within and in the vicinity of the project site.

1.9 **Whether construction debris and waste during construction cause health hazard? (Give quantities of various types of wastes generated during construction including the construction labor and the means of disposal)**

Construction waste generated has been used on the site as filler material for as internal roads and pavements. Remaining construction waste was sent to an approved dumping site/landfill site.

2. WATER ENVIRONMENT

2.1 **Give the total quantity of water requirement for the proposed project with the breakup of requirements for various uses. How will the water requirement met? State the sources & quantities and furnish a water balance statement**

Total water requirement for this project is 43 KLD out of which approx. 20 KLD treated waste water from STP is being reused. The fresh water demand of 23 KLD is being obtained from water supply department of M.C.G.M. Breakup of water requirements for various uses is given below. Efficient dual plumbing system has been provided to achieve conservation of fresh water. Details of water requirement are given in **Table 2** below:

Table 2: Total Water Requirement Details of the Project

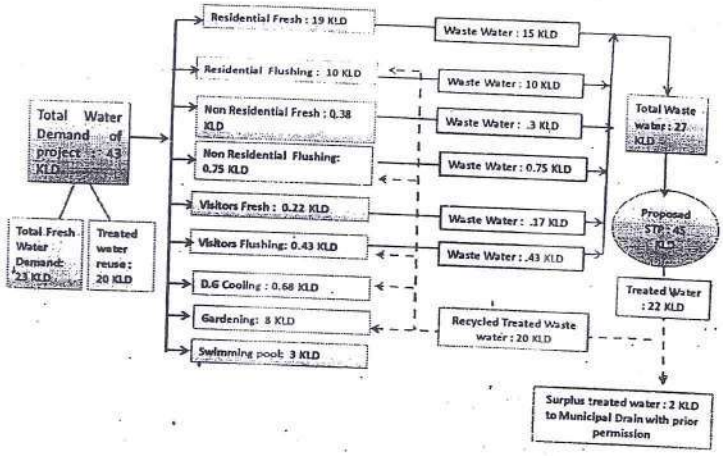
SN	Particulars	Water Demand (KLD)
1	Total Water Demand	43
2	Fresh Water Requirement	23
3	Total Waste water Generation	27
4	Total treated waste water	22
	Flushing	11
	Gardening	08
	Swimming Pool	03
	Surplus	02 (will be discharged into sewer with prior permission)
5	STP Proposed	45

Water requirement for horticulture and dual flushing purpose is being fulfilled by recycling the treated waste water from onsite STP; it helps in conservation of fresh. Water Balance Diagram is given below.

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028

M/S. SANDHU BUILDERS MUMBAI

WATER BALANCE DIAGRAM



2.2 What is the capacity (dependable flow or yield) of the proposed source of water?

Domestic Water Supply from Municipal Corporation of Greater Mumbai (M.C.G.M.).

2.3 What is the quality of water required, in case, the supply is not from a municipal source? (Provide physical, chemical, biological characteristics with class of water quality)

Fresh water sourced from water supply department of Municipal Corporation of Greater Mumbai (M.C.G.M.). The quality of water is confirmed to the desirable drinking water standards as per IS: 10500. 2012.

2.4 How much of the water requirement can be met from the recycling of treated wastewater? (Give the details of quantities, sources and usage)

Approx 20 KLD of treated waste water from onsite STP is being used to meet 100% water required for flushing & gardening.

2.5 Will there be diversion of water from other users? (Please assess the impacts of the project on other existing uses and quantities of consumption)

Therefore, no diversion of water from other user and no impact on the existing users is anticipated. M.C.G.M. has common water supply in this area.

2.6 What is the incremental pollution load from wastewater generated from the proposed activity? (Give details of the quantities and composition of wastewater generated from the proposed activity)

As estimated, 27 KLD of waste water will be generated from the project which will be treated onsite STP. Approx. 20 KLD of treated wastewater will be used for flushing & gardening.

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3649 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

2.7 Give details of the water requirements met from water harvesting? Furnish details of the facilities created.

Rain Water Harvesting structures as per details given to recharge rain water to ground water aquifer. Provision of RWH tank of capacity 22.25 CUM.

2.8 What would be the impact of the land use changes occurring due to the proposed project on the runoff characteristics (quantitative as well as qualitative) of the area in the post construction phase on a long term basis? Would it aggravate the problems of flooding or water logging in any way?

Total Runoff from the project site: After development = 0.53 m3/sec
(Considering different coefficients for paved area, unpaved area and terrace)

Precaution to avoid water logging on site:
- Minimizing the incremental runoff from the site with the help of rain water recharge pits of capacity 22.25 CUM (storage volume).
- Rain water collection tank of 34 KL capacity is proposed in basement for reuse of collected water.
- Proper management of channelization of storm water from site by using proper internal SWD system and discharge points of having adequate capacity (0.59m3/sec)
- Use of screens and silt traps to SWD
- Proper maintenance of storm water drainage to avoid choking of drains and flooding on site
- Ensure discharge of storm water from the site is clear of sediment and pollution
- Provision of sump pump.

2.9 What are the impacts of the proposal on the ground water? (Will there be tapping of ground water; give the details of ground water table, recharging capacity, and approvals obtained from competent authority, if any)

There are existing borewells at the project site. It is proposed to provide 2 Nos of recharge pits to rainwater to recharge ground water aquifers.

2.10 What precautions/measures are taken to prevent the run-off from construction activities polluting land and aquifers? (Give details of quantities and the measures taken to avoid the adverse impacts)

The major underground construction activities were not taken up during monsoon period. Further, this is not applicable, as construction is nearing completion.

2.11 How is the storm water from within the site managed? (State the provisions made to avoid flooding of the area, details of the drainage facilities provided along with a site layout indication contour levels)

Internal storm water drains are already constructed strictly in accordance to the governing authority regulations. (MCGM NOC & completion received for SWD).
Peak runoff after development = 0.53 m3/sec.

2.12 Will the deployment of construction laborers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation)

Not applicable, as construction nearing completion.

NOTARY GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

2.13 What on-site facilities are provided for the collection, treatment & safe disposal of sewage? (Give details of the quantities of wastewater generation, treatment capacities with technology and facilities for recycling and disposal)

Now in operation phase, sewage generation from project is 27 KLD, Generated Sewage is being collected and treated upto tertiary level in STP of 45 KLD capacity installed at the site. MBBR Technology for STP is proposed for the treatment of sewage.The treated water is being recycled and used for toilet flushing & Gardening, etc. Surplus treated water has been discharged in to municipal sewer with permission of competent authority.

2.14 Give details of dual plumbing system if treated waste water is used for flushing of toilets or any other use.

Generation of treated water from onsite STP is 22 KLD out of which 11 KLD water will be used for Flushing & 9 KLD for irrigation & DG Cooling and surplus 08 KLD of treated water is being discharged into public sewer after permission of competent authority.

3. VEGETATION

3.1 Is there any threat of the project to the biodiversity? (Give a description of the local ecosystem with its unique features, if any)

No, there is no threat to biodiversity.

3.2 Will the construction involve extensive clearing or modification of vegetation? (Provide a detailed account of the trees & vegetation affected by the project)
Total existing trees: 32 Nos. In response 250 Nos. of new trees are already planted as per norms.

3.3 What are the measures proposed to be taken to minimize the likely impacts on important site features (Give details of proposal for tree plantation, landscaping, creation of water bodies etc along with a layout plan to an appropriate scale)

Total existing trees: 32 Nos. In response 250 Nos. of new trees are already planted as per norms. Project is having 3222.52 sq m green area. Green area also includes ground cover, lawns at selected locations and shrubs for shade and reduction of Air and Noise pollution. Trees and plant species which are planted within the project is as below:-

Table 3: List of Plant Species which are planted within the project

Sl.	Botanical Name	Common Name	No. of Trees planted
1	*Areca Catechu*	Supari	86
2	*Alstonia Scholaris*	Devil Tree	1
3	*Polyalthia Longifolia*	False Ashoka	10
4	*Terminalia Catappa*	Badam	8
5	*Bauhinia Acuminata*	Bauhinia	5
6	*Callistemon Viminalls*	Bottle Brush	27
7	*Hyophorbe Legenicaulis*	Bottle Palm	25
8	*Araucaria Columnaris*	Christmas Tree	2
9	*Caryota Urens*	Fishtail Palm	57
10	*Howea Forsteriana*	Kentia Palm	2
11	*Plumeria Alba*	White Frangipani	13

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

12	*Magnolia Champaca*	Sonchapa	4
Total			

4. FAUNA

4.1 **Is there likely to be any displacement of fauna-both terrestrial and aquatic or creation of barriers for their movement? Provide the details.**

No displacement of fauna was envisaged due to this project. This site is not a natural host to any sensitive creature. Therefore, no animal habitat was effected due to construction of this project.

4.2 **Any direct or indirect impacts on the avifauna of the area? Provide details.**

No direct or indirect impact on the fauna of the area was envisaged.

4.3 **Prescribe measures such as corridors, fish ladders etc. to mitigate adverse impacts on fauna.**

Not applicable for this project.

5. AIR ENVIRONMENT

5.1 **Will the project increase atmospheric concentration of gases and result in heat islands? (Give details of background air quality levels with predicted values based on dispersion models taking into account the increased traffic generation as a result of the proposed constructions)**

Project increased hard areas (Terrace, Roads, Paths and parking area). Heat island effect is negligible due to shading of hard surfaces by plantation.

Construction Phase

The important activities during the construction phase that produce particulate matter and affect the air quality are material storage, transportation and handling of excavated earth and construction materials like cement, sand and aggregates. Gaseous pollutants like SO_2, NO_2, CO emitted from the various machineries and vehicles used in construction activities.

Appropriate mitigation measure was taken during construction phase of the project to reduce the pollution level to the acceptable limit.

Operational Phase

There is no major impact on air environment. Low sulpher diesel for DG Set will be used as a fuel which is causing air pollution. But APCM minimizes the pollution load into environment.

5.2 **What are the impacts on generation of dust, smoke, odorous fumes or other hazardous gases? Give details in relation to all the meteorological parameters.**

During construction phase, Dust, Particulate Matter was the main poliutant, which was generated during construction activities. Other emission sources were

NOTARY S.M.H ZAIDI Mumbai & Thane Dist. Reg. No. 3040 My Commission Expires 26 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

intermittent and include emissions of SO_2, NO_2 and CO from materials transport of heavy vehicles on site etc. Proper upkeep and maintenance of vehicles, sprinkling of water on roads and construction site were some of the measures that reduced the impact during construction phase.

Sources of Air pollution during operational phase

- The gaseous emission from vehicles.
- Emissions from DG set while in operation only during power failure.

Mitigation measures:

- The traffic congestion has been avoided by proper parking arrangement and maintaining smooth traffic flow.
- Regular PUC check up for vehicles.
- CPCB approved DG sets used.
- Regular maintenance of DG sets is being done & low sulphur diesel is being used.

5.3 **Will the proposal create shortage of parking space for vehicles? Furnish details of the present level of transport infrastructure and measures proposed for improvement including the traffic management at the entry & exit to the project site.**

No, well organized parking arrangement has been designed for the project. Provided parking is more than required parking as building byelaws. Separate Entry & exit is provided to avoid cognation congestion at these points.

Type	Parking Required as per DCR of MCGM	Parking Provision
4 Wheeler	108	226
2 Wheeler	Nil	43

5.4 **Provide details of the movement patterns with internal roads, bicycle tracks, Pedestrian pathways, footpaths etc with area under each category.**

Three entry & exits are provided. 7.5 mt. turning radius for easy access of fire tender movement has been provided. The detail of the road system has been clearly demarcated in the layout plan.

5.5 **Will there be significant increase in traffic noise & vibrations? Give details of the sources and the measures proposed for mitigation of the above.**

The source of noise is mainly vehicular noise. Well organized parking has been provided to maintain smooth traffic flow which helps in reducing traffic congestion and noise levels. Maximum parking has been provided in the basement to minimize noise level and traffic on surface.
Trees planned along road & periphery would act as noise barrier and will reduce the noise level.

5.6 **What will be the impact of DG sets & other equipment on noise levels & vibration in & ambient air quality around the project site? Provide details.**

D.G. Set operated only in case of power failures. The Pollutants like SPM, SO_2 are arised from emissions from D.G. set is being discharged through vent of proper

M/S. SANDHU BUILDERS MUMBAI

height. D.G. set installed with inbuilt acoustic enclosures to reduce the noise of D.G. set.

DG sets with a capacity of 380 KVA has been installed as power backup during power failure.

6. AESTHETICS

6.1 **Will the proposed constructions in any way result in the obstruction of a view, scenic amenity or landscapes? Are these considerations taken into account by the proponents?**

No, the use of site is in conformity with the planned land use. There is no scenic amenity or landscape in its surrounding.

6.2 **Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?**

Design development of the project was done on the basis of development control norms of the local body. The construction of the proposed project did not impact on any existing structures as safe distance has been maintained from existing structures.

6.3 **Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.**

There are no mandatory guidelines issued by local body for development of urban form; however architect and landscape had designed the project keeping in mind principles of urban design & urban form and setting in over all contexts.

6.4 **Are there any anthropological or archaeological sites or artifacts nearby? State if any other significant features in the vicinity of the proposed site have been considered.**

No, anthropological or archeological sites of significance do not exist in the vicinity of the project site.

7. SOCIO-ECONOMIC ASPECTS

7.1 **Will the proposal result in any changes to the demographic structure of local population? Provide the details.**

Not applicable.

7.2 **Give details of the existing social infrastructure around the proposed project.**

Site is easily accessible through public transport such as buses, Auto, Taxis etc, Apart from this number of Hospitals/Clinics, and facilities like post office, schools, shopping are also located at convenient distance from the site.

7.3 **Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?**

No disturbance was envisaged.

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028

M/S. SANDHU BUILDERS MUMBAI

8. BUILDING MATERIALS

8.1 May involve the use of building materials with high-embodied energy. Are the construction materials produced with energy efficient processes? (Give details of energy conservation measures in the selection of building materials and their energy efficiency)

ISI marked building materials of reputed brands was used. Preferences were given to locally available building materials which conserve low energy in entire processes of manufacture. Use of alternative technologies for each component of the buildings of envelope, superstructure, finishes and the road and surrounding areas as per guidelines provided.
Some of them are given below:

- Building material with low embodied energy had been given preference.
- Ready mix concrete with fly ash 15 to 20%.

Some of the alternate materials for openings in construction are:-
- Use of rapidly renewable timber for doors.
- Use of steel manufactured from recycled content of smaller diameter.
- Saw dust based particle board for panels.
- Use Ceramic tile in flooring.

The use of the above alternative building materials helps to reduce the use of non renewable resources.

8.2 Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?

Not applicable as construction is already completed.

8.3 Are recycled materials used in roads and structures? State the extent of savings achieved?

Locally available recycled materials has been given preference during construction phase.

However, light weight sipore blocks have been used for external & internal walls.

8.4 Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.

Approx. 97 kg/day solid wastes is being generated from the project. Out of which, approx. 59 kg/day waste is of bio-degradable in nature. Waste is being collected door to door. Dry & wet garbage has been managed separately.

Waste Management during operation phase:
Municipal Solid Waste
Sweepers engaged for door to door collection and handling municipal waste. Adequate number of collection bins separately for biodegradable and non-biodegradable waste (wet & dry) has been provided as per the Municipal Solid Waste (Management and Handling) Rule, 2016. Wastes from such bins are collected on daily basis and biodegradable waste will be composted on site by using vermi composting. Non biodegradable waste will be

NOTARY S.M.H. ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

segregated into recyclable & inert waste. Recyclable waste like glass, Card Board, Paper Waste sold to authorized recycler. Remaining inert waste sent to landfill site through authorized vendor.

- All waste collection arrangement has been made with local civic authority, for providing garbage station or transfer point (preferably near the entry/ exit point of the site), for collection and disposal of inert waste.
- The garbage storage/transfer point has been covered and cleaned every day to as to avoid any nuisance, vectors and unhygienic conditions.

9. ENERGY CONSERVATION

9.1 Give details of the power requirements, source of supply, backup source etc. What is the energy consumption assumed per square foot of built-up area? How have you tried to minimize energy consumption?

- **Power sourced from Reliance Energy:**
  The Maximum Power demand for the project is as around 1104 KW. The power is being supplied by **Reliance Energy**. DG sets of Capacity: 380 KVA installed to meet requirement of power back up during power failure.

- **Energy Conservation Measures & Management Plan:**
  In operation phase, appropriate energy conservation measures & management plan will be adopted in order to minimize the consumptions of conventional energy. The following measures are adopted. Details of energy saving measure:

  - Day light provision to all habitable room.
  - Use of high frequency, high power factor, electronic ballasts in place of conventional copper-iron ballasts in light fixture.
  - Use energy efficient light fixtures.
  - Use LEDs in external lighting bollards, and in areas such as staircases, corridors & lift lobbies, where lights burn on 24 hrs. basis.
  - Use of LED in basements parking areas.
  - Putting external lighting control on time switch/time control.
  - Using high efficiency motors 'EF1' for pumps & ventilation fans.
  - Use of local building material (400 Km range) to reduce pollution & transportation energy.

9.2. What type of, and capacity of, power back-up do you plan to provide?

I) Type: Diesel Generator Set
II) Capacity: 380 KVA

9.3 What are the characteristics of the glass you plan to use? Provide specifications of its characteristics related to both short wave and long wave radiation?

24 mm Double Glazed Unit (Glass) with low U values and SHGC recommended in ECBC norms have been used for glazing.

9.4 What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project.
Passive solar technique:-

Passive solar architectural feature-
Use of low U value glass & wall material and high reflecting white china mosaic tiles to

NOTARY GOVT. OF INDIA S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2026

M/S. SANDHU BUILDERS MUMBAI

terraces.
Day light integrated to reduce artificial lighting demand.
Balconies planned around building act as shading provider.
Landscaping to alter micro climate for better condition – Large green areas, peripheral plantation and avenue plantation provided to shed the hard areas & reduce heat island effect, reduction of noise & air pollution & provide buffer to sun heat.

9.5 Does the layout of streets & buildings maximize the potential for solar energy devices? Have you considered the use of street lighting, emergency lighting and solar hot water systems for use in the building complex? Substantiate with details.

Yes, the layout of streets & buildings had been designed to maximize the potential for solar energy devices. Further, solar energy will also be used for common area lighting,

9.6 Is shading effectively used to reduce cooling/heating loads? What principles have been used to maximize the shading of Walls on the East and the West and the Roof? How much energy saving has been effected?

Passive solar architectural measures had been adopted to provide shades to windows which effectively reduce heating of building envelope. Balconies & buffer space designed on external façade protects external façade from heat gain & reduce heat gain/energy consumption.

9.7 Do the structures use energy-efficient space conditioning, lighting and mechanical systems? Provide technical details. Provide details of the transformers and motor efficiencies, lighting intensity and air-conditioning load assumptions? Are you using CFC and HCFC free chillers? Provide specifications.

Building is not centrally air conditioned. However energy efficient VRV units wall mounted/ceiling mounted will be used in dwelling units.
Energy efficient transformers & motors are proposed. CFC & HCFC is not proposed in the project.

9.8 What are the likely effects of the building activity in altering the micro-climates? Provide a self assessment on the likely impacts of the proposed construction on creation of heat island & inversion effects?

Not Applicable as construction is already completed.

9.9 What are the thermal characteristics of the building envelope? (a) roof; (b) external walls; and (c) fenestration? Give details of the material used and the U-values or the R values of the individual components.

Energy efficient materials for building envelope & heat reflecting terrace surfaces has been provided to reduce heat gain and cooling load.

9.10 What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.

The project is approved by fire department. Adequate measures have been taken as per local fire norms and National Building Code 2005 to provide fire protection. Measures include building structure designed for appropriate fire rating, provision of Fire detection & alarm and rescue system, provision of infrastructure required by Fire Service Department to suppress the fire, Provision of fire suppression system.

NOTARY GOVT. OF INDIA S.M.H. ZAIDI Mumbai & Thane Dist. Reg. No. 3560 My Commission Expires 25 Sept. 2028

M/S. SANDHU BUILDERS MUMBAI

9.11 If you are using glass as wall material provides details and specifications including emissive and thermal characteristics.

Not applicable, as this is group housing project without any glass wall.

9.12 What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.

This is not a centrally air conditioned building. However, airtight construction has been done.

9.13 To what extent the non-conventional energy technologies are utilized in the overall energy consumption? Provide details of the renewable energy technologies used.

Non conventional (Solar) energy used to reduce burden on conventional energy.

- Provision of Solar Water Heater.
- Common Area Lighting through SPV Plant.

10. Environment Management Plan

The Environment Management Plan consist of all mitigation measures for each item wise activity to be undertaken during the operation and the entire life cycle to minimize adverse environmental impacts as a result of the activities of the project.

Table4: Environment Management Plan

Sl.	Potential Impact	Action	Parameters for Monitoring	Timing
I. Operational Phase				
1.	Air Emission	Stack emissions from DG set to be monitored	PM, SO_2, NO_2, CO	During operation phase
		Ambient air quality within the premises of the proposed unit to be monitored. Exhaust from vehicles to be minimized by use of fuel efficient vehicles and well maintained vehicles having PUC certificate.	PM_{10}, $PM_{2.5}$, SO_2, NO_2, and CO as given by SPCB. Vehicle logs to be maintained	
		Vehicle trips to be minimized to the extent possible	Vehicle logs	
2.	Noise	Noise generated from operation of DG set to be optimized and monitored. DG sets are to be provided with acoustic enclosures with appropriate height of chimney above roof level or as specified by PCB	Maintain records of vehicles	During operation Phase
		Generation of vehicular noise	Maintain records of vehicles	
3.	Wastewater Discharge	No untreated discharge to be made to surface	No discharge hoses in vicinity of	During operation phase.

		water, groundwater or soil.	watercourses.	
		Take care in disposal of wastewater generated such that soil and groundwater resources are protected	Discharge norms for effluents as given by SPCB	
4.	Drainage and Effluent Management	Ensure drainage system and specific design measures are working effectively. Design to incorporate existing drainage pattern and avoid disturbing the same.	Visual inspection of drainage and records thereof	During operation phase
5.	Energy Usage	Replacement of conventional luminaries to energy efficient luminary fittings	Luminary parameters	During operation phase
6.	Emergency preparedness, such as fire fighting	Fire protection and safety measures to take care of fire and explosion hazards, to be assessed and steps taken for prevention.	Mock drill records, on site emergency pian, evacuation plan	During operation phase
7.	Environment Management Cell/Unit	The Environment Management Cell/Unit to be set up to ensure implementation and monitoring of environmental safeguards.	A formal letter from the management indicating formation of Environment Management Cell	During operation phase

5: Environment Monitoring Plan (Operation Phase)

S. No.	Particulars	Parameters	Frequency
1.	Ambient Air Monitoring	PM 2.5, PM 10, SO2, NOx, CO	Half yearly
2.	Stack Emission Monitoring	PM, SO_2, NO_x	Half yearly
3.	Treated Effluent Monitoring	pH, BOD, COD, O& G, Total Suspended Solids	Monthly
4.	Noise Level Monitoring	24 Hrs. Noise Level	Quarterly

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3549 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1. Background Information

The group housing project "Sandhu Palace" is located on CTS No. 1381, 1382/C, 1378/A, 1629 A/1-10, AT PALI HILL, BANDRA (WEST), MUMBAI. The developer of the project is M/S Sandhu Builders. The Land use of project site is in residential zone as per (Development Plan) H/W ward. The Building plan of project was approved by local body in 24.02.2006 (before issue of EC notification dated 14.09.2006) & construction started thereafter with subsequent revision and approval from various bodies. The project is now nearing complication. All requisite clearances required to occupy building have been obtained from various agencies except environmental clearance.

2.0 PROJECT DETAILS

The project is planned on CTS No. 1381, 1382/C, 1378/A, 1629 A/1-10, AT PALI HILL, BANDRA (WEST), MUMBAI on a Gross Plot area of 13,592.50 Sqm. The total built-up area is approximately 40,317.33 sq m. The project comprises of 02 number of building blocks with 43 Nos. of Dwelling units.

Table1. Salient features of Group Housing Project

Table 1.1: Building details

Residential: 1 Building with Wing A & B	
Wing A: 2 Basements + Ground + 18 floors + 19 part floor	Flats: 38 Nos.
Wing B: 2 Basements + Ground + 5 upper floors	Flats: 5 Nos.

Table 1.2: Area Statement

No.	Description	Area (Sq. Mt.)
1	Total plot area	13,592.50
2	Deduction (Road set back)	725.65
3	Net plot area	12,866.85
4	Ground Coverage Area (11%)	1,377.22
5	RG Area	3,222.52
6	**Proposed FSI Area**	**13,178.65**
7	**Proposed Non FSI Area**	**27,138.68**
8	**Total Construction area/Built up area**	**40,317.33**

Table 1.3: Parking Statement

Type	Parking Required as per DCR of MCGM	Parking Provision
4 Wheeler	**108**	**226**
2 Wheeler	**Nil**	**43**

Table 1.4: Population Details

NOTARY S.M.H. ZAIDI Mumbai & Thane Dist. Regd. No. 3643 MT Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

M/S SANDHU BUILDERS	GROUP HOUSING PROJECT "SANDHU PALACE" AT PALI HILL, BANDRA (WEST), MUMBAI	CONCEPTUAL PLAN

POPULATION			
RESIDENTIAL	**DU'S**	**POP/DU**	**POPULATION**
SALEABLE DU'S	43	5	215
TOTAL			**215**
NON RESIDENTIAL			
Employees/Staff			
FACILITY MANAGEMENT STAFF	LS		**25**
VISITORS			
TOTAL VISITORS			**43**
TOTAL POPULATION			**283**

Table 1.5: Water requirement Details

WATER REQUIREMENT			
	POPULATION/ AREA/UNIT	**RATE IN LTS**	**TOTAL QTY IN KL**
RESIDENTIAL			
DOMESTIC	215	90	19.35
FLUSHING	215	45	9.68
NON RESIDENTIAL (Working)			
DOMESTIC	25	15	0.38
FLUSHING	25	30	0.75
VISITORS			
DOMESTIC	43	5	0.22
FLUSHING	43	10	0.43
TOTAL POPULATION	**283**		
GARDENING	2340.9	3.5	8.19
DG Cooling	380 KVA	0.9	0.68
SWIMMING POOL	1		3
TOTAL WATER REQUIREMENT			**42.67**
TOTAL TREATED WATER REQUIREMENT			19.73
TOTAL FRESH WATER			22.94
CAPACITY OF STP			

WATER FLOW TO STP (DOMESTIC) 80%			15.95
WATER FLOW TO STP (FLUSHING) 100%			10.86
TOTAL WASTE WATER GENERATION			**26.81**
REQUIRED CAPACITY OF STP - 120%			32
SAY			**45**
AVAILABLE TREATED WATER (80%)			21.45
REUSE OF TREATED WATER			19.73
TO BE DISCHARGED IN MUNICIPAL DRAIN			**1.71**

Table 1.6: Total water requirement for the project and source (Operation phase)

No.	Description	Quantity of water requiredin KLD	Source of water supply
1	Domestic	20	M.C.G.M.
2	Flushing	11	Treated sewage from STP
3	Gardening	8	Treated sewage from STP
4	Swimming pool make up	3	Tanker water of potable quality
5	DG Cooling	0.68	Treated sewage from STP

Table 8: Solid Wastes During Operation Phase

Occupancy Load	Solid waste generation (TPD)		
	Non-biodegradable	Biodegradable	Total
283 (215+68)	0.06	0.09	0.15

Table 9: Power Requirement

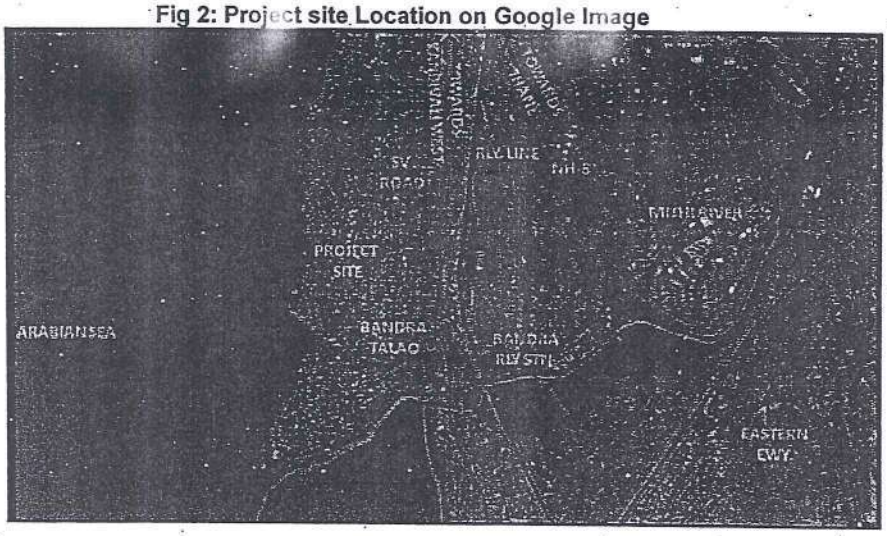
Connected load	1816KW
Maximum demand	1104KW
D.G. Set (In case of emergency backup during power failure)	1 DG set of 380 KVA

M/s. SANDHU BUILDERS MUMBAI

3.0 CONNECTIVITY

The Project site is well connected to the Major National highways NH 91, NH 3 and NH 8 which are situated at 8 Km North East, 4.60 Km South East and 1.83 Km East from the project site respectively. Almost all the surrounding and nearby areas are connected with network of roads. Bandra Railway Station is around 1.79 km in South East direction. Google image showing location and connectivity of project site is as given below (Ref, fig.2).

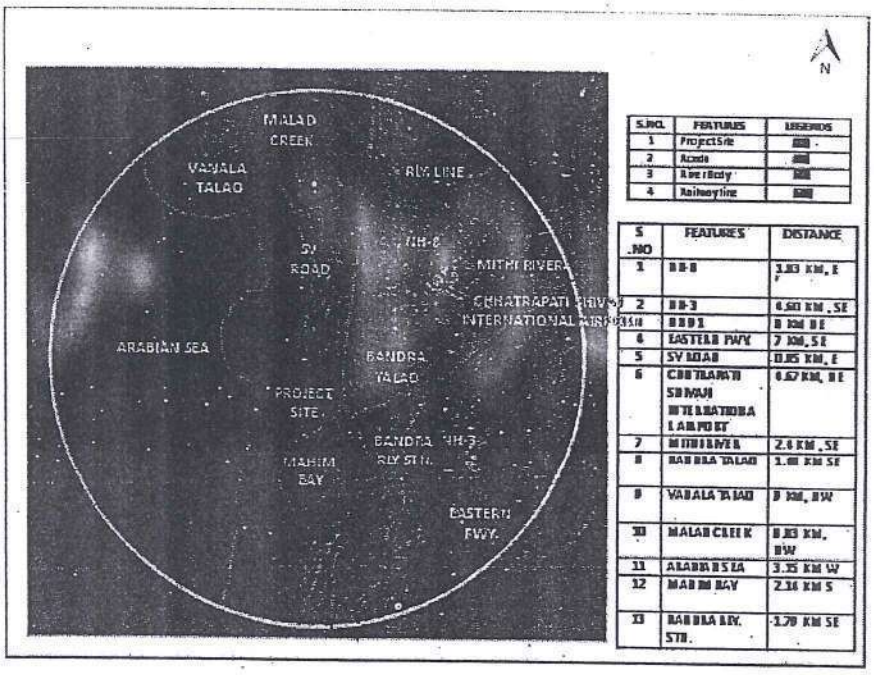
Fig 2: Project site Location on Google Image



NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3040 My Commission Expires 25 Sept. 2022 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

Fig 3 10 Km Radius Map



4.0 PROJECT SURROUNDINGS

Project site is located at CTS No. 1381, 1382/C, 1378/A, 1629 A/1-10, AT PALI HILL, BANDRA (WEST), MUMBAI. The location coordinate of project site are 19^0 04' 07.38"N and 72^0 49' 43.76" E. Major National highways NH 91, NH 3 and NH 8 which are situated at 8 Km North East, 4.60 Km South East and 1.83 Km East from the project site respectively. Almost all the surrounding and nearby areas are connected with network of roads. Bandra Railway Station is around 1.79 km in South East direction and nearest Air Port is Chhatrapati Shivaji International Airport at about 4.67 Km North East. The details of site surroundings are given below in Table- 2.

Table-2: Site and Surrounding of the project Site

S. No.	Particulars	Details
1.	Nearest National Highway	NH 91, NH 3 and NH 8 which are situated at 8 Km North East, 4.60 Km South East and 1.83 Km East
2.	Nearest Railway Station	Bandra Railway Station: 1.79 Km South East
3.	Nearest Airport	Chhatrapati Shivaji International Airport – 4.67 Km North East
4.	Nearest Town/ City	Bandra
5.	River Body	Mithi River- 2.4 Km South East

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3649 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

		Mald Creek, 8.83 Km North West
6.	Hills/ Valleys	Plain
7.	Site Topography	Nil
8.	Archaeologically Important Site	Nil
9.	National Parks/ Wildlife Sanctuaries	Nil
10.	Delhi State Boundary	Nil
11.	Seismicity	The study area falls under Seismic Zone-III.

5.0 OCCUPANCY DETAILS

The total population of the project will be approx. 283 persons. Details of population are given below in **Table -3.**

Table -3 Population Detail

POPULATION			
RESIDENTIAL	**DU'S**	**POP/DU**	**POPULATION**
SALEABLE DU'S	43	5	215
TOTAL			**215**
NON RESIDENTIAL			
Employees/Staff			
FACILITY MANAGEMENT STAFF	LS		**25**
VISITORS			
TOTAL VISITORS			**43**
TOTAL POPULATION			**283**

6.0 WATER DEMAND

6.1 Water supply & source

The water supply for the residential project during operation phase will be sourced from water supply department of M.C.G.M. The total water demand works out to approximately **43 KLD**. After recycling and reuse of **20 KLD** treated water, the net fresh water requirement will be **23 KLD**. Details of daily water requirement, waste water generation & reuse of treated water are given below in **Table 4** and water balance diagram is given in **Figure-5.** below.

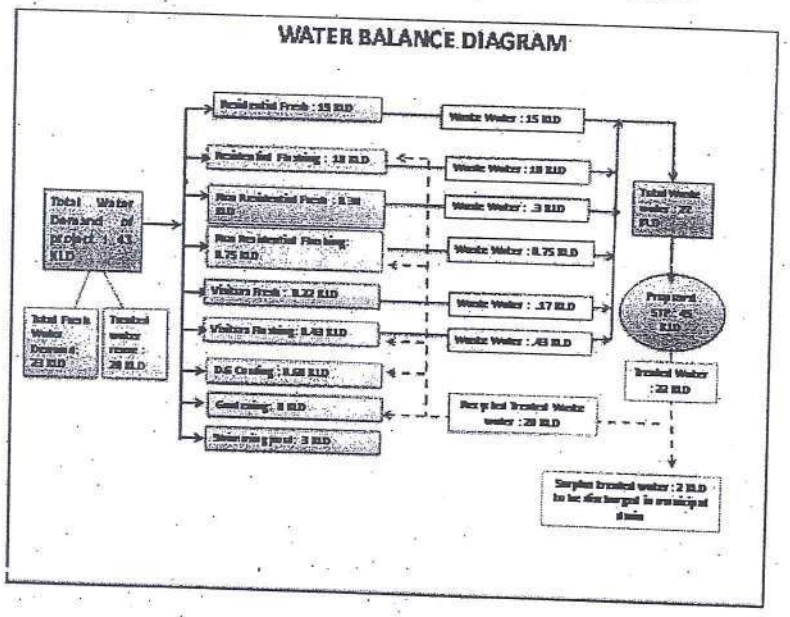
NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

Table 4: Calculations for Daily Water Demand for the Project

No.	Description	Quantity of water requiredin KLD	Source of water supply
1	Domestic	20	M.C.G.M.
2	Flushing	11.18	Treated sewage from STP
3	Gardening	8	Treated sewage from STP
4	Swimming pool make up	3	Tanker water of potable quality
5	DG Cooling	0.68	Treated sewage from STP

Fig.5: Water Balance Diagram for the Project



7.0 SEWAGE GENERATION

Construction phase:

During the construction stage domestic liquid effluent generation was nominal. Waste water generated from construction site contains suspended materials, and washings from various areas. Construction wastewater was collected in a separate basin and was reused after primary treatment for sprinkling on roads. Mobile toilets

and potable water facilities was provided at site during construction phase for labour and staff.

Operational Phase:
Approximately 27 KLD of domestic waste water will be generated from the proposed facility. This effluent will be treated in Sewage Treatment Plant of 45 KLD. The total treated water from STP will be reused for flushing & horticulture development.

8.0 WASTE GENERATION, COLLECTION, TRANSPORT AND DISPOSAL

Solid waste generated during the Construction phase, the following steps was followed for the management solid waste:

- Construction yards was used for storage of construction materials.
- Excavated top soil was stored in temporary constructed soil bank and is reused for landscaping of the Project.
- Remaining soil was utilized for back filling / road work /raising of site level at locations.

Waste generation during Operation Phase
During operation phase municipal solid waste would be generated from the project. The quantification of different type of waste likely to be generated are given below in table: 5 below

Table 5: Quantity of Waste Generation during operation phase

Total Waste Generation	0.15	TPD
Organic Waste Generation	0.09	TPD
E- Waste Generation	0.7	KG/Day
Sludge Generation	12	KG/Day
Hazardous Waste Generation (DG Waste Oil)	0.58	Lts/day

Following arrangements will be made at the site in accordance to Municipal Solid Wastes (Management and Handling) Rules, 2016 and amended Rules, 2008.

❖ **Collection and Segregation of waste**

1. A door to door collection system will be adopted for collection of domestic waste in colored bins from household units.
2. Biodegradable & non biodegradable waste shall be separately collected to ensure segregation at source.
3. Adequate number of colored bins separate for Bio-degradable and Non Bio-degradable will be placed at planned location.
4. Litter bin will also be provided in open areas like parks etc.

Treatment of Bio-Degradable wastes
Biodegradable /Organic and Horticultural Waste would be treated in vermi composting installed at site. Generated compost would be used as manure for horticulture development.

Non Biodegradable waste
Recyclables, such as plastic, rubber, wood pieces, glass etc will be segregated from non biodegradable waste & sold to authorize vendors for recycling & remaining inert

NOTARY GOVT OF INDIA

M/S. SANDHU BUILDERS MUMBAI

waste shall be sent to land fill site through authorized vendor as per the guidelines of Municipal Solid Wastes (Management and Handling) Rules, 2008 and amended Rules, 2016.

STP sludge will also be used for horticultural purposes as manure.

9.0 POWER REQUIREMENT DETAILS

The power supply shall be supplied by **Reliance Energy** the estimated electrical demand load & proposed power back to be used during power failure shall be as per details given in Table:6 below.

Table: 6 Power & DG detail

POWER		
ELECTRICAL - DEMAND LOAD	**1104**	KW
POWER BACK UP - DG SETS	**380**	KVA
NO OF DG SETS	**(1X380)**	

9.1 BACKUP POWER DETAILS

There is provision of 1 no (1X380)of DG set for power back up in the Project. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.

10.0 STORM WATER DRAINAGE & RAIN WATER HARVESTING SYSTEM

A network of covered/underground storm water drain is developed to collect rain water runoff from roof top. Strom water would be channelized to rain water harvesting structure designed to charge the rain water to ground water aquifer.

Total of 02 Rain Water Harvesting pits are planed rain water recharge within the project premises and Rain water collection tank of 34 KL capacity is proposed in basement for reuse of collected water.

11.0 LANDSCAPE & SHELTERBELT DEVELOPMENT

Total reserved green area measures **3222.52 m²** of the total plot area. Which include 2340.93 Sqm +881.59 Sqm peripheral tree plantation, road side plantation & remaining area would be used for plantation of shrubs, lawn, and ground cover. There are several trees which will be planted along the sides of the Project boundary. For tree plantation preference will be given to local tree with large leafs & dense foliage for shading & reduction of air & noise pollution. The plant species would be selected from the list given below:

M/S. SANDHU BUILDERS MUMBAI

THE LIST OF PLANT SPECIES LIKELY TO BE PLANTED

SN	Botanical Name	Common Name	Nos. Trees Planted
1	*Areca Catechu*	Supari	86
2	*Alstonia Scholaris*	Devil Tree	1
3	*Polyalthia Longifolia*	False Ashoka	10
4	*Terminalia Catappa*	Badam	8
5	*Bauhinia Acuminata*	Bauhinia	5
6	*Callistemon Viminalls*	Bottle Brush	27
7	*Hyophorbe Legenicaulis*	Bottle Palm	25
8	*Araucaria Columnaris*	Christmas Tree	2
9	*Caryota Urens*	Fishtail Palm	57
10	*Howea Forsteriana*	Kentia Palm	2
11	*Plumeria Alba*	White Frangipani	13
12	*Magnolia Champaca*	Sonchapa	4

12.0 PARKING FACILITIES

For smooth circulation & reduction of pollution separate entry & exits with gates of adequate sizes are planned for the vehicles & also for the movement of fire engine. Provision for car/vehicle parking is planned in the basements. Apart from peripheral roads for vehicular movement internal roads/pavements are planned for traffic free movement of pedestrians. Details of parking provision are given in table:8

Table-8: Parking Details

Type	Parking Required as per DCR of MCGM	Parking Provision
4 Wheeler	**108**	**226**
2 Wheeler	**Nil**	**43**

13.0 Risk and Hazards

13.1 Seismicity

Based on the tectonic features and records of earthquake, a Seismic Zoning map has been developed for the country by Bureau of Indian Standard (BIS). The area under study falls in Seismic Zone-III. Suitable seismic coefficients in horizontal and vertical directions respectively has been adopted while designing the structures.

NOTARY S.M.H. ZAIDI Mumbai & Thane Dist. Reg. No. 35-2. My Commission Expires 25 Sept. 2023 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

Earthquake resistant construction techniques also been used.

13.2 Fire Safety

- Fire Fighting Designed: As per National Building Code 2005
- Provision fire detection, alarm & rescue system.
- Provision of infrastructure required for suppression of fire as per norms.
- Provision of fire escape staircase
- Provision of Fire Extinguishers, Fire Hose Cabinet, Internal & External hydrant, Fire sprinkler system in basements & residential towers are planned as per applicable codes & norms of local fire department.

14.0 ENVIRONMENTAL POLLUTION MITIGATION MEASURES

14.1 Air Pollution

Increased traffic generation due to project (no. of parking space proposed for the project is 269 is not going to cause significant increase in atmospheric concentration of gases and will not result in heat island formation as adequate landscaping has been provided.

Mitigation Measures for Air Pollution during Operational Stage
Operation of DG Sets is the only source of air pollution during operational phase. Also, it is proposed to minimize air pollution by providing plantation as buffer on the periphery of the project site and on the open spaces. An area of 3222.52 m^2 of the total area has been kept for green development & plantation purposes.

14.2 Water Pollution

The source of water pollution during construction and operation phase is due to waste water generated from toilets and washing.

14.3 Noise Environment

It is envisaged that within the Group Housing complex there shall be maximum movement of light motor vehicles like cars and 2-wheelers which will lead to some increase in noise levels. It is proposed to minimize the noise levels by providing plantation as buffer on the sides of internal roads, on the open spaces inside and around the periphery of whole complex. Proper maintenance of the internal roads will also be carried out and Informatory signboards shall be provided to encourage vehicle owners to maintain their vehicle, not to blow horns and follow the emission standards fixed by Government Authorities. DG sets will be kept in the acoustic chamber and ambient noise will be within the CPCB standard limits.

Mitigation Measures for Noise Pollution during Operation Stage
It is envisaged that there shall be maximum movement of light motor vehicles like cars and 2-wheelers which will lead to some increase in noise levels. It is proposed to minimize the noise levels by providing plantation as buffer on the open spaces and around the periphery of whole complex. Informatory signboards shall be provided to encourage vehicle owners to maintain their vehicle, not to blow horns and follow the

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3549 My Commission Expires 26 Sept. 2023 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

emission standards fixed by Government Authorities. DG sets will be kept in the acoustic chamber and ambient noise will be within the CPCB standard limits.

15.0 CONSTRUCTION MATERIALS

The following construction materials are required for residential construction;

1. Coarse sand	11. P.V.C. conduit
2. Fine sand	12. MCBs/DBs
3. Stone aggregate	13. Overhead water tanks
4. Cement	14. Pavors
5. Fly Ash	15. Conc, CI, GI, CPVC, UPVC pipes
6. Reinforcement steel	16. Sanitary fittings & fixtures
7. Plywood & steel shuttering	17. Stainless steel sink
8. Pipe scaffolding (cup lock system)	18. Glass
9. Light weight siporese Blocks	19. Joinery hardware
10. Marble/vitrified/ceramic floor & wall tiles	20. Aluminium Frames
	21. Electrical equipments, fittings & fixtures.

16.0 LIST OF MACHINERY USED DURING CONSTRUCTION

(i) Dumper
(ii) Concrete mixer with hopper
(iii) Excavator
(iv)Concrete Batching Plant
(v) Cranes
(vi) Road roller
(vii Bulldozer
(viii) Tower Cranes
(ix) Hoist
(x) Labor Lifts
(xi) Concrete pressure pumps
(xii) Mobile transit mixer

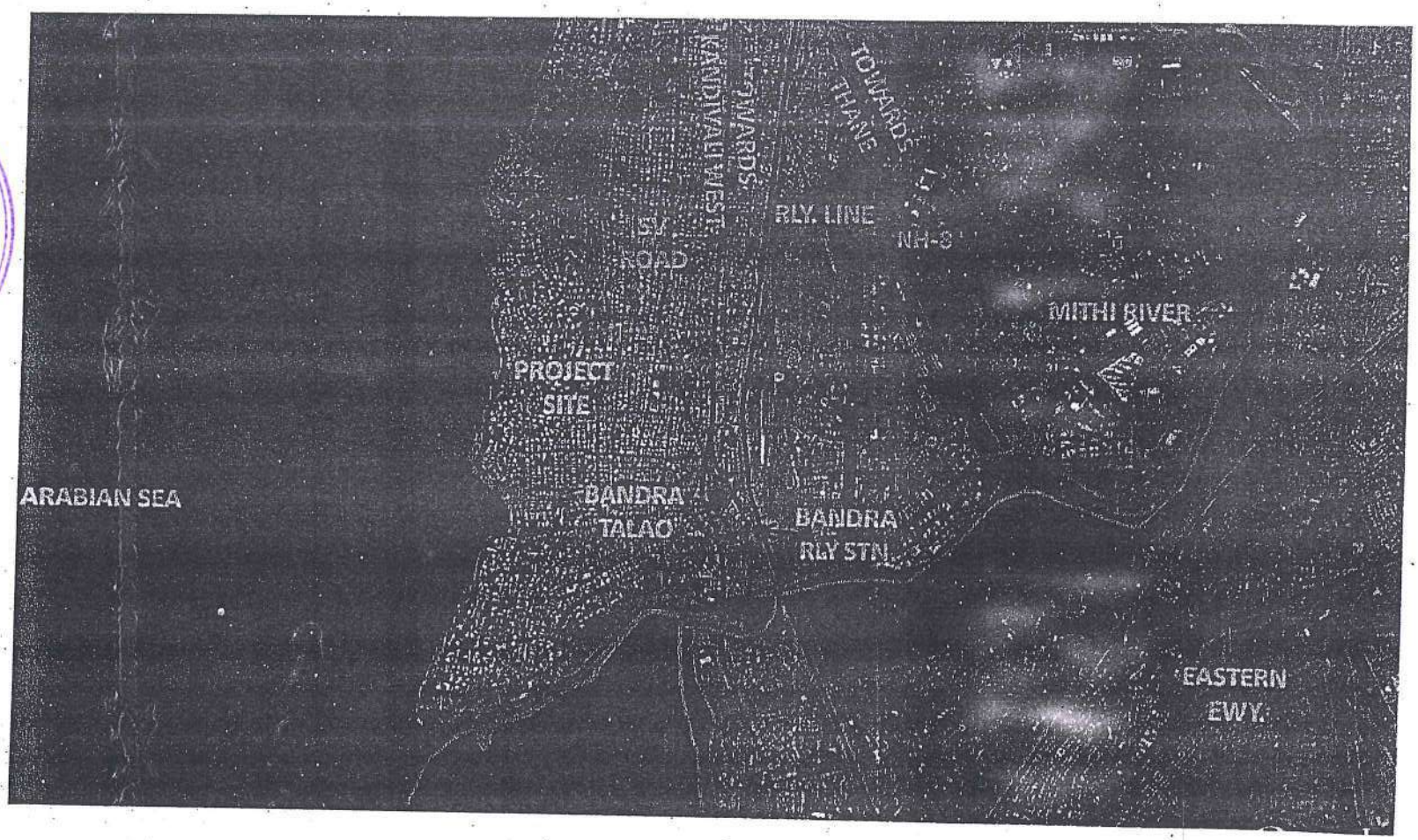
17.0 PROJECTCOST

The total construction cost of the Group Housing project is approximately Rs. **206.26 Crore.**

NOTARY GOVT OF INDIA

M/S. SANDHU BUILDERS MUMBAI

SITE LOCATION MAP ON GOOGLE EARTH



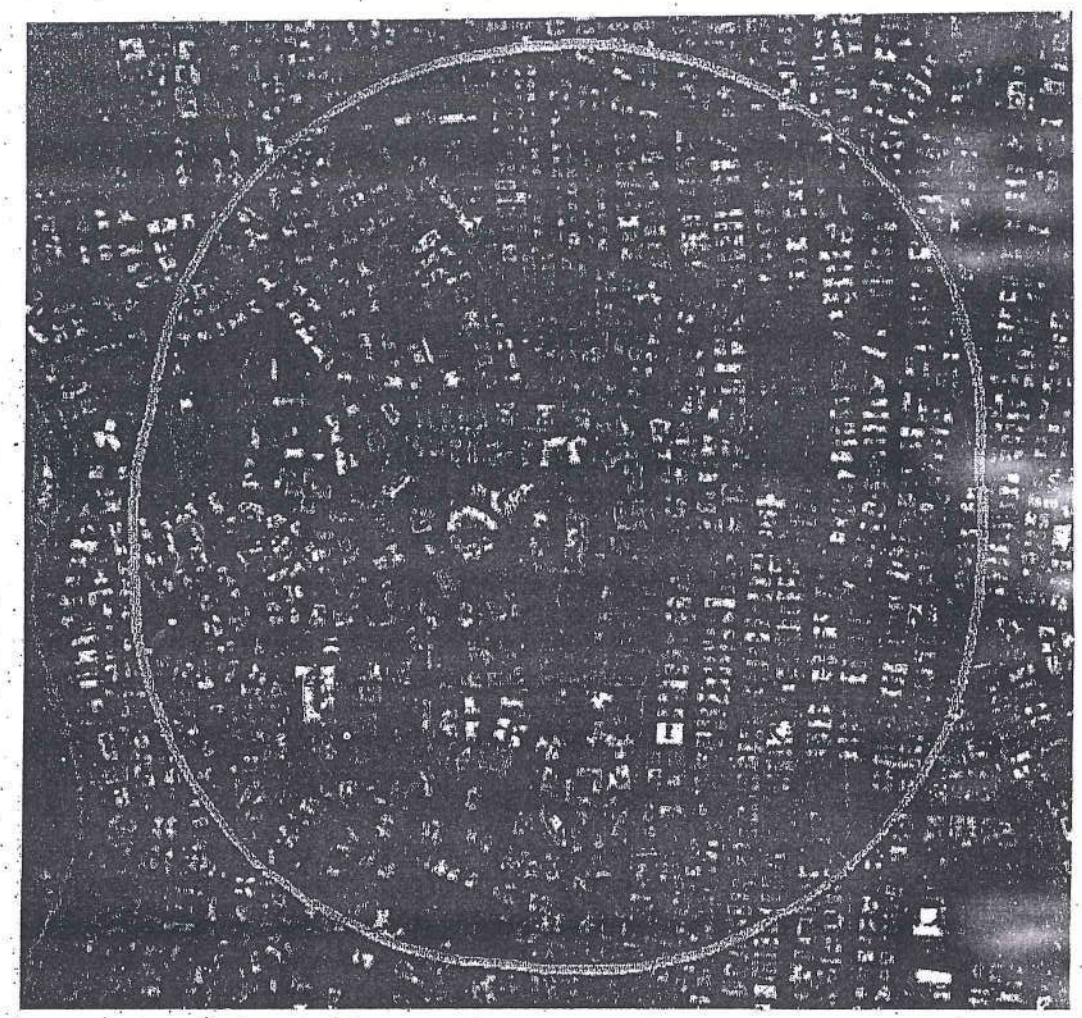
GOVT. OF INDIA NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3910
My Commission Expires
25 Sept. 2026

M/s. SANDHU BUILDERS
MUMBAI

1130

500 METER RADIOUS MAP ON GOOGLE EARTH

N

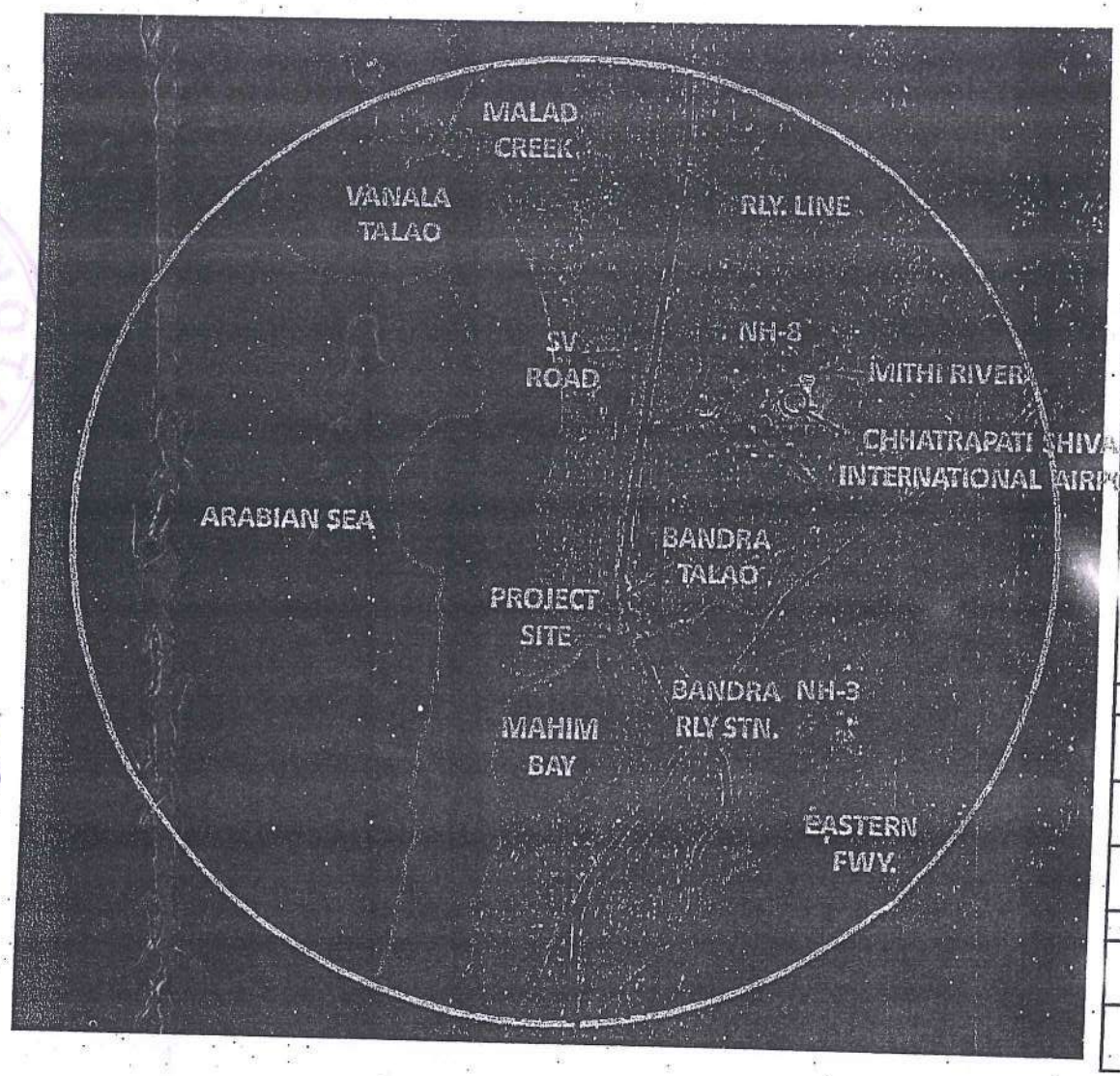


NOTARY GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

1121

10 KM RADIUS MAP ON GOOGLE EARTH



N

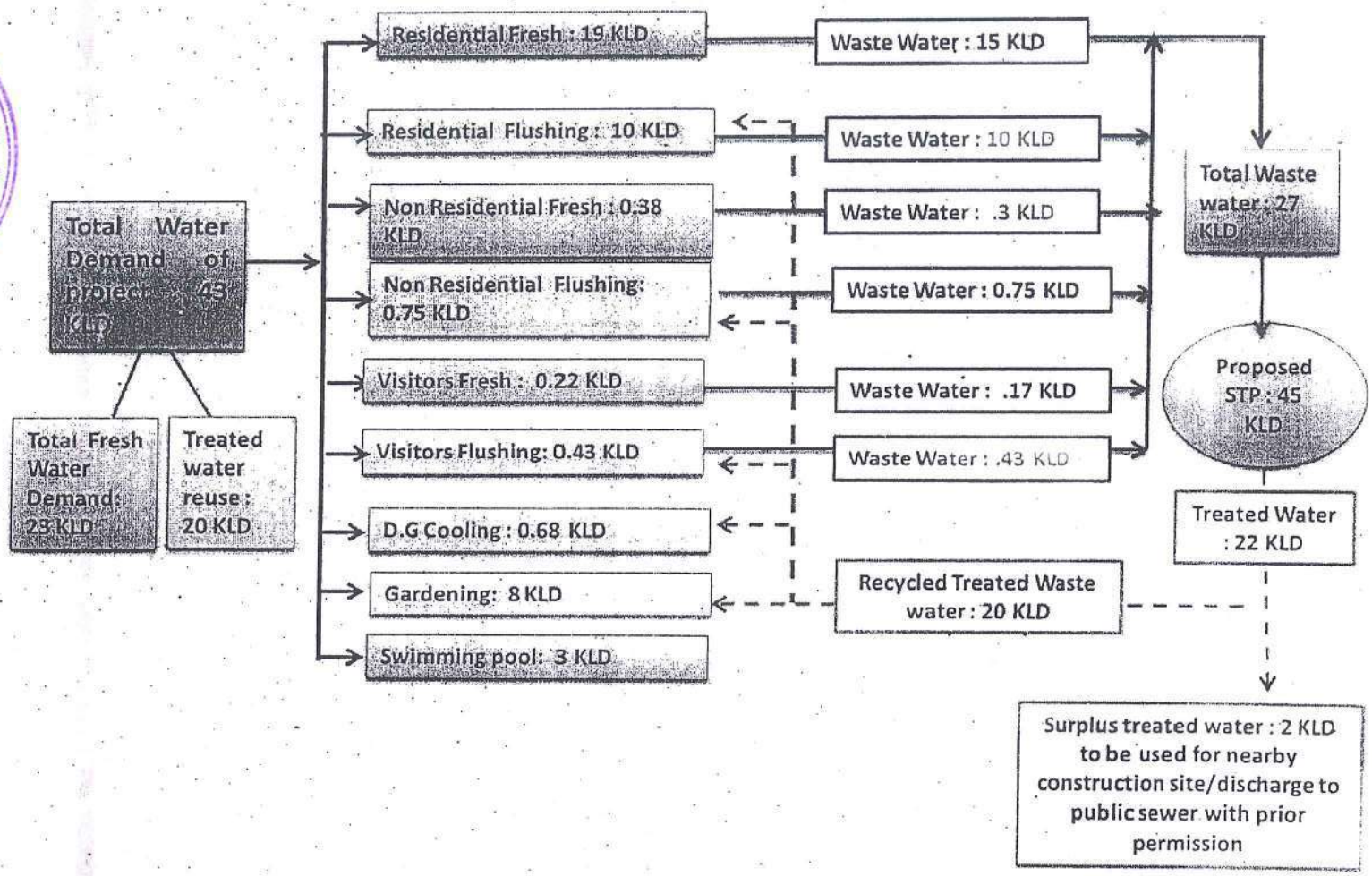
S.NO.	FEATURES	LEGENDS
1	Project Site	
2	Roads	
3	River Body	
4	Railway line	

S .NO	FEATURES	DISTANCE
1	NH-8	1.83 KM, E
2 .	NH-3	4.60 KM , SE
3	NH 91	8 KM NE
4	EASTERN FWY.	7 KM, SE
5	SV ROAD	0.85 KM, E
6	CHHTRAPATI SHIVAJI INTERNATIONAL AIRPORT	4.67KM, NE
7	MITHI RIVER	2.4 KM , SE
8	BANDRA TALAO	1.48 KM SE
9	VANALA TALAO	9 KM, NW
10	MALAD CREEK	8.83 KM, NW
11	ARABIAN SEA	3.15 KM W
12	MAHIM BAY	2.14 KM S
13	BANDRA RLY. STN.	1.79 KM SE

M/s. SANDHU BUILDERS MUMBAI

1/32

WATER BALANCE DIAGRAM



1132

1134

RAIN WATER HARVESTING CALCULATION

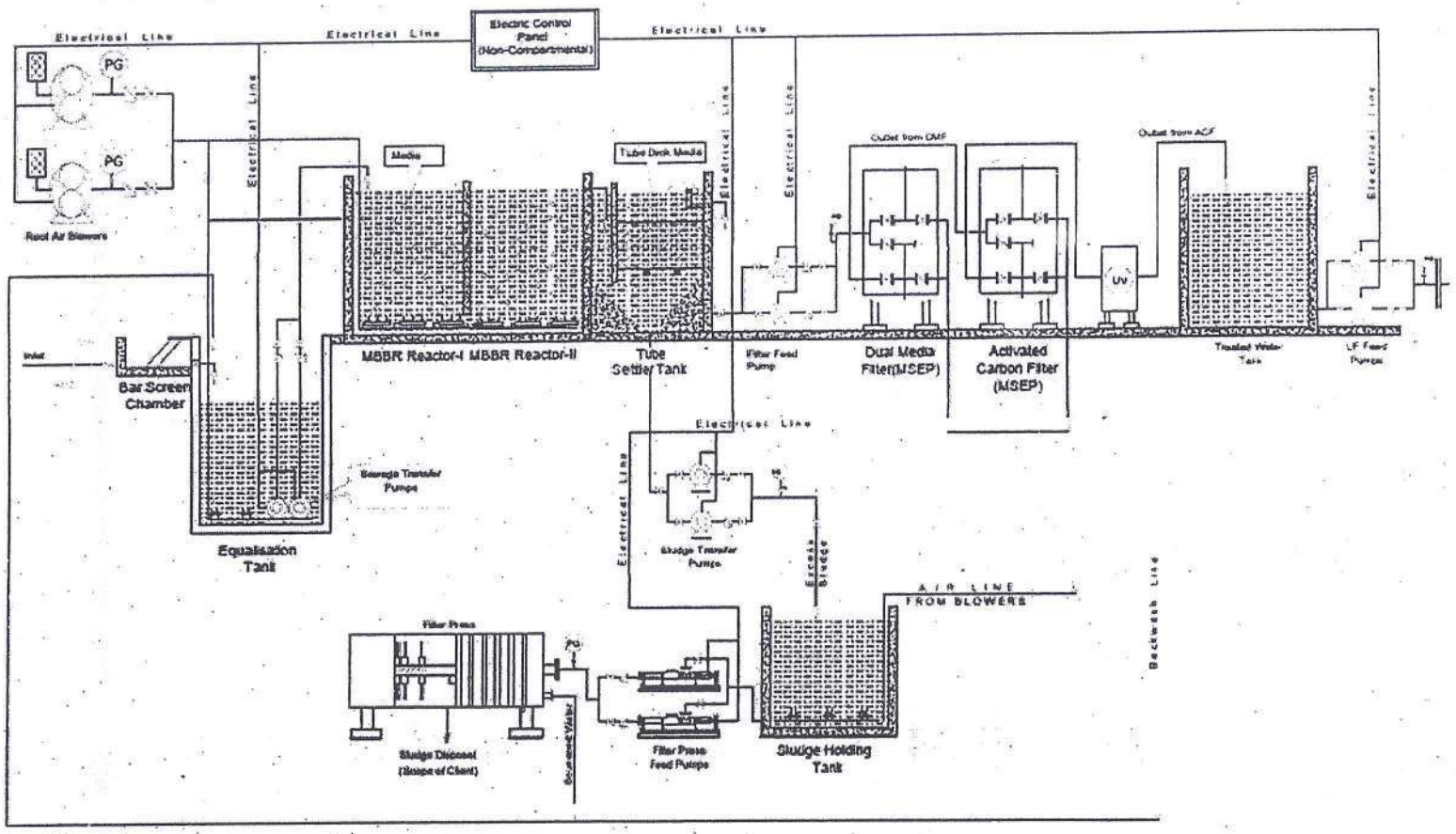
RAIN WATER HARVESTING				
PARTICULARS	**OTHER OPEN AREAS**	**ROAD/PAVEMENT/PARKING AREAS**	**GREEN AREA**	**ROOF TOP AREA**
Area (Sq.m.)	35	2025.84	2340.93	1966.1
Runoff coefficient	0.3	0.75	0.2	0.9
Rainfall (m)	2.1074	2.1074	2.1074	2.1074
Harvesting potential (cu.m.)	22.1277	3201.9414	986.6552	3728.9284
Net water availability and potential for recharge (cu.m.) per year (considering 20% losses)		**6351.7**		

Rain Water Harvesting Pit Design		
Particulars	**Values**	**Unit**
Peak hourly rate taken @ 100 mm/hr for one hour duration	176.94	CUM
Peak hourly rate taken @ 100 mm/hr for 15 min duration Storage Volume.	44.24	CUM
Volume of recharge pit	22.25	CUM
No. of recharge pit required	2.0	NO
Proposed	2	NO

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

STP FLOW DIAGRAM
(MBBR TECHNOLOGY)



1135

1136

V. K. Chari Consultants

CONSULTING ENGINEERS, ARCHITECTS & SURVEYORS
LIFE MEMBER OF "PEATA"
Office : 105, First Floor, Anand Dham, 10th Road, Khar (W), Mumbai - 400 052.
Tel.: (R) : 26365910 (O) : 65826215 Fax : 2605 9028 • Cell: 98200 32110

REF. NO.: _____ DATE: _____

To,
Dy. Chief Fire Officer (R-III),
Mumbai Fire Brigade,
Suburban Head Quarters,
Marol Fire Station,
Agni Shaman Dal Marg,
Marol Naka, Mumbai- 400 059.

Sub:- NOC for part occupation & use of High Rise Building Wing 'A' on plot bearing C.T.S. No. C-1381, 1382-C, 1378A & 1629A-1/10 of Village Bandra, Pali Hill Bandra (W) Mumbai.

Your Ref. No. FB HR/WS/1816 dated 16/03/2013

Sir,

On behalf of and under instruction from my clients M/s Sandhu Builders please Reference to your NOC for part occupation under No. FB/HR/WS/1816 dated 16.03.2013.

Accordingly "As per Maharashtra Fire Prevention and Lift safety Measures Act 2006" we are submitting herewith the Inspection & Maintenance Reports in Form – A certified duly by M/s S.D. MEP Services certifying the maintenance of the Fire fighting system periodically from Jan-2014 to Jan 2016.

Kindly acknowledge the same for updating your records after the part occupation.

Thanking you,

CERTIFIED TRUE COPY
V. K. CHARI
Architect
M C GM LIC. NO. C-59

Yours faithfully,

V. K. Chari
For V.K. Chari Consultants
(Architect)

अग्निशमन अधिकारी यांचे कार्यालय
दिनांक :- 25/2/16
क्रमांक :-
मरोळ, मुंबई-५९.

Encl) certificates in Form-'A'
2) Lift Completion certificates
3) last CFO NOC / Completion
4) System photographs as on site.

☆ Planning ☆ Design ☆ Liason ☆ Co-ordination ☆ Valuation ☆ M. C. G. M. Follow-up

M/S. SANDHU BUILDERS MUMBAI

1137

Annexure - II

BMPB-3536-2005-15,000 Forms. (4 Pages F/B)

This I.O.D./C.C. is issued subject to the provision of Urban Land ceiling and Regulation Act. 1976

EC-48

346
Form ------
88

in replying please quote No. and date of this letter.

Ex. Engineer Bldg. Proposal (W.S.)
H and K — Wards,
Municipal Office, R. K. Patkar Marg,
Bandra (West), Mumbai-400 050.

Intimation of Disapproval under Section 346 of the Mumbai Municipal Corporation Act, as amended up to date.

No. E.B./CE/ 2158/WS/AH BS/A of 200 - 200

24 FEB 2006

MEMORANDUM

Municipal Office,
Mumbai 200

xRre M/S.SANDHU BUILDERS C.A. TO CHETAK CO.OP.HSG.SOC.LTD.

With reference to your Notice, letter No. 330 dated 6/2/2006 200 and delivered on ..... 200 and the plans, Sections Specifications and Description and further particulars and details of your buildings at Prop. residential bldg. on land bearing CTS Nos. 1381/2, 1382/C, 1378/A & 1629 A/1-10 of Vill. Bandra at Bales Hill, Bali Hill Rd., Bandra (West) submitted to me under your letter, dated ..... I have to inform you that I cannot approval of the building or work proposed to be erected or executed, and I therefore hereby formally intimate to your, under Section 346 of the Bombay Municipal Corporation Act as amended upto-date, my disapproval by thereof reasons :-

A. CONDITIONS TO BE COMPLIED WITH BEFORE STARTING THE WORK / BEFORE PLINTH C.C.

1) That the commencement certificate under section 44/69 (1)(a) of the M.R.T.P. Act will not be obtained before starting the proposed work.

2) That the compound wall is not constructed on all sides of the plot clear of the road widening line with foundation below level of bottom of road side drain without obstructing the flow of rain water from the adjoining holding to prove possession of holding as per D.C. Regulation No.38(27) before starting the work.

3) That the low lying plot will not be filled upto a reduced level of atleast 92 T.H.D. or 6" above adjoining road level whichever is higher with murum, earth, boulders etc. and will not be levelled, rolled and consolidated and sloped towards road side, before starting the work.

4) That the specifications for layout / D.P. / or access roads / development of setback land will not be obtained from E.E.R.C.(W.S.) before starting the construction work and the access and setback land will not be developed accordingly including providing street lights and S.W.D. from E.E.R.C.(W.S.)/ E.E.S.W.D. of W.S. before submitting B.C.C.

5) That the Structural Engineer will not be appointed. Supervision memo as per appendix XI (regulation 5(1)(ix) will not be submitted by him.

M/S. SANDHU BUILDERS MUMBAI

1138

( ) That proper gutters and down pipes are not intended to be put to prevent water dropping from the leaves of the roof on the public street.

( ) That the drainage work generally is not intended to be executed in accordance with the Municipal requirements.

Subject to your so modifying your intention as to obviate the before mentioned objections and meet by requirements, but not otherwise you will be at liberty to proceed with the said building or work at anytime before the 23rd day of Dec 2007 but not so as to contravance any of the provision of the said Act, as amended as aforesaid or any rule, regulations or bye-law made under that Act at the time In force.

Your attention is drawn to the Special Instructions and Note accompanying this Intimation of Disapproval.

For Executive Engineer, Building Proposals,
Zone, H/K/E Wards.

SPECIAL INSTRUCTIONS

(1) THIS INTIMATION GIVES NO RIGHT TO BUILD UPON GROUND WHICH IS NOT YOUR PROPERTY.

(2) Under Section 68 of the Bombay Municipal Corporation Act, as amended, the Municipal Commissioneer for Greater Mumbai has empowred the City Engineer to exercise, perform and discharge the powers, duties and functions conferred and imposed upon and vested in the Commissioner by Section 346 of the said Act.

(3) Under Byelaw, No. 8 of the Commissioner has fixed the following levels :--

"Every person who shall erect as new domestic building shall cause the same to be built so that every part of the plinth shall be--

"(*a*) Not less than, 2 feet (60 cms.) above the centre of the adjoining street at the nearest point at which the drain from such building can be connected with the sewer than existing or thereafter to be laid in such street"

"(*b*) Not less than 2 feet (60 cms.) above every portion of the ground within 5 feet (160 cms.) of such building.

"(*c*).Not less than 92 ft. ( ) meters above Town Hall Datum."

(4) Your attention is invited to the provision of Section 152 of the Act whereby the person liable to pay property taxes is required to give notice of erection of a new building or occupation of building which has been vacant, to the Commissioner, within fifteen days of the completion or of the occupation whichever first occurs. Thus compliance with this provision is punishable under Section 471 of the Act irrespective of the fact that the valuation of the premises will be liable to be revised under Section 167 of the Act, from the earliest possible date in the current year in which the completion on occupation is detected by the Assessor and Collector's Department.

(5) Your attention if further drawn to the provision of Section 353-A about the necessary of submitting occupation certificate with a view to enable the Municipal Commissioner for Greater Mumbai to inspect your premises and to grant a permission before occupation and to leavy penalty for non-compliance under Section 471 if necessary.

(6) Proposed date of commencement of work should be communicated as per requirements of Section 347 (1) (*aa*) of the Bombay Municipal Corporation Act.

(7) One more copy of the block plan should be submitted for the Collector, Mumbai Suburbs District.

(8) Necessary permission for Non-agricultural use of the land shall be obtained from the Collector Mumbai Suburban District before the work is started. The Non-agricaltural assessment shall be paid at the site that may be fixed by the Collector, under the Land Revenue Code and Rules thereunder.

Attention is drawn to the notes Accompanying this Intimation of Disapproval.

NOTARY ★ S.M.H.ZAIDI Mumbai & Thane Dist Reg. No. 2640 My Commission Expires 25 Sept. 2028 ★ GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1139

Ex. Engineer [illegible] (W.S.)
H and [illegible] Wards,
Municipal Office, B. K. Patkar Marg,
Bandra (West), Mumbai-400 050

NO.CE/2157/WS/AH 24 FEB 2006

6) That the structural design and calculations for the proposed work and for existing building showing adequacy thereof to take up the additional load will not be submitted before C.C.

7) That the regular / sanctioned / proposed lines and reservations, C.R.Z. marking will not be got demarcated at site through A.E.[Survey] / E.E. [T&C] / E.E.[D.P.] / D.I.L.R. before applying for C.C.

8) That the sanitary arrangement shall not be carried out as per Municipal specifications and drainage layout will not be submitted before C.C.

9) That the registered undertaking and additional copy of plan shall not be submitted for agreeing to hand over the setback land free of compensation and that the setback handing over certificate will not be obtained from Asst. Commissioner [ ] that the ownership of the setback land will not be transferred in the name of M.C.G.M. before demolition of existing building.

10) That the consent letter from the existing tenants for the proposed additions/alterations in their tenement will not be submitted before C.C.

11) That the Indemnity Bond indemnifying the Corporation for damages, risks, accidents etc. and to the occupiers and an undertaking regarding no nuisance will not be submitted before C.C./starting the work.

12) That the existing structure proposed to be demolished will not be demolished or necessary Phase Programme with agreement will not be submitted and got approved before C.C.

13) That the requirements of N.O.C. of (i) Reliance Energy, [ii] S.G. [iii] P.C.O., [iv] A.A. & C. H/West, [v] S.P. [vi] S.W.D., [vii]M.T.N.L., [viii] H.E. will not be obtained and the requisitions if any will not be complied with before occupation certificate / B.C.C.

14) That the qualified/registered site supervisor through architect/structural Engineer will not be appointed before applying for C.C.

15) That the extra water and sewerage charges will not be paid to A.E.W.W.H/West Ward before C.C.

16) That the true copy of the sanctioned layout/sub-division/amalgamation approved under the terms and conditions thereof will not be submitted before C.C. and compliance thereof will not be done before submission of B.C.C.

17) That the development charges as per M.R.T.P. (amendment) Act 1992 will not be paid.

18) That the registered undertaking in prescribed proforma agreeing to demolish the excess area if constructed beyond permissible FSI shall not be submitted before asking for C.C.

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3540
My Commission Expires
25 Sept. 2026
GOVT OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

NO.CE/2157/WS/AH 24 FEB 2006

Ex. En... Municipal Office, ... Bandra (West), Mumbai-400 050.

19)That the N.O.C. from Society alongwith certified extract of General Body Resolution for development/additions and alterations will not be submitted before C.C.

20)That the N.O.C. from C.F.O will not be submitted before asking for C.C.

21)That the requisite premium as intimated will not be paid before applying for C.C.

22)That the registered undertaking shall not be submitted for payment of difference in premium paid and calculated as per revised land rates.

23)That the C.C. shall not be asked unless payment of advance for providing treatment at construction site to prevent epidemics like Dengue, Malaria, etc. is made to the Insecticide Officer of the concerned Ward Office and provision shall be made as and when required by the Insecticide Officer for inspection of water tanks by providing safe but stable ladder, etc. and requirements as communicated by the Insecticide Office shall not be complied with.

24)That the Phase programme will not be got approved before asking for C.C.

25)That the Janata Insurance Policy or policy to cover the compensation claims arising out of workman's compensation Act 1923 will not be taken out before starting the work and also will not be renewed during the construction work.

26)That the N.O.C. from Superintendent of Garden for tree authority shall not be submitted.

27)That the soil investigation will not be done and report thereof will not be submitted with structural design.

28)That the building will not be designed with the requirements of all relevant IS codes including IS code 1893 for earthquake design while granting occupation certificate from Structural Engineer to that effect will be insisted.

29)That no main beam in R.C.C. framed structure shall not be less than 230 mm. wide. The size of the columns shall also not be governed as per the applicable I.S. Codes.

30)That all the cantilevers [projections] shall not be designed for five times the load as per I.S. code 1993-2002. This also includes the columns projecting beyond the terrace and carrying the overhead water storage tank, etc.

31)That the R.C.C. framed structures, the external walls shall be less than 230 mm. if in brick masonary or 150 mm autoclaved cellular concrete block excluding plaster thickness as circulated under No.CE/5591 of 15.4.1974.

32)That the Vermiculture bins for disposal of wet waste as per the design and specification of Organisations/individuals specialized in this field, as per the list furnished by Solid Waste Management Department of M.C.G.M. shall not be provided to the satisfaction of Municipal Commissioner.

NOTARY GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

33) That the phasewise programme for removal of the debris shall not be submitted and got approved.

34) That the registered undertaking for not misusing the part / pocket terraces / A.H.Us. and area claimed free of F.S.I. will not be submitted.

35) That the registered undertaking for water proofing of terrace and Nani traps shall not be submitted.

36) That the N.O.C. from E.E.[M&E] for parking layout in the basement / podium shall not be submitted.

37) That setback area shall not be handed over to M.C.G.M.

38) That the Indemnity Bond for compliance of I.O.D. conditions shall not be submitted.

39) That the owner/developer shall not display a board at site before starting the work giving the details such as name and address of the owner/developer, architect and structural engineer, approval no. and date of the layout and building proposal, date of issue of C.C., area of the plot, permissible built up area, built up area approved, number of floors etc.

40) That the design for Rain Water Harvesting System from Consultant shall not be submitted.

41) That the N.O.C. from E.E. Mech. (E.I.) P&D for the provision of artificial light, ventilation for inner chowk shall not be submitted.

42) That the sheet piling along with diaphragm wall shall not be constructed taking all the precautionary measures under the strict supervision of registered Structural Engineer before actual work of basement is taken in hand.

43) That the no action cft. For existing bldg. for Asstt. Munl. Commissioner H/West Ward shall not be submitted.

44) That the handing over of setback before C.C. shall not be submitted.

45) That the internal walls if any shall not be demolished.

B. CONDITIONS TO BE COMPLIED BEFORE FURTHER C.C.

1. That the notice in the form of appendix XVI. of D.C.R. shall not be submitted on completion of plinth.

2. That N.O.C. from Civil Aviation department will not be obtained for the proposed height of the building.

3. That the debris shall not be transported to the respective Municipal dumping site and challan to that effect shall not be submitted to this office for record.

4. That the N.O.C. from A.A. & C. [H/West] shall not be submitted.

M/S. SANDHU BUILDERS MUMBAI

1142

NO.CE/2137/WS/AH 24 FEB 2006

Ex. Engineer (W. S.)
H and K Wards.
Municipal Office, R. K. Patkar Marg
Bandra (West), Mumbai-400 050

5. That the plinth stability certificate from R.C.C. consultant shall not be submitted.

6. That the work-start notice shall not be submitted.

C. GENERAL CONDITIONS TO BE COMPLIED WITH BEFORE O.C. :-

1) That the dust bin will not be provided as per C.E.'s circular No. CE/9297/II dated 26.6.1978.

2) That the surface drainage arrangement will not be made in consultation with E.E.(S.W.D.) or as per his remarks and a completion certificate will not be obtained and submitted before applying for occupation certificate/B.C.C.

3) That the 10' wide paved pathway upto staircase will not be provided.

4) That the surrounding open spaces, parking spaces and terrace will not be kept open and unbuilt upon; and will not be levelled and developed before requesting to grant permission to occupy the bldg. or submitting the B.C.C. whichever is earlier.

5) That the name plate/board showing plot no., name of the bldg. etc. shall not be displayed at a prominent place before O.C.C./B.C.C.

6) That the carriage entrance will not be provided before starting the work.

7) That the parking spaces will not be provided as per D.C.R. No.36.

8) That B.C.C. will not be obtained and IOD and debris deposit etc. will not be claimed for refund within a period of six years from the date of occupation.

9) That every part of the building constructed and more particularly overhead water tank will not be provided with the proper access for the staff of Insecticide Officer with a provision of temporary but safe and stable ladder.

10) That the owner/developer will not hand over the possession to the prospective buyer before obtaining occupation permission.

11) That the letter box of appropriate size shall not be provided for all the tenements at the ground floor.

12) That the infrastructural works such as construction of hand-holes/manholes, ducts for underground cables, concealed wiring inside the flats/rooms, room/space for telecom installations etc. required for providing telecom services shall not be provided.

13) That the regulation No.45 and 46 of D.C. Reg. 1991 shall not be complied with.

14) That the necessary arrangement of borewell shall not be made/provided and necessary certificate to that effect from the competent authority shall not be obtained before C.C.

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission Expires
25 Sept. 2028
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

NO.CE/2157/WS/AH 24 FEB 2006

Ex. Engineer B... H and ... Municipal Office... Bandra (West) ...-400 050

15)That the provisions of Rain Water Harvesting as per the design prepared by approved consultants in the field shall not be made to the satisfaction of Municipal Commissioner while developing plots having area more than 1000 Sq.Mts.

16)That the requisition from fire safety point of view as per D.C.R.91 shall not be complied with and completion from C.F.O. shall not be submitted.

17)That the Vermiculture bins for disposal of wet waste as per the design and specification of Organisations/individuals specialized in this field, as per the list furnished by Solid Waste Management Department of M.C.G.M. shall not be provided to the satisfaction of Municipal Commissioner.

18) That the Drainage Completion Certificate shall not be submitted.

19)That the Lift Inspector's completion certificate shall not be submitted.

20)That the structural stability certificate shall not be submitted.

21)That the Site Supervisor's completion certificate shall not be submitted.

22)That the smoke test certificate shall not be submitted.

23)That the water proofing certificate shall not be submitted.

24)That the setback area shall not be transferred in the name of M.C.G.M.]

25)That the P.R.Card for amalgamated plots in the name of applicant shall not be submitted.

26)That the N.A. order shall not be submitted.

27)That the final completion certificate from C.F.O. shall not be submitted.

28)That the N.O.C. from A.A. & C. [H/West] shall not be submitted.

29)That the completion certificate for Rain Water Harvesting System from Consultant shall not be submitted.

37)That the completion certificate from E.E. Mech. (E.I.) P&D for the provision of Artificial light, ventilation inner chowk shall not be submitted.

D) CONDITIONS TO BE COMPLIED WITH BEFORE B.C.C. :-

1. That the certificate under Sec.270-A of the B.M.C. Act will not be obtained from H.E.'s department regarding adequacy of water supply.

24/2/06

For E. E. B. P. (W.S.) H & K Ward

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1144

No. EB/CE/2157/WSAH /BS /A/

NOTES 24 FEB 2006

(1) The work should not be started unless objections A are complied with (1044)

(2) A certified set of latest approved plans shall be displyed on site at the time of commencement the work and during the progress of the construction work.

(3) Temporary permission on payment of deposite should be obtained any shed to house and store for constructional purposes, Residence of workmen shall not be allowed on site. The temporary structures for storing constructional material shall be demolished before submission of building completion certificate and a certificate signed by Architect submitted along with the building completion certificate.

(4) Temporary sanitary accommodation on full flusing system with necessary drainage arrangement should be provided on site workers, before starting the work.

(5) Water connection for constructional purpose will not be given until the hoarding is constructed and application made to the Ward Officer with the required deposite for the construction of carriage entrance, over the road side drain.

(6) The owners shall intimate the Hydraulic Engineer or his representative in Wards atleast 15 days prior to the date of which the proposed construction work is taken in hand that the water existing in the compound will be utilised for their construction works and they will not use any Municipal Water for construction purposes. Failing this, it will be presume that Municipal tap water has been consumed on the construction works and bills preferred against them accordingly.

(7) The hoarding or screen wall for supporting the depots of building materials shall be constructed before starting any work even though no materials may be expected to be stabled in front of the property. The scaffoldings, bricks metal, sand preps debrics, etc. should not be deposited over footpaths or public street by the owner/ architect/their contractors, etc. without obtaining prior permission from the Ward Officer of the area.

(8) The work should not be started unless the manner in obviating all the objection is approved by this department.

(9) No work should be started unless the structural design is approved.

(10) The work above plinth should not be started before the same is shown to this office Sub-Engineer concerned and acknowledgement obtained from him regarding correctness of the open spaces & dimension.

(11) The application for sewer street connections, if necessary, should be made simultaneously with commencement of the work as the Municipal Corporation will require time to consider alternative site to avoid the excavation of the road an footpath.

(12) All the terms and conditions of the approved layout/sub-division under No. of should be adhered to and complied with.

(13) No Building/Drainage Completion Certificate will be accepted non water connection granted (except for the construction purposes) unless road is constructed to the satisfaction of the Municipal Commissioner as per the provision of Section 345 of the Bombay Municipal Corporation Act and as per the terms and conditions for sanction to the layout.

(14) Recreation ground or amenity open space should be developed before submission of Building Completion Certificate.

(15) The acces road to the full width shall be constructed in water bound macadam before commencing work and should be complete to the satisfaction of Municipal Commissioner including asphalting lighting and drainage before submition of the Building Completion Certificate.

(16) Flow of water through adjoining holding or culvert, if any should be maintained unobstructed.

(17) The surrounding open spaces around the building should be consolidated in Concrete having broke glass pieces at the rate of 125 cubic meters per 10 sq. meters below payment.

(18) The compound wall or fencing should be constructed clear of the road widening line with foundation below level of bottom of road side drain without obstructing flow of rain water from abjoining holding before starting the work to prove the owner's holding.

(19) No work should be started unless the existing structures proposed to be demolished are demolished.

NOTARY GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1145

(20) This Intimation of Disapproval is given exclusively for the purpose of enabling you to proceed further with the arrangements of obtaining No Objection Certificate from the Housing commissioner under Section 13 (*h*) (H) of the Rent Act and in the event of your proceeding with the work either without an inimation about commencing the work under Section 347 (1) (*aa*) or your starting the work without removing the structures proposed to be removed the act shall be taken as a severe breach of the conditions under which this Intimation of Disapproval is issued and the sanctioned will be revoked and the commencement certificate granted under Section 45 of the Maharashtra Regional and Town Planning Act, 1966, (12 of the Town Planning Act), will be with drawn.

(21) If it is proposed to demolish the existing structures by negotiations with the tenants, under the circumstances, the work as per approved plans should not be taken up in hand unless the City Engineer is satisfied with the following :-

(*i*) Specific plans in respect of eviciting or rehousing the existing tenants on hour stating their number and the area in occupation of each.

(*ii*) Specifically signed agreement between you and the existing tenants that they are willing to avail or the alternative accommodation in the proposed structure at standard rent.

(*iii*) Plans showing the phased programme of construction has to be duly approved by this office before starting the work so as not to contravene at any stage of construction, the Development control Rules regarding open spaces, light and ventilation of existing structure.

(22) In case of extension to existing building, blocking of existing windows of rooms deriving light and its from other sides should be done first before starting the work.

(23) In case of additional floor no work should be start or during monsoon which will same arise water leakage and consequent nuisance to the tenants staying on the floor below.

(24) the bottom of the over hand storage work above the finished level of the terrace shall not be more than 1 metre.

(25) The work should not be started above first floor level unless the No Objection Certificate from the Civil Aviation Authorities, where necessary is obtained.

(26) It is to be understood that the foundations must be excavated down to hard soil.

(27) The positions of the nahanis and other appurtenances in the building should be so arranged as not to necessitate the laying of drains inside the building.

(28) The water arrangement must be carried out in strict accordance with the Municipal requirements.

(29) No new well, tank, pond, cistern or fountain shall be dug or constructed without the previous permission in writing of the Municipal Commissioner for Greater Mumbai, as required in Section 381-A of the Municipal Corporation Act.

(30) All gully traps and open channel drains shall be provided with right fiting mosquito proof covers made of wrought iron plates or hinges. The manholes of all jisterns shall be covered with a properly fitting mosquito proof hinged cast iron cap over in one piece, with locking arrangement provided with a bolt and huge screwed on hightly serving the purpose of a lock and the warning pripes of the ribbet pretessed with screw or dome shape pieces (like a garden mari rose) with copper pipes with perfiections each not exceeding 1.5 mm. in diameter. the cistern shall be made easily, safely and permanently a ceasible by providing a firmly fixed iron ladder, the upper ends of the ladder should be earmarked and extended 40 cms. above the top where they are to be fixed an its lower ends in cement concrete blocks.

(31) No broken bottles should be fixed over boundary walls. This prohibition refers only to broken bottles to not to the use of plane glass for coping over compound wall.

(32) (a) Louvres should be provided as required by Bye-law No. 5 (b).

(b) Lintels or Arches should be provided over Door and Window opening.

(c) The drains should be laid as require under Section 234-1 (a).

(d) The inspection chamber should be plastered inside and outside.

(33) If the proposed aditional is intended to be carried out on old foundations and structures, you will do so at your own risk.

COPY TO-~~ARCHITECT~~ OWNER

24/12/06

for *Executive Engineer, Building Proposals*
Zones H K K E *Wards.*

NOTARY GOVT. OF INDIA S.M.H. ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2023

M/S. SANDHU BUILDERS MUMBAI

1146

This I.O.A./C.C. is issued subject to the provision of Urban Land (Ceiling and Regulation) Act, 197[illegible]

BMPP-1649-2002-10,000 Forms. C-3

MUNICIPAL CORPORATION OF GREATER MUMBAI

FORM 'A'

MAHARASHTRA REGIONAL AND TOWN PLANNING ACT, 1966

No. CE/257/~~BSH~~/WS/AH/~~AK~~ of

COMMENCEMENT CERTIFICATE [Ex. Engineer Bldg. Proposal (W.S.)]

H and K – Wards
Municipal Office, R. K. Ratkar Marg,
Bandra (West), Mumbai-400 050.

To,
Sandhu Builders &
Chetak C.H.S. Ltd

22 JUN 2006

Sir,

With reference to your application No. 337 dated 6.2.2006 for Development Permission and grant of Commencement Certificate under Section 44 & 69 of the Maharashtra Regional and Town Planning Act 1966, to carry out development and building permission under Section 346 of the Mumbai Municipal Corporation Act 1888 to erect a building.

To the development work of proposed resi. bldg. CTS No. 1381, 1382/C, 1328/A at premises at Street Pali Hill village plot No. situated at Bandra (W) Ward H(W)

The Commencement Certificate/Building Permit is granted on the following conditions :–

1. The land vacated in consequence of the endorsement of the setback line/road widening line shall form part of the public street.
2. That no new building or part there of shall be occupied or allowed to be occupied or used or permitted to be used by any person until occupancy permission has been granted.
3. The Commencement Certificate/Development permission shall remain valid for one year commencing from the date of its issue.
4. This permission does not entitle you to develop land which does not vest in you.
5. This Commencement Certificate is renewable every year but such extended period shall be in no case exceed three years provided further that such lapse shall not bar any subseequent application for fresh permission under section 44 of the Maharashtra Regional & Town Planning Act, 1966.
6. This Certificate is liable to be revoked by the Municipal Commissioner for Greater Mumbai if :–
   (a) The Development work in respect of which permission is granted under this certificate is not carried out or the use thereof is not in accordance with the sanctioned plans.
   (b) Any of the conditions subject to which the same is granted or any of the restrictions imposed by the Municipal Commissioner for Greater Mumbai is contravened or not complied with.
   (c) The Municipal Commissioner of Greater Mumbai is satisfied that the same is obtained by the applicant through fraud or misrepresentation and the applicant and every person deriving title through or under him in such an event shall be deemed to have carried out the development work in contravention of Section 42 of 45 of the Maharashtra Regional and Town Planning Act, 1966.
7. The conditions of this certificate shall be binding not only on the applicant but on his heirs, executors, assignees, administrators and successors and every person deriving title through or under him.

The Municipal Commissioner has appointed Shri S.V. Ghole Executive ~~Assistant~~ Engineer to exercise his powers and functions of the Planning Authority under Section 45 of the said Act.

This CC is valid upto 21 JUN 2007

The Commencement Certificate is for carrying out the work up to top of basement as per approved plan dated 24.2.2006

CERTIFIED TRUE COPY
V. K. CHARI
Architect
M.C.G.M.

For and on behalf of Local Authority
The Municipal Corporation of Greater Mumbai

Ex ~~Assistant~~ Eng. Building Proposals
(Western Subs.) 'H & ~~K/West~~' 'K/East & ~~E~~'/Wards'

FOR
MUNICIPAL CORPORATION OF GREATER MUMBAI

M/S. SANDHU BUILDERS MUMBAI

1147

valid up to 21/6/09
CE/ 2157 /BSII/WS/AH 6 OCT 2008
Further C.C. is now extended up to re-endorsed up to top of upper basement
For......height as per approved plan dated 3.10.08

E. E. B. P. (W.S.) H & K Ward

valid up to 21/6/09
CE/ 2157 /BSII/WS/AH 24 OCT 2008
Further C.C. is now extended up to CC up to top of 3rd Floor for FST 1 (one) i.e. 15.84 mtr height
For......height as per approved plan dated 3.10.2008

E. E. B. P. (W.S.) H & K Ward

valid up to 21/6/09 19 JAN 2009
CE/ 2157 /BSII/WS/AH
Further C.C. is now extended up to top of 6th Floor i.e. 25.59 mtr AGL for wing A
For......height as per approved plan dated 3.10.08

E. E. B. P. (W.S.) H & K Ward

valid up to 21/6/09 20 JUN 2009
CE/ 2157 /BSII/WS/AH
Further C.C. is now extended up to top of 14th floor for wing 'A' & top of 5th floor for wing 'B'
For......height as per approved plan dated 03/10/08

E. E. B. P. (W.S.) H & K Ward

valid up to 21/6/2010 15 OCT 2009
CE/ 2157 /BSII/WS/AH
Further C.C. is now extended up to top of 17th floor for wing 'A' i.e. 55.74 mtr AGL
For......height as per approved plan dated 3.10.08

E. E. B. P. (W.S.) H & K Ward

valid up to 21/6/2010 22 JAN 2010
CE/ 2157 /BSII/WS/AH
Further C.C. is now extended up to full C.C. for wing A up to top of 19th floor i.e. ht 69.10 mtr excluding OHT & LMR
For......height as per approved plan dated 21.1.2010

E. E. B. P. (W.S.) H & K Ward

valid up to 21/6/10 - 7 MAY 2010
CE/ 2157 /BSII/WS/AH
Further C.C. is now extended up to full C.C. is re-endorsed upto top of 19th floor excluding OHT & LMR
For 69.10 mtr AGL height as per approved amended plan dt. 06/05/10

E. E. B. P. (W.S.) H & K Ward

valid up to 21/6/2012 18 MAY 2012
CE/ 2157 /BSII/WS/AH
Further C.C. is now extended up to re-endorsed full C.C. for wing A up to top of 19th floor (pt) i.e. ht 69.10 mtr AGL height as per approved plan dated 11.5.2012

E. E. B. P. (W.S.) H & K Ward

CERTIFIED TRUE COPY

M/S. SANDHU BUILDERS MUMBAI

1148

mahimtura consultants pvt. ltd.

consulting engineers

Mg. Dir. : R. H. MAHIMTURA B.E., F.I.E.
Dir. : H. R. MAHIMTURA B.E., M.S. (U.S.A.), F.I.I
Tel. : 91-22-2266 1212 / 2266 4228 / 4368 5000
Fax : 91-22-2266 2227

C/6092/2013
Date: 13th March, 2013

To,
The Executive Engg. (W/S)
Building Proposal, (City)
Municipal Corporation of Greater Mumbai.
Bandra, Mumbai.

STRUCTURAL STABILITY OF COMPLETION

Sub : **Proposed Development on plot bearing C.T.S. Nos. 1381, 1382/C, 1378/A & 1629 A/1-10 of Village Bandra, Pali Hill Road, Bandra (West), Mumbai.**
(Wing 'A' – building comprise of 2Basements + Ground + 19 upper flrs)

Ref. : _____

I hereby certify that the structural work of the above proposal has been carried out as per my structural design sand details and the said structure is safe and stable for the purpose for which it intended for, to the best of my knowledge and belief today.

Thanking you,

Yours faithfully,

H. R. Mahimtura
Consulting Structural Engineer
Registration No. STR/M/63.

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3840
My Commission
Expires
25 Sept. 2028
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

E-mail: info@mahimtura.net
Website: www.mahimtura.com
Administrative Office : Unique House, 3rd Floor, 25, S. A. Brelvi Road, Fort, Mumbai - 400 001.
Branch Office : No. 10, Poes Road, Teynampet, Chennai - 600 018. E-mail: chennai@mahimtura.net Ph: (044) 2432 9969
Branch Office : No. 701, Mittal Tower 'B' Wing, New No.21, Old No.8, M.G. Road, Bangalore - 560 001.
Branch Office : Shree Nandham, Office No. 319, "A" Wing, 3rd Floor, Plot No. 59, Sector No.11, C.B.D. Belapur, Navi Mumbai - 400 614.
Branch Office : G-1, Parmar Trade Centre, Connaught Road, Pune - 411 001. Ph: (020) 6601 2240 Fax: (020) 6601 2241. E-mail: mcipune@gmail.com
Branch Office : F4 - Building No.2, Siddharth Apartments, Tonca, Panji, Goa. Ph: (0832) 242 4458

1149

Date: 22.06.2012

To,
SANDHU BUILDERS
Plot No 41, CTS No 1381,1382/C,1378/A & 1629A /1-10
Bandra (W), Mumbai-400051

Sub :- Electric Supply at plot No 41 , CTS No 1381,
1382/C ,1378/A & 1629A/1-10, Pali Hill Road, Bandra West

Ref :- IOD-CC No : CE/2157/WS/AH

We would like to inform you that, we have release electric supply and connected energy meter to Wing A & B of above mention plot against your application number 1007098441 & 1007094883.

Thanking you,

Yours faithfully,

Sr, Manager
New Connection (SD)

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3540
My Commission
Expires
25 Sept. 2024
GOVT. OF INDIA

आराखडयासाठा ह्या कायालयाकडून नवान ना हरकत प्रमाणपत्र प्राप्त करण वधनकारक राहील.

१७. संदर्भित इमारतीस ह्याआधी, क. जलविभाग/८५५/का.अ.जा.का.(नि.व सं.)/ना.ह.प्र. दि. २५/०५/२०१८ अन्वये देण्यात आलेले नाहरकत प्रमाणपत्र रद्द करण्यात येत आहे.

सदर नाहरकत प्रमाणपत्र निर्गमित केल्या दिनांकापासून दोन वर्षापर्यंत वैध राहील.

कार्यकारी अभियंता, जलकामे (नियोजन व समन्वय)

M/S. SANDHU BUILDERS MUMBAI

...विभाग

1150

16 MAR 2016

विषय :- न.भू.क्र. १३८१, १३८२सी, १३७८ए आणि १६२९ए-१/१०, मौजे वांद्रा, पाली हिल रोड, वांद्रा (प), मुंबई ह्या भूखंडावरील प्रस्तावित इमारत

संदर्भ :- १) सीई/२१५७/डब्ल्यूएस/एएच दि. ११/०५/२०११ (नुतनीकरण दि.२१/०७/२०१५)
२) छाननी शुल्क पावती क्र.१००२४३७१४५ दि.९/०२/२०१६

मालकाचे नाव :- मे.सांधु बिल्डर्स, चेतक स.गृ.सं.म.करीता मुखत्यार

जल अभियंता यांच्या आदेशावरून, मी आपणास नमूद करतो की, संदर्भित इमारतीस खालील अटींच्या सापेक्ष ह्या विभागापुरती हरकत नाही.

१. लेआउट मधील प्रत्येक स्वतंत्र इमारतीस ह्या कार्यालयाकडून ना हरकत प्रमाणपत्र प्राप्त करणे बंधनकारक राहील.

२. सदर निवासी/अनिवासी/व्यावसायिक इमारतीसाठी पाणीपुरवठा, प्रचलित नियमानुसार तात्पुरता प्रमाणपत्र सादर केल्यावर दिला जाईल.

३. जलतरण तलावासाठी पाणीपुरवठा केला जाणार नाही. त्यासाठी वापरण्यात येणारे पाणी महानगर पालिकेच्या पाण्यात मिसळू देवू नये, तसेच त्यासाठी स्वतंत्र साठवण टाकी व वेगळ्या रंगाने रंगवलेल्या स्वतंत्र जलवाहिन्या वापराव्यात.

४. प्रस्तावित इमारतीच्या बांधकामासाठी व इमारतीस तात्पुरता प्रमाणपत्र मिळाल्यावर फ्लशींगसाठी विहिरीचे अथवा कूपनलिकेचे पाणी वापरावे, ते पाणी महानगरपालिकेच्या पाण्यात मिसळू देवू नये, तसेच त्यासाठी स्वतंत्र साठवण टाकी व वेगळ्या रंगाने रंगवलेल्या स्वतंत्र जलवाहिन्या वापराव्यात.

५. सदर भूखंडावर विहीर अथवा कूपनलिका खणण्यापूर्वी विभागातील सहाय्यक अभियंता जलकामे ह्यांची परवानगी घेणे बंधनकारक आहे.

६. शोषण टाकी इमारतीच्या तळघरात रस्पखाली प्रस्तावित केलेली असल्यामुळे त्यातील क्लोरीनयुक्त पाण्याच्या सतत संपर्कात येणाऱ्या इमारतीच्या भागांची संरचना आणि बांधकाम करताना पुरेशी काळजी घ्यावी. तसेच त्यातील महानगरपालिकतर्फे पुरवलेले पाणी दूषित होणार नाही ह्याची पुरेशी काळजी घ्यावी आणि टाकीतून भरून वाहणाऱ्या पाण्याचा निचरा करण्याची पुरेशी व्यवस्था करावी.

७. सदर इमारतीच्या घरगुती वापरासाठी व फ्लशींगसाठी स्वतंत्र भूमिगत शोषण टाक्यांची उदंचन संचासह व्यवस्था करावी. तसेच ह्या भूमिगत शोषण टाक्या किंवा टाक्यांची झाकणे लगतच्या जमिनीच्या पातळीपासून साधारणपणे ६० सेमी उंचावर असावीत, जेणेकरून बाहेरचे पाणी शोषण टाकीमध्ये जाणार नाही. शोषण टाकी व ड्रेनेज चेंबर्स जवळ नसावे व त्यामध्ये कमीतकमी १.५० मी. अंतर असावे.

८. भूमिगत शोषण टाकी व इमारतीच्या छतावरील पाण्याची टाकी भरून वाहू नये ह्यासाठी दोन्ही टाक्यांमध्ये पाण्याची पातळी नियंत्रीत करण्यासाठी स्वयंचलित संवेदक यंत्रणा बसविण्याची व्यवस्था करणे बंधनकारक आहे.

९. प्रस्तावित इमारतीमधील शौचकुपात फ्लशींग साठी फक्त डयुएल फ्लश व्हॉल्व्ह / डयुएल फ्लशींग सिस्टर्न (आय.एस.आय. मार्क असलेले) किंवा मॅन्युअली कंट्रोल्ड कॉक्स् वापरण्यात यावेत.

१०. संदर्भित इमारतीच्या अंतर्गत पाणी पुरवठयासाठी नवीन मंजूर आराखडयामध्ये बदल झाले नसल्यास यापूर्वी ह्या कार्यालयाने मंजूर करून दिल्याप्रमाणे हायड्रोन्युमॅटीक सिस्टीमची व्यवस्था करावी. परंतु नवीन मंजूर आराखडयामध्ये बदल झाले असल्यास त्याप्रमाणे सुधारीत अंतर्गत पाणी पुरवठा करण्यासाठीचा प्रस्ताव सादर करून त्यास ह्या कार्यालयाकडून मंजूरी प्राप्त करणे आवश्यक आहे. तसेच हायड्रोन्यूमॅटीक सिस्टीमसाठी भुमिगत शोषण टाक्या ह्या पुर्ण क्षमतेच्या आणि पिण्याच्या पाण्यासाठी व फ्लशिंगच्या पाण्यासाठी वेगवेगळ्या असाव्यात.

११. इमारतीची आवार भिंत व तळघराची बाह्य बाजू यामध्ये कमीतकमी १.५ मी. अंतर असावे.

१२. खोदकाम केलेल्या ठिकाणी बाजूची माती कोसळू नये म्हणून त्या बाजूने शोरींग / पाईलिंग (Shoring/Piling) करून योग्यरीत्या संरक्षित करण्यात याव्या.

१३. खोदकाम करण्यासाठी अवजड यंत्रसामग्रीचा वापर करू नये.

१४. इमारतीचे रचनात्मक घटक (Saturated Members) हे जलाशयाचा भार व संपृक्त माती (Saturated Soil) यांचा परिणाम लक्षात घेऊन त्या अनुषंगाने संरचित केलेले असावेत.

१५. सुरूंग लावून कोणतेही खोदकाम करू नये, त्यासाठी मनुष्यबळाचाच वापर करावा.

१६. सदर ना हरकत प्रमाणपत्र दि. ११/०५/२०११ च्या क्र. सीई/२१५७/डब्ल्यूएस/एएच अन्वये मंजूर झालेल्या आराखडया सापेक्ष देण्यात येत आहे. ह्या आराखडयामध्ये काही फेरबदल झाल्यास, सदरहू नाहरकत प्रमाणपत्र रद्द समजण्यात येईल व सुधारीत आराखडयासाठी ह्या कार्यालयाकडून नवीन ना हरकत प्रमाणपत्र प्राप्त करणे बंधनकारक राहील.

१७. संदर्भित इमारतीस हाआधी, क्र. जलविभाग/८५५/का.अ.ज.का.(नि.व.सं.)/ना.ह.प्र. दि. २५/०५/२०११ अंतर्गत देण्यात आलेले नाहरकत प्रमाणपत्र रद्द करण्यात येत आहे.

१८. सदर नाहरकत प्रमाणपत्र निर्गमित केल्या दिनांकापासून दोन वर्षांपर्यंत वैध राहील.

NOTARY S.M.KHAN Mumbai Suburban Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

MUMBAI

1151

Annexure-C1

Ind Tech House Consult

EIA Consultancy Organization: Ind Tech House Consult, G-8/6, Ground Floor, Rohini, Delhi-110 089, has been appointed as EIA Consultant to carry out Environmental Impact Assessment Study and Obtaining Environmental Clearance for Group Housing Project "Sandhu Palace" At Pali Hill, Bandra (West), Mumbai

Similar Assignment: Following are some of projects of similar kind successfully carried out/ ongoing by the Consultancy organization.

a. Environmental Impact Assessment for Extension of Parliament House Annexe Project, Parliament House Complex, New Delhi;
b. Environmental Impact Assessment for Construction of Group Housing for LokSabha Secretariat, New Delhi;
c. Environmental Impact Assessment for Park at Sector 92, Noida (under direction of Hon'ble Supreme Court);
d. Environmental Impact Assessment for Expansion of LNJP Hospital, New Delhi;
e. Environmental Impact Assessment for Construction of Institutional Campus at Rohtak;
f. Environmental Impact Assessment for Construction of Police Line by Delhi Armed Police, Dwarka, New Delhi.

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1152

Intellectual Strength of Ind Tech House Consult

I	**Name**	:	**Mr. Arvind Narayan Devikar**
1	Status in the Organization	:	EIA Coordinator
2	Educational Qualification	:	Bachelor of Architecture (Visvesvaraya Regional College of Engineering – Nagpur (1973)
3	Work Experience	:	40 Years
4	Work Experience related to EIA	:	7 years More than 25 successful EIA projects in Building Construction Sector
5	Previous Organizations Served	:	Senior Architect, CPWD, Directorate General, CPWD Nirman Bhawan (1976 – 2007)
6	Specialization	:	Planning and Designing, Energy Efficient Buildings, Climate Responsive Architectural Design, Passive Energy in Buildings, Energy Conservation, Landscape and Environmental Impact Assessment
7	Additional Qualification	:	Evaluator and Trainer for GRIHA - Green Rating for Integrated Habitat Assessment; Panel member for National Building Code 2005 in Landscaping, CED 46:p18; Architecture, Energy and Environment – Lund University Sweden Planning and Design of Energy Efficient Building – CPWD Ghaziabad; Public Administration
II	**Name**	:	**Dr. Ravinder Mohan Mehta**
1	Status in the Organization	:	EIA Coordinator
2	Educational Qualification	:	Ph.D. Chemistry – Patiala University, Patiala
3	Work Experience	:	38 years in Pharmaceutical Industry, Academics, Laboratory and Environmental Consultancy
4	Work Experience	:	10 years

NOTARY GOVT OF INDIA

M/S. SANDHU BUILDERS MUMBAI

	related to EIA		More than 50 successful EIA projects
5	Previous Organization Served	:	Ranbaxy Labs, Punjabi University, Nuchem Limited, Senes Consultants India Pvt. Ltd., Voyants Solutions Pvt. Ltd.
6	Additional Qualification	:	ISO-14001 Lead Auditor, Planning Implementing and Auditing of Laboratory Quality System as per NABL/ISO 17025, Environmental Training on Industry and Environment Protection for India, Unit operation and processes for CETP, CIQA as per 17025:1999
III	**Name**	:	**Mrs. Supriti Guha**
1	Status in the Organization	:	EIA Coordinator
2	Educational Qualification	:	B. Tech Chemical Engineering
3	Work Experience	:	15 Years
4	Work Experience related to EIA	:	3.5 years More than 10 EIA Studies
5	Previous Organizations Served	:	West Bengal Pollution Control Board for 12 years as Regional Officer
6	Specialization	:	Air Quality, Water Pollution, Solid and Hazardous Waste, Environmental Assessment for Industries and Thermal power Plant and Environmental Impact Assessment
IV	**Name**	:	**Mr. Suman Banerjee**
1	Status in the Organization	:	EIA Coordinator
2	Educational Qualification	:	B.E. Environmental Engineering
3	Work Experience	:	12 Years
4	Work Experience related to EIA	:	8 Years More than 50 successful EIA projects
5	Previous Organizations Served	:	Common - Hazardous Waste Management Facility at Taloja, Mumbai; Common - Biomedical Waste Management Facility at Taloja, Mumbai; Consultant for JBIC for Environment and Social Guideline

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3540 My Commission Expires 25 Sept. 2026 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

			Frame Work for Steel and Thermal Power Projects in India; Consultant for JICA for Dedicated Freight Corridor for DFCCL - Ministry of Railways, projects; EIA Consultant and Environmental Trainer for JBIC funded Kerala water supply project for Thiruvananthapuram, Meenad, Cherthala, Kozhikode&Pattuvam.
6	Specialization	:	Air Pollution, Water Pollution, Noise and Vibration, Green Building, Municipal Solid Waste, Hazardous Waste and Biomedical Waste; Environmental Impact Assessment for Building and Construction Projects, Highway Projects, Area Development Projects, Industrial Estate/ Park/ Leather Park Projects, SEZ, Oil and Natural Gas Exploration Projects, Mineral Beneficiation Projects, Highway and Solid and Hazardous Waste Management Projects; Noise and Vibration assessment and analysis expert
7	Additional Qualification	:	GRIHA – Green Rating for Integrated Habitat Assessment ECBC – Energy Conservation Building Code EIA Trainer for CPWD Officials at CPWD Training Institute, Ghaziabad
V	**Name**	:	**Mr. Anand Kumar Dubey**
1	Status in the Organization	:	Air Quality, Water Quality, Solid Waste and Ecology and Biodiversity Expert
2	Educational Qualification	:	M. Sc. Environment and Ecology
3	Work Experience	:	7 years
4	Work Experience related to EIA	:	7 years
5	Previous Organizations Served	:	Asian Consulting Engineers Pvt. Ltd.
6	Specialization	:	Environmental Impact Assessment for Building Construction, Industrial Estates/ Parks, Solid Waste Management, Area Development Projects, Oil and Natural Gas Exploration and Highway Projects

NOTARY GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

1155

VI	Name	:	Dr. Debasish Bhattacharya
1	Status in the Organization	:	Social Expert
2	Educational Qualification	:	Ph.D. Tribal Development/ Social Science – IIT Kharagpur MRP Regional Planning – IIT Kharagpur
3	Work Experience	:	25 years
4	Work Experience related to EIA	:	25 years
5	Previous Organizations Served	:	IIT Kharagpur – Senior Project Manager LEA Associates SMEC India Pvt. Ltd. Feedback Ventures Pvt. Ltd. Nippon Koei External Funding Agency Projects for World Bank, ADB, JICA
6	Specialization	:	Tribal Development, Socio economic Development, Social Study in Forest Management, Preparation of RAP, SIA, SE Framework Development, Rehabilitation and Resettlement (R&R)
VII	Name	:	Mr. Sameer Vilasrao Deshpande
1	Status in the Organization	:	Ecology and Biodiversity Expert
2	Educational Qualification	:	M.Sc. Botany
3	Work Experience	:	6.5 years
4	Work Experience related to EIA	:	6.5 years
5	Previous Organizations Served	:	National Environmental Engineering Research Institute - NEERI Nagpur
6	Specialization	:	Biological Monitoring, preparation of Biodiversity report, conservation plan for scheduled plant and animals, green belt development plan
VIII	Name	:	Mr. Rahul RamaraoDeshmukh
1	Status in the	:	Social Expert

NOTARY GOVT OF INDIA

M/s. SANDHU BUILDERS MUMBAI

1156

	Organization		
2	Educational Qualification	:	Master of Social Work Ph.D. Submitted
3	Work Experience	:	6 years
4	Work Experience related to EIA	:	6 years
5	Previous Organizations Served	:	National Environmental Engineering Research Institute - NEERI Nagpur
6	Specialization	:	Socio Economic Monitoring, Rehabilitation and Resettlement, Corporate Social Responsibility
IX	**Name**	**:**	**Mr. Sunil Chandra Gupta**
1	Status in the Organization	:	Risk Assessment and Hazard Management
2	Educational Qualification	:	M.E. Chemical Engineering, B.E. Chemical Engineering (University of Roorkee)
3	Work Experience	:	20 years
4	Work Experience related to EIA	:	20 years
5	Previous Organizations Served	:	Shriram Institute of Industrial Research ERM India Pvt. Ltd. SGS India Pvt. Ltd.
6	Specialization	:	Risk Assessment and Disaster Management Plan; HAZOP study; Execution of Safety Audit, Hazard Analysis and preparation of Disaster Management Plan; Waste Water Treatment and Disposal; Solid and Hazardous Waste Treatment and Disposal.
X	**Name**	**:**	**Mr. UmeshPratap Singh Chauhan**
1	Status in the Organization	:	Geology Expert
2	Educational Qualification	:	M.Sc. Geology
3	Work Experience	:	30 years
4	Work Experience	:	6 years

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1157

	related to EIA		
5	Previous Organizations Served	:	Uttar Pradesh State Mineral Development Corporation Ltd.; Directorate of Geology and Mining
6	Specialization	:	Mining Plan; R&D project for Mining and Quality Control; Exploration, Surveying and Mapping.
XI	Name	:	Dr. Manoj Kumar Mishra
1	Status in the Organization	:	Air Pollution, Meterology, Modeling and Noise and Vibration Expert
2	Educational Qualification	:	M.Tech. Atmospheric Sciences – University of Pune Ph.D. Atmospheric Sciences (Air Quality Modelling and Micrometeorology – IIT Delhi)
3	Work Experience	:	14 years
4	Work Experience related to EIA	:	14 years
5	Previous Organizations Served	:	IIT Delhi – Research Associate SENES Consultants India Pvt. Ltd.
6	Specialization	:	Air and Noise Impact Assessment Studies; Air Quality and Noise Modeling by ISCST3, AERMOD, CALPUFF, OCD, CALINE, INM, DHAWANI, TNM, etc.; Air and Noise Modeling for Coal and Gas fired industries, landfill, helipad, wind farms, highways SEZ Projects;
7	Specialized Study	:	Coastal Atmospheric Boundary Layer (CABL) field experiment at kalpakkam in collaboration with Indira Gandhi Centre for Atomic Research (IGCAR), Bhabha Atomic Research Centre (BARC) Mumbai and Institute of Meteorology and Physics, University of Agriculture, Forestry and Renewable Resources – Vienna, Austria
XII	Name	:	Dr. Suraj Kumar Sharma
1	Status in the Organization	:	Hydrology, Ground Water, Water Conservation, Geology and Land Use Expert
2	Educational Qualification	:	M.Sc. Geology – Jammu University Diploma in Remote Sensing – Indian Institute of Remote

NOTARY S.M.H ZAIDI Mumbai & Thane Dist. Reg. No. 3249 My Commission Expires 29 Sept. 2019 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

1158

			Sensing (IIRS Dehradun) Diploma in Advance Course in Remote Sensing – ITC, The Netherlands
3	Work Experience	:	46 years
4	Work Experience related to EIA	:	3.5 years
5	Previous Organizations Served	:	Assistant Geologist – Geological Survey of India Director Hydrogeologist – Central Ground Water Authority Member Hydrogeology – Central Ground Water Authority
6	Specialization	:	Water Harvesting Water Shed Management Ground Water Study under NNRMS Program along with ISRO Appraisal and Examination of Environmental Projects of MoEF Interpretation and Analysis of Aerial photographs and satellite imageries and providing S&T inputs to ground water projects in the states, investigation and exploration of ground water resources, Geological and hydro-geological data processing

NOTARY GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1159

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission
Expires
25 Sept. 2028
GOVT. OF INDIA

Ind Tech House Consult
(An ISO 9001:2008 Certified Organization)
G-8/6, Ground Floor, Sector 11, Rohini, Delhi – 1,10 085
Tel: +91 11 2757 1410, 6460 7252; Fax: +91 11 2757 2241
Email: ithconsult@hotmail.com

M/S. SANDHU BUILDERS
MUMBAI

NATIONAL ACCREDITATION BOARD FOR EDUCATION & TRAINING
QUALITY COUNCIL OF INDIA

QCI Office, 6th Floor, ITPI Building, Ring Road, I.P. Estate, New Delhi

Scheme for Accreditation of EIA Consultant Organizations

Accreditation Committee Meeting for Re-Accreditationheld on

December 09, 2016

The following were present during the meeting:

1. Prof. B.B Dhar - Chairman
2. Dr. Naini Bhat - Member
3. Dr. S P Chakrabarti - Member
4. Dr. G.K Pandey - Member
5. Prof. C.P Kaushik. - Member
6. Prof. Umesh Kulshrestha -Member

Earlier Dr.S.R Wate, and Prof. G.J Chakrapani expressed their inability to attend the meeting.

NABET Secretariat was represented by:

Mr. A.K Ghose – Principal Advisor Mr. A.K Jha – Senior Director, Dr. Pawan Kumar Singh – Assisstant Director and Ms. Samra Khan– Accreditation Officer

1.0 Minutes of the Accreditation Committee meeting dt. December 02, 2016 were approved.

2.0 Following cases were discussed and decisions taken as noted below.

Case for Re-Accreditation

2.1 Ind Tech House Consult (ITHC), Delhi

The ACO has been assessed as per Version 3 of the Scheme. Result of the Re-accreditation Assessment (RA) is given below:

2.1.1 Category of Approval :

The ACO has scored more than 60% marks hence it continues to be accredited with Cat. A.

2.1.2 Scope of Accreditation

Sl. No.	NABET Scheme Sectors	Sector Description	Cat.	Sector No.(MoEFCC Notification dt. September 14,2006 & Ammendments)
1.	1	Mining of minerals including opencast / underground mining	B	1 (a) (i)
2.	2	Offshore and onshore oil and gas exploration, development & production	A	1 (b)
3.	3	River Valley projects	A	1 (c)
4.	18*	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A	5 (c)
5.	27	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/coral reefs / ecologically sensitive areas including LNG terminal	A	6 (a)
6.	28	Isolated storage & handling of Hazardous chemicals (As per threshold planning quantity indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	A	6 (b)
7.	31	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	A	7 (c)
8.	33	Ports, harbours, break waters and dredging	A	7 (e)
9.	37	Common Municipal Solid Waste Management Facility (CMSWMF)	B	7 (i)
10.	38	Building and construction projects	B	8 (a)
11.	39	Townships and Area development projects	B	8 (b)

*Approval of sector- 18 is subject to coverage of core functional area- AQ as per the Scheme for Accreditation of EIA Consultant Organizations- Version 3.

2.1.3 Sectors approved for EIA Coordinators (ECs)

a. Assessed as per RA norms – for ECs approved earlier:

Sl. No.	Name	Earlier approval status (SA/subsequently)		Current approval status (after RA)		Remarks
		Sector	Cat.	Status	Cat.	
In-house						
1	A.N Devikar	38	B	Renewed	B	None
2	Suman Banerjee	37	B	Renewed*	B	*With Alert
		38	B	Renewed*	B	*With Alert
3	Supriti Guha	21	B	-	-	To be assessed as per IA norms based on Scheme requirements.
		31	B	-	-	To be assessed as per IA norms based on Scheme requirements.
		37	B	-	-	To be assessed as per IA norms based on Scheme requirements.

M/s. SANDHU BUILDERS MUMBAI

1162

Sl. No.	Name	Earlier approval status (SA/subsequently)		Current approval status (after RA)		Remarks
		Sector	Cat.	Status	Cat.	
		38	B	Renewed	B	None
		39	B	Renewed	B	None
4	R M Mehta	4	B	-	-	Resigned
		37	B	-	-	Resigned
		39	B	-	-	Resigned
Empanelled						
5	Pankaj Pande	1	-	-	-	Absent during interaction

#Reason for Alert will be communicated to ACO.

b. Assessed as per IA norms – for new sectors of approved ECs and fresh ECs proposed:

Sl. No.	Name	Sectors			Cat.	Remarks
		Applied	Recommended	Approved		
In-house						
1	Somya Dwivedi	27	Yes	Yes*	A	* With observation
		28	Yes	Yes	B	None
		38	Yes	Yes	B	None
2	Anand Dubey	33	-	-	-	Candidature withdrawn
3	R. M.Mehta	34	-	-	-	Resigned
		35	-	-	-	Resigned
4	A.N. Devikar	39	Yes	Yes	B	None
Empanelled						
5	Sameer V Deshpande	2	Yes	Yes	A	None
		3	Yes	Yes	A	None
		27	Yes	Yes	A	None
		34	-	-	-	Candidature withdrawn
		38	Yes	Yes	B	None
6	C.A. Moghe	2	Yes	Yes	A	None
		10	-	-	-	Candidature withdrawn
		18#	Yes	Yes	A	#See note below
		27	-	-	-	Candidature withdrawn
7	Alok Pathak	1	Yes	Yes	B	None
		27	Yes	Yes	A	None
		31	Yes	Yes	A	None
		33	Yes	Yes	A	None
8	Pawan S. Sharma	8	-	-	-	Absent during interaction
		38	-	-	-	Absent during interaction
9	Arvind Kumar Purohit	1	Yes	Yes	B	None

#Though the candidate is approved for sectors 18, the ACO would be permitted to take up EIAs in this sector on complying with the requirements of approved in-house expert for functional areas AQ
*Reason for observation will be communicated to ACO.

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2018 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

2.1.4 Functional Areas (FAs) approved for Functional Area Experts (FAEs):

a. Assessed as per RA norms – for FAEs approved earlier:

Sl. No.	Name	Earlier approval status		Approval status after RA		Remarks
		FA approverd in SA/subsequently	Cat	Status	Cat	
In-house						
1	Supriti Guha	WP	B	Renewed*	A	*Upgraded to Cat. A
		SHW	B	Renewed*	A	*Upgraded to Cat. A
2	Suman Banerjee	AP	B	Renewed	B	None
		MSW	B	Renewed*	B	*With Alert
3	R. M. Mehta	WP	A	-	-	Resigned
		MSW	A	-	-	Resigned
4	Debashish Bhattacharya	SE	A	Renewed*	A	*With Alert
Empanelled						
5	Pankaj Pande	GEO	-	-	-	Absent during interaction
6	Shrikant Misra	SC	A	Renewed	A	None
7	Rajver Singh	LU	B	Renewed*	A	*Upgraded to Cat. A
8	Manoj Mishra	AP	A	Renewed	A	None
		AQ	A	Renewed	A	None
		NV	A	Renewed	A	None
9	Rahul Rama Rao Deshmukh	SE	A	Renewed*	B	*Cat. Downgraded to B
10	Sameer V. Deshpande	EB	B	Renewed	B	None

b. Assessed as per IA norms – approved experts for new functional areas and fresh FAEs proposed:

Sl. No.	Name	Functional Areas			Cat.	Remarks
		Applied	Recommended	Approved		
In-house						
1	Somya Dwivedi	SHW	Yes	Yes	B	None
		RH	Yes	Yes	B	None
2	Bideh Shukla	EB	Yes	Yes	B	None
		SC	Yes	Yes	B	None
3	Manish Shukla	Geo	Yes	Yes	B	None
		HG	Yes	Yes	B	None
		LU	Yes	Yes	B	None
4	U.P.S. Chauhan	GEO	Yes	Yes	B	None
Empanelled						
5	Alok Pathak	AP	Yes	Yes	B	None
		EB	Yes	Yes	A	None
		SHW	-	-	-	Candidature withdrawn
6	Pawan S. Sharma	AP	-	-	-	Absent during interaction
		RH	-	-	-	Absent during interaction
		NV	-	-	-	Absent during interaction
7	C. A. Moghe	WP	Yes	Yes	A	None

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 M7 Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

1164

Sl. No.	Name	Functional Areas			Cat.	Remarks
		Applied	Recommended	Approved		
		SC	Yes	Yes	B	None

Note: Results of balance candidates and details of the assessment shall be communicated to the ACOs by NABET

The meeting concluded with a vote of thanks to and from the Chair.

Issued by:

A.K Jha
Senior Director I NABET

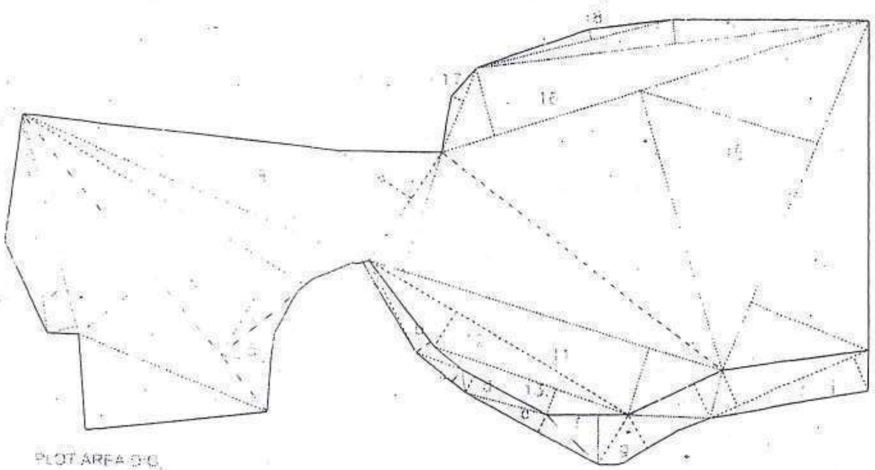
Abbreviations

ACO	: Accredited Consultant Organization
AC	: Accreditation Committee
Cat.	: Category
IA	: Initial Accreditation
EC	: EIA Coordinator
FAE	: Functional Area Expert
RA	: Re-Accreditation
SA	: Surveillance Assessment
FAA	: Functional Area Associates

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 M. Commission Expires 25 Sept. 2028 GOVT. OF INDIA

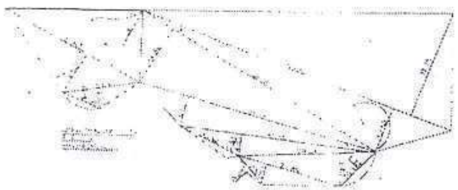
M/S. SANDHU BUILDERS MUMBAI

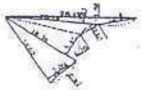
1165



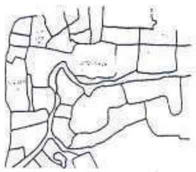
PLOT AREA D/G

AREA STATEMENT FOR EXISTING BUILDINGS

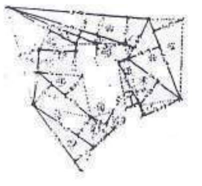




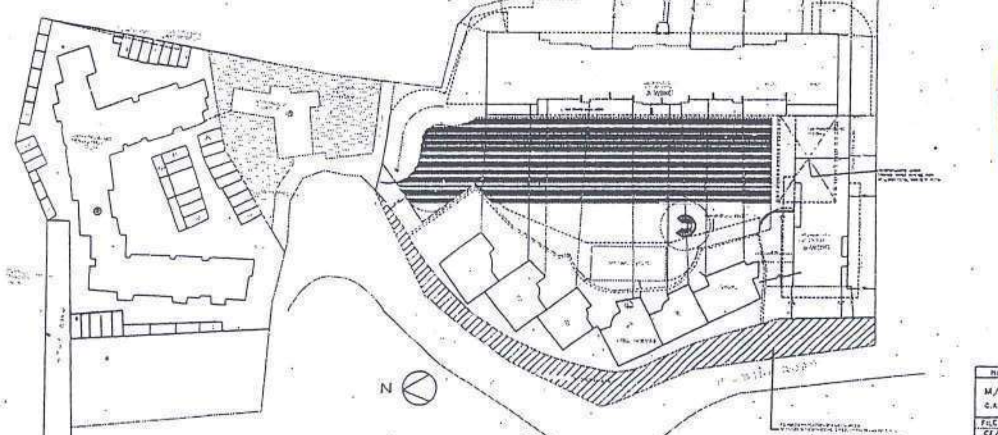
LESS AREA DIAGRAM From R.G. - 1
PHYSICAL R.G.



LOCATION PLAN N
SCALE 1:4000



AREA DIAGRAM FOR R.G. - 2
PHYSICAL R.G.



BLOCK PLAN
SCALE 1:200

TOTAL R.G. REQUIRED AS PER RULE

TOTAL R.G. PROVIDED

TOTAL

15% R.G. AREA CALCULATION

1.	46.[illegible]	x	27.75	x	[illegible]	=	955.16	SQ.MT.
2.	60.85	x	12.26	x	0.50	=	368.71	SQ.MT.
3.	55.00	x	14.00	x	0.50	=	426.72	SQ.MT.
4.	54.75	x	6.50	x	0.50	=	168.18	SQ.MT.
5.	41.16	x	4.51	x	0.50	=	92.82	SQ.MT.
6.	13.58	x	1.55	x	0.50	=	10.02	SQ.MT.
7.	21.99	x	4.36	x	0.50	=	47.72	SQ.MT.
8.	25.14	x	6.57	x	0.50	=	82.35	SQ.MT.
9.	10.10	x	1.77	x	0.67	=	11.96	SQ.MT.
10.	7.57	x	0.77	x	0.67	=	1.91	SQ.MT.
11.	31.90	x	13.65	x	0.50	=	218.35	SQ.MT.
12.	31.63	x	9.52	x	0.50	=	153.26	SQ.MT.
13.	15.64	x	4.27	x	0.50	=	33.29	SQ.MT.
14.	9.85	x	1.75	x	0.67	=	7.24	SQ.MT.
		TOTAL ADDITION				=	2807.60	SQ.MT.
ADD								
15.	0.62	x	4.18	x	4.61	=	1.75	SQ.MT.
		TOTAL ADDITION				=	2009.39	SQ.MT.

LESS :-

1.	0.50	x	78.45	x	1.08	=	42.93	SQ.MT.
2.	0.50	x	20.14	x	2.58	=	25.95	SQ.MT.
3.	0.50	x	18.34	x	5.45	=	49.96	SQ.MT.
4.	0.50	x	18.00	x	7.07	=	63.81	SQ.MT.
5.	0.67	x	8.50	x	0.50	=	2.92	SQ.MT.
6.	0.67	x	7.05	x	0.97	=	4.60	SQ.MT.
7.	5.49	x	3.14	x	5.49	=	54.64	SQ.MT.
		TOTAL ADDITION				=	255.56	SQ.MT.

TOTAL R.G. PROVIDED = 2009.39 - 255.56 = 1753.83 SQ.M.

TOTAL [illegible] SQ.M.

PLOT AREA CALCULATION:

1.	0.50	x	32.90	x	09.83	=	161.76	SQ.MT.
2.	0.50	x	49.41	x	06.25	=	154.40	SQ.MT.
3.	0.50	x	44.23	x	18.72	=	413.99	SQ.MT.
4.	0.50	x	112.96	x	20.73	=	1170.63	SQ.MT.
5.	0.50	x	23.33	x	10.95	=	127.67	SQ.MT.
6.	0.50	x	98.40	x	22.77	=	1120.28	SQ.MT.
7.	0.50	x	81.72	x	09.83	=	401.65	SQ.MT.
8.	0.50	x	116.05	x	20.00	=	1160.50	SQ.MT.
9.	0.50	x	28.33	x	18.87	=	267.29	SQ.MT.
10.	0.50	x	110.00	x	29.00	=	1595.00	SQ.MT.
11.	0.50	x	120.50	x	15.40	=	927.80	SQ.MT.
12.	0.50	x	78.16	x	05.47	=	298.06	SQ.MT.
13.	0.50	x	49.53	x	05.99	=	134.65	SQ.MT.
14.	0.50	x	100.00	x	20.00	=	1000.00	SQ.MT.
15.	0.50	x	103.67	x	19.85	=	1732.87	SQ.MT.
16.	0.50	x	131.24	x	17.97	=	1179.15	SQ.MT.
17.	0.50	x	19.71	x	02.98	=	25.56	SQ.MT.
18.	0.50	x	44.26	x	02.36	=	52.61	SQ.MT.
19.	0.50	x	69.64	x	05.20	=	225.49	SQ.MT.
		TOTAL ADDITION				=	12866.85	SQ.MT.

SET BACK AREA CALCULATION :

a.	0.50	x	23.01	x	01.36	=	15.87	SQ.MT.
b.	0.50	x	31.43	x	03.94	=	61.91	SQ.MT.
c.	0.50	x	13.92	x	02.50	=	24.36	SQ.MT.
d.	0.50	x	21.16	x	04.21	=	44.54	SQ.MT.
e.	0.50	x	13.24	x	04.23	=	70.91	SQ.MT.
f.	0.50	x	18.18	x	10.02	=	99.15	SQ.MT.
g.	0.50	x	20.07	x	07.53	=	113.02	SQ.MT.
h.	0.50	x	15.47	x	05.34	=	81.19	SQ.MT.
i.	0.50	x	30.72	x	08.49	=	130.41	SQ.MT.
j.	0.50	x	28.27	x	06.00	=	84.86	SQ.MT.
		TOTAL ADDITION				=	725.65	SQ.MT.

TOTAL AREA OF PLOT : 13592.50 SQ.MT.

(12866.85 + 725.65 = 13592.50 SQ.MT.)

1/9

STAMP OF APPROVAL OF PLAN	STAMP OF RECEIPT OF PLAN

CONTENTS OF SHEET:
LOCATION PLAN, BLOCK PLAN, PLOT AREA CALCULATION, R.G. AREA CALCULATION, PLOT AREA DIAGRAM.

DESCRIPTION OF PROPOSAL & PROPERTY:
PROPOSED BUILDING ON PLOT BEARING
C.T.S. NO. 1301, 1392 [illegible] 1621 [illegible] 1623[illegible]-1/10
AT [illegible] HILL, PALI HILL, ROAD
BANDRA (WEST)

R. G. - 3 CALCULATION:

1.	9.43	x	2.55	x	0.50	=	12.02	SQ.MT.
2.	10.67	x	2.94	x	0.50	=	15.68	SQ.MT.
3.	10.67	x	2.25	x	0.50	=	12.01	SQ.MT.
4.	14.68	x	9.25	x	0.50	=	67.90	SQ.MT.
5.	19.22	x	10.04	x	0.50	=	96.45	SQ.MT.
6.	19.22	x	9.70	x	0.50	=	93.46	SQ.MT.
7.	9.94	x	2.17	x	0.50	=	10.78	SQ.MT.
8.	30.91	x	7.89	x	0.50	=	121.62	SQ.MT.
9.	20.97	x	1.84	x	0.50	=	21.81	SQ.MT.
10.	6.53	x	1.37	x	0.50	=	4.47	SQ.MT.
11.	20.78	x	1.80	x	0.50	=	18.72	SQ.MT.
12.	17.12	x	6.14	x	0.50	=	52.56	SQ.MT.
13.	8.12	x	1.70	x	0.50	=	6.94	SQ.MT.
14.	27.61	x	5.00	x	0.50	=	68.53	SQ.MT.
15.	17.50	x	0.57	x	0.50	=	3.51	SQ.MT.
16.	14.93	x	8.33	x	0.50	=	62.18	SQ.MT.
17.	14.53	x	8.02	x	0.50	=	53.34	SQ.MT.
18.	17.23	x	6.20	x	0.50	=	52.80	SQ.MT.
19.	5.75	x	3.12	x	0.50	=	8.97	SQ.MT.
20.	3.35	x	0.19	x	0.50	=	0.30	SQ.MT.
21.	6.05	x	5.37	x	0.50	=	16.24	SQ.MT.
22.	17.50	x	7.91	x	0.50	=	67.13	SQ.MT.
		TOTAL ADDITION				=	861.59	SQ.MT.

NAME & SIGNATURE OF OWNER :-

M/S. SANDHU BUILDERS
C.A. TO CHETAK CO-OP.HSG.LTD. OWNERS.

FILE NO. :-	SCALE :-	JOB. No.	DATE	DRAWN BY	CHECK BY
CE/2137/WS/AH	1 : 100		29/01/2010		S.Bhalla

ARCHITECT :-

V. K. Consultants
- CONSULTING ENGINEERS, ARCHITECTS & SURVEYORS
LIFE MEMBER OF "PEATA"
- 801/802, EMBASSY TOWERS, SEVEN BUNGLOWS, ANDHERI (WEST), VERSOVA, MUMBAI - 400 061.
TEL :- (0) 91 022 65628213

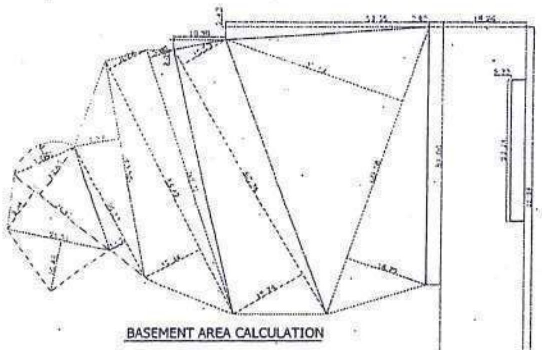
NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission Expires
25 Sept. 2028
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

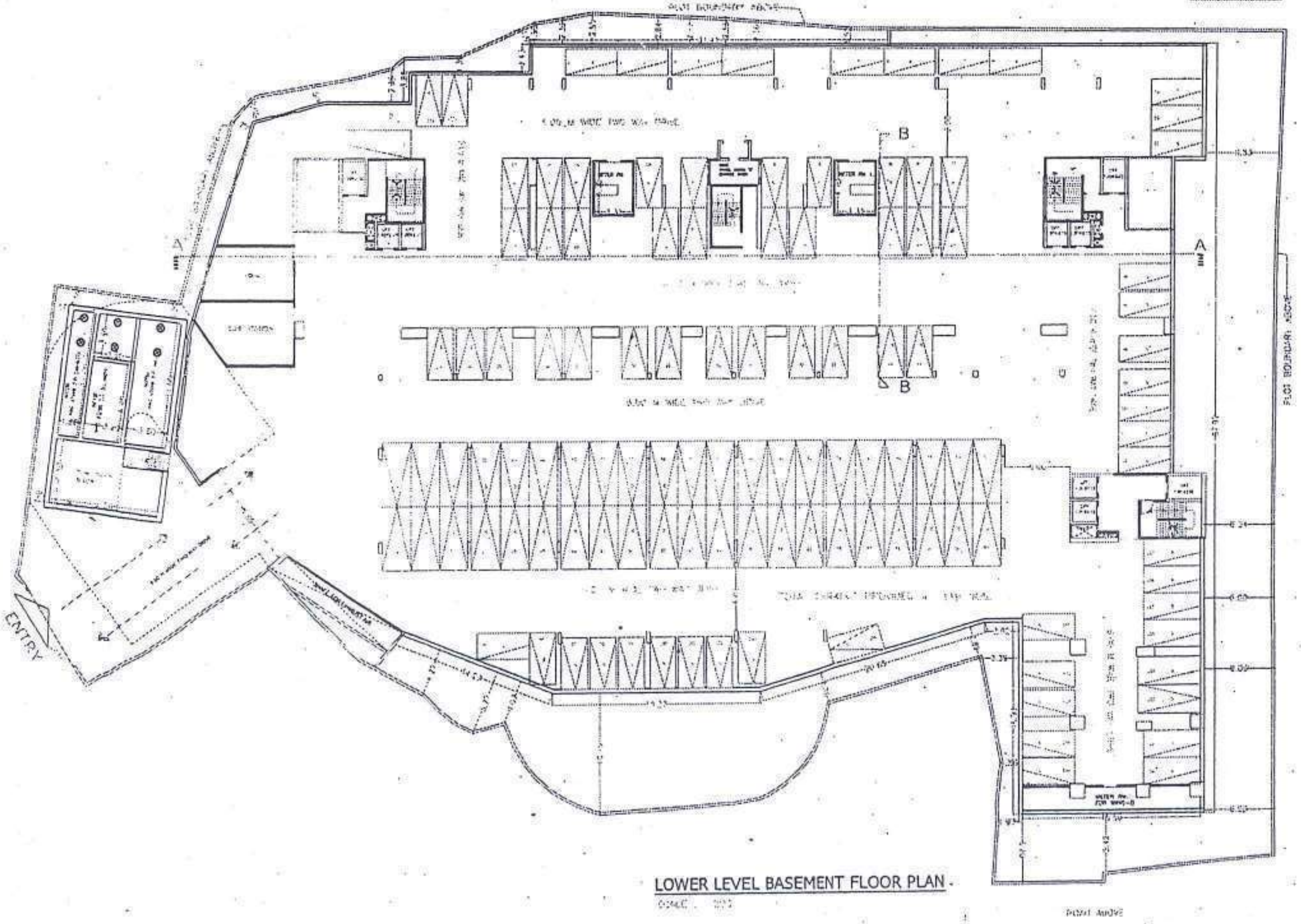
1166

BASEMENT AREA CALCULATION

[illegible]



BASEMENT AREA CALCULATION



LOWER LEVEL BASEMENT FLOOR PLAN

2/9	
STAMP OF APPROVAL OF PLAN	STAMP OF RECEIPT OF PLAN

CONTENTS OF SHEET:-
LOWER LEVEL BASEMENT PLAN

DESCRIPTION OF PROPOSAL & PROPERTY:
PROPOSED BUILDING ON PLOT BEARING
C.T.S. No. 1301, 1362 C, 1319 A & 1625A-1/10
AT BATES HILL, PALLI HILL ROAD
BANDRA (WEST).

PARKING STATEMENT (PROPOSED)
PARKING REQUIREMENT AS PER DCR 36 [illegible]

PARTICULAR	NOS OF FLAT	PARKING REQUIRED	PARKING PROVIDED
1) 1 PARKING FOR TENEMENTS WITH CARPET AREA UPTO 45 SQ.M	-----	-----	-----
2) 1 PARKING FOR 2/3 TENEMENTS WITH CARPET AREA FROM 45SQ.M. TO 100 SQ.M.	-----	-----	-----
3) 1 PARKING FOR 1/2 TENEMENT WITH CARPET AREA EXCEEDING 100 SQ.M.	[illegible]	[illegible]	---
4) 25% VISITORS	-----	[illegible]	-----
TOTAL PARKING REQUIRED		[illegible]	
TOTAL PARKING PROVIDED			
LOWER BASEMENT			119 NOS.
UPPER BASEMENT			100 NOS.
GROUND FLOOR (STILT)			20 NOS.
SMALL CARS PROVIDED			125 NOS.
S.C. CARS PROVIDED			114 NOS.
TOTAL PARKING PROVIDED			239 NOS.

NAME & SIGNATURE OF OWNER :-
M/S. SANDHU BUILDERS
C.A. TO CHETAN CO-OP.HSG.LTD OWNERS

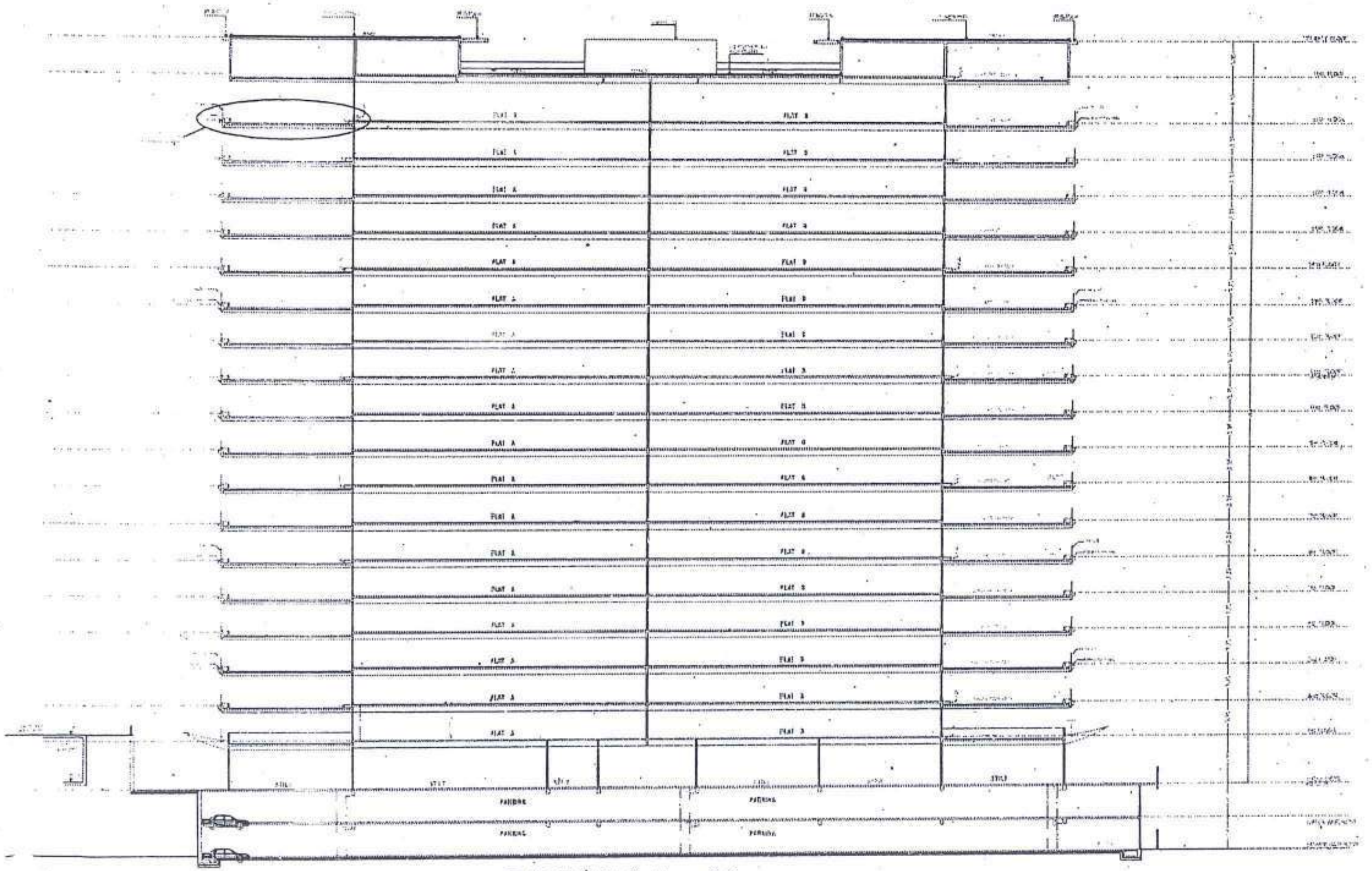
FILE NO. :-	SCALE	JOB. No.	DATE	DRAWN BY	CHECK BY
CE/2157/WS/AH	1 : 100		20/01/2010		S.Bhosle

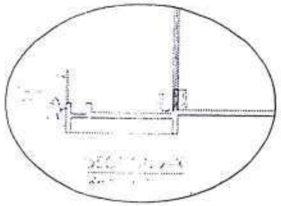
ARCHITECT :-
V. K. Bhave Consultants
CONSULTING ENGINEERS, ARCHITECTS & SURVEYORS
LIFE MEMBER OF "PEATA"
501/502, EMBASSY TOWERS, SEVEN BUNGLOWS,
ANDHERI (WEST), VERSOVA, MUMBAI - 400 061.
TEL :- (0) 91 022 65024215

NOTARY
S.M.H. ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission Expires
Sept. 2022
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

1167





SECTION AA

SCALE : 1:200

8/9	
STAMP OF APPROVAL OF PLAN	STAMP OF RECEIPT OF PLAN

CONTENTS OF SHEET:-

SECTION 'A'-'A'

DESCRIPTION OF PROPOSAL & PROPERTY:-

PROPOSED BUILDING ON PLOT BEARING C.T.S. No. [illegible] AT [illegible] HILL, PALI HILL [illegible] BANDRA (WEST).

NAME & SIGNATURE OF OWNER :-

M/S. SANDHU BUILDERS

C.A. TO CHETAK CO-OP.HSG.LTD. OWNERS.

FILE NO :-	SCALE	JOB No.	DATE	DRAWN BY	CHECK BY
CE/2537/WS/AH	1 : 100		[illegible]		S.Dhole

ARCHITECT :-

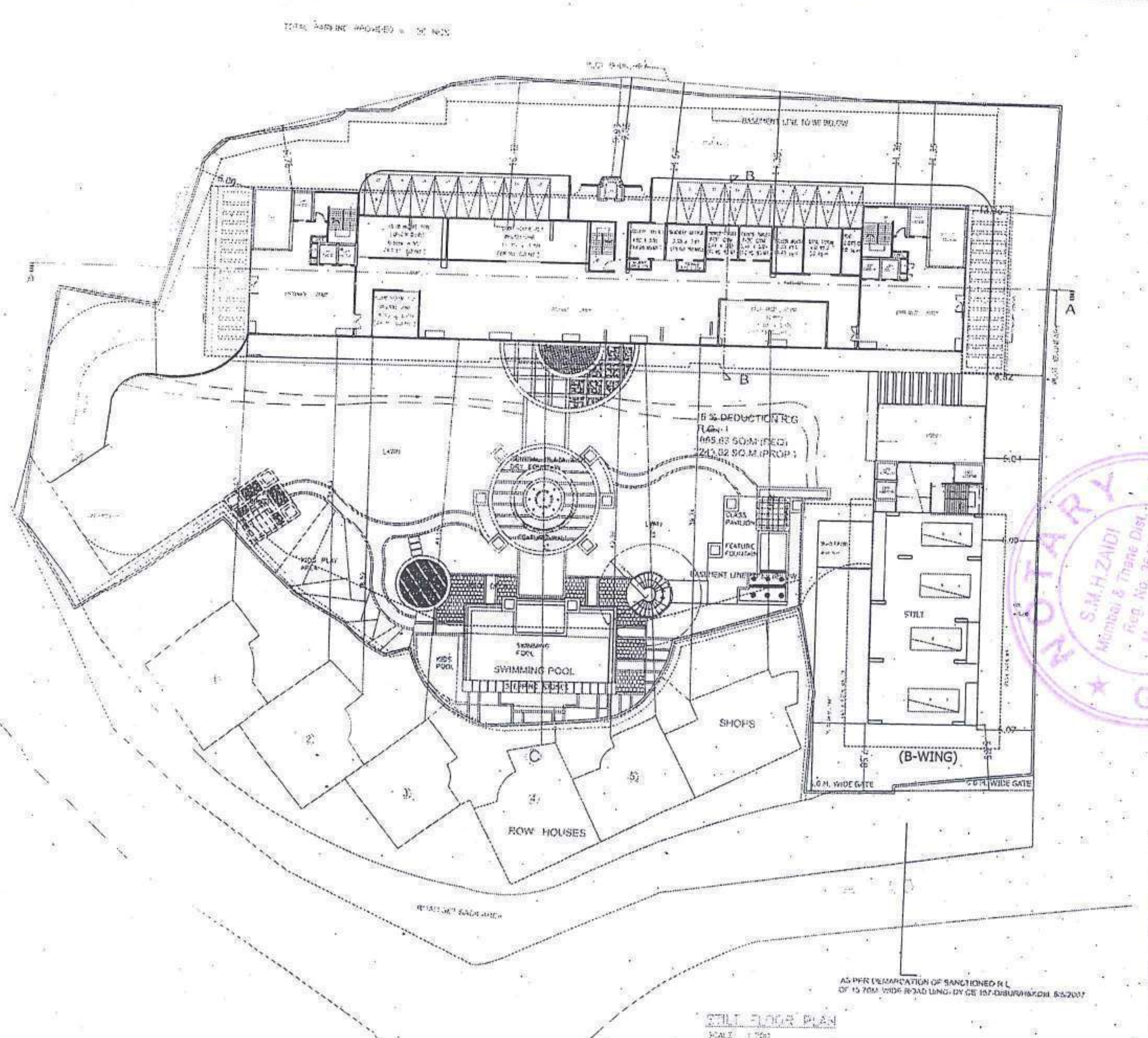
V. K. Chavri Consultants

CONSULTING ENGINEERS, ARCHITECTS & SURVEYORS
LIFE MEMBER OF "PEATA"
301/302, EMBASSY TOWERS, SEVEN BUNGLOWS,
ANDHERI (WEST), VERSOVA, MUMBAI - 400 061.
TEL :- (0) 91 022 [illegible]

NOTARY ★ S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires. 25 Sept. 2028 ★ GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1168



STILT FLOOR PLAN

SCALE 1:500

4/9

STAMP OF APPROVAL OF PLAN | STAMP OF RECEIPT OF PLAN

CONTENTS OF SHEET: STILT FLOOR PLAN

DESCRIPTION OF PROPOSAL & PROPERTY:

A. AREA STATEMENT — SQ. MTS.

B. GALLERY STATEMENT — AS PER STATEMENT

CERTIFICATE OF AREA

SIGNATURE OF ARCHITECT

NOTES :-
1) BOUNDARY OF THE PLOT SHOWN BLACK
2) PROPOSED STRUCTURE SHOWN RED
3) EXISTING STRUCTURE SHOWN BLUE
4) EXISTING STRUCTURE TO BE DEMOLISHED SHOWN DOTTED YELLOW
5) DRAINAGE SHOWN RED DOTTED LINE
6) SET BACK AREA SHOWN GREEN

NAME & SIGNATURE OF OWNER :-

M/S. SANDHU BUILDERS

C.A. TO CHETAK CO-OP.HSG.LTD. OWNERS.

FILE NO :-	SCALE	JOB. No.	DATE	DRAWN BY	CHECK BY
CE/2157/WS/AH	AS SHOWN		29/01/2010	P.B.	S.Bhatia

ARCHITECT :-

V. K. Bhasin Consultants

CONSULTING ENGINEERS, ARCHITECTS & SURVEYORS
LIFE MEMBER OF 'PEATA'
301/303, EMBASSY TOWERS, SEVEN BUNGLOWS,
ANDHERI (WEST), VERSOVA, MUMBAI - 400 061.

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640

M/S. SANDHU BUILDERS MUMBAI

1169

Slope Stability Analysis for the Slope

on Plot Bearing C. T. S. No. 1381, 1382-C, 1378-A,

& 1629-A/1-10, at Pali Hill, Bandra (W), Mumbai – 400 050.

REPORT PREPARED BY

BHARATIYA VIDYA BHAVANS
SARDAR PATEL COLLEGE OF ENGINEERING
MUNSHI NAGAR, ANDHERI (W), MUMBAI 400 058

May - 2008

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3649
My Commission
Expires
25 Sept. 2026
GOVT. OF INDIA

M/s. SANDHU BUILDERS
MUMBAI

1170

CONTENTS

Sr. No.	Description	Page No.
1	Introduction	1
2	Soil Profile	1
3	Observations and Need for Slope Stability	2
4	Geotechnical Appraisal and Recommendations	2
5	Conclusions and Recommendations	8
	Location Plan	A-1
	Appendix – A	B-1 to B - 5

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3849 My Commission Expires 25 Jan. 2026 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

Slope Stability Analysis for the Slope on Plot Bearing C. T. S. No. 1381, 1382-C, 1378-A, & 1629-A/1-10 at Pali Hill, Bandra (W), Mumbai – 400 050.

Date: 30th April, 2008

1. INTRODUCTION

This report covers the observations and recommendations regarding the slope stability for the slope on Plot Bearing C. T. S. No. 1381, 1382-C, 1378-A, & 1629-A/1-10, at Village Pali Hill, Pali Hill, Bandra (W), Mumbai – 400 050. This report is based on the geotechnical investigation report submitted by M/s. SAFE Cores and Tests, Bandra (W). Drawing A-1 shows the location of the two boreholes drilled at the above mentioned location.

2. SOIL PROFILE

The site is located on the top of a hilly terrain. At places, the slope is very steep and the slope angle varies from 40 degrees to about 70 degrees. The soil profile at the above mentioned site (as mentioned in the report dated June 2005) can be described as

Stratum – I: Reddish brown, gravelly soil mixed with pebbles, cobbles and boulders and residual soil (locally called murum up to a depth ranging from 4.50 to 16.00 m.

Stratum II: Brown, highly jointed Breccia up a depth ranging from 13.50 to 18.00 m with core recovery ranging from 33 % to 99% and RQD ranging from 0 to 15 %.

Stratum III: Grey hard Amygdaloidal Basalt is found up to the depth of investigation. i.e. 30.00 m with core recovery ranging from 30 % to 94 % and RQD ranging from 18 % to 84 %.

Rock samples from this stratum show a saturated UCS ranging from 100 kg/cm^2 to 350 kg/cm^2.

NOTARY GOVT OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1172

3. OBSERVATIONS AND NEED FOR SLOPE STABILITY

The morphology and environmental condition like rain fall are such that the parent rock, at the present site, has undergone both physical and chemical weathering over geological years. The rainfall is very heavy in this part and the topography exhibits an extremely undulating terrain. Such conditions have lead to both physical and chemical weathering of parent rock that has resulted in the secondary rocks (weathered and disintegrated formations).

The site is of prime importance due to the presence of reservoir supplying water to the Western suburb of Khar. Because of the steep slopes and the presence of vertical cuts (local – 1 and local – 2) on these slopes (Fig. 1), it is necessary to analysis the slope stability, in addition to evaluating the allowable bearing capacity. There is a need for assessing the local and global stability of slopes under static and dynamic loading conditions.

4. GEOTECHNICAL APPRAISAL AND RECOMMENDATIONS

The purpose of this investigation was to analysis the slope stability (local and global), and to recommend the measures to be taken for slope stability

In the following paragraphs slope stability analysis is discussed.

4.1 Slope Stability Analysis

The vertical cuts, about 3.50 m deep at local – 1 and about 6.40 m at local – 2, made for the construction of retaining walls are shown in the following figure 1. The retaining wall at local – 1 is about 3.00 m away from the right edge of a water reservoir (as shown in Fig. 1).

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission Expires
25 Sept. 2028
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

1173

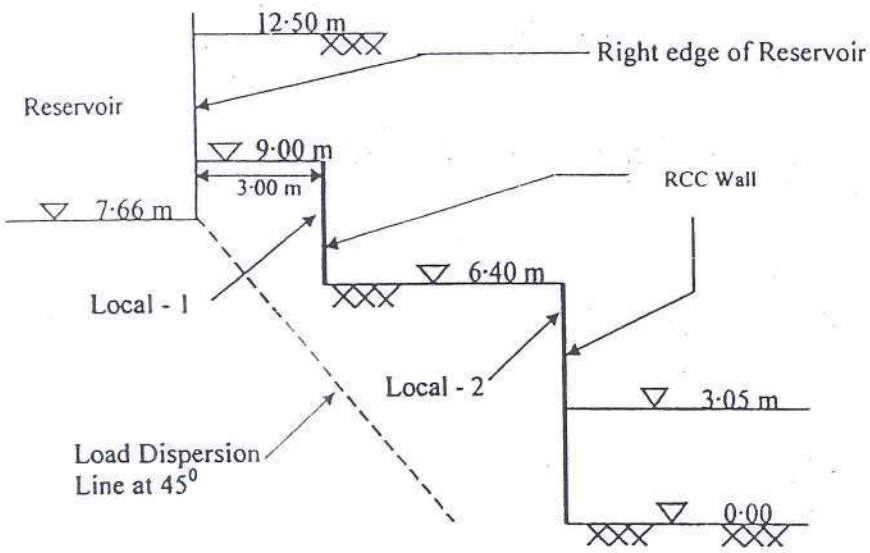


Fig. 1 Position of Reservoir and Retaining Wall.

The slope stability has been analysed using the software **SLOPE/W-2007.** The software involves the modelling of the geometry of the slope, allowing for stratification, if required and assigning material and strength (to include rock mass properties) properties of various strata. The software is also capable of handling piezometric line, static (vertical) and seismic loads. The method considers various slip surfaces (totaling 125 numbers of slip surfaces) and gives the factor of safety for these slip surfaces. The typical report gives the factor of safety (FoS) for critical slip surface (minimum FoS). For the chosen factor of safety, the corresponding slip surface can be obtained and the forces acting on the slice under consideration are calculated.

The SLOPE /W 2007 has the ability to conduct multiple analyses for the given slope. Advanced analyses to include probability and sensitivity analysis can also be performed using this software.

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

4.1.1 Slope Stability Analysis at Local – 1, Local 2 and Global

In this section the analysis of slope stability is carried out for section at local – 1, local – 2 and global (Fig. 1) stability of the vertical cuts. Modelling in the software is done by considering the following properties of soils at different depths. The section is analysed for both global and local conditions and the corresponding factor of safety is found out for the critical slip surface.

Figure 2 shows the different layers of soil / rock and their properties. The resultant forces representing the retaining wall are also shown in this figure.

Table 1. Properties of Soils.

Layer	Depth	Unit weight (kN/m^3)	Angle of Friction (ϕ)	Remark
1	10.00 – 8.50 m	20	30	Soil, cohesion neglected
2	8.50 – 3.00 m	22	30	Soil, cohesion neglected
3	3.00 – 1.00 m	25	—	Highly jointed rock

The slope stability for the rock layer (layer – 3) is analysed using Hoek and Brown model which is a nonlinear shear strength model for rock (basalt). The slope is modeled as a weak, blocky/disturbed, folded and/or faulted with angular blocks formed by many intersecting discontinuity sets.

4.1.2 Properties Rock slope as per Hoek and Brown (2002) Model

Four input parameters are required for Hoek and Brown modelling. The four parameters are:

σ_{ci} = the Uniaxial Compressive strength of the intact rock

m_i = a property of the intact rock

GSI = Geological Strength Index (0-100)

D = rock mass disturbance factor.

In the present analysis, the values used as input parameters are given in Table 2.

Table 2. Rock Properties.

Sl. No.	Parameter	Value of the parameter	Remark
1	σ_{ci}	100 kg/cm^2	Weak rock: 5 – 25 MPa
2	m_i	17	for basalt
3	GSI	30	Blocky/disturbed rock
4	D	0·4	Max value 1 for significant disturbance

4.1.3 Various Analyses Carried out, Results and Discussions

The slope stability analysis is carried out for vertical cuts of the soil and rock faces. The analyses included the local and global conditions. Static and seismic loads were considered separately for disturbance factors of 0·4. The factor of safety for critical slip surface for different cases is tabulated in Table 3 given below.

In the slope stability model, the retaining wall is replaced by the active pressure acting on the wall, considering an angle of internal friction of soil particles to be 30^0 (neglecting the cohesion). $\phi = 30^0$ gives higher coefficient of active pressure, though the actual ϕ value in the field is more than this value. The resultant pressure is assumed to be acting at its CG.

The FoS (factor of safety) is 1·522 for a disturbance factor of 0·40 under static loading for global conditions, without the provision of the retaining wall. The FoS is increased to 1·749 for the same conditions when the retaining wall is provided. The FoS is 1·260 for global conditions under dynamic loading effects (with retaining wall). The

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

seismic coefficients of 0·16 for horizontal and 0·10 for vertical (corresponding to zone-III) are considered.

It is observed that the slope is not safe for the local -1 condition (i.e. at the vertical face of soil). The FoS is 0·349 for a disturbance factor of 0·40 under static loading conditions and local analysis made. When the retaining wall is provided the FoS is improved and the value is found to be 2·144 for static loading conditions and 1·571 under dynamic loading conditions.

The angle of internal friction of soil $\phi = 30^0$ taken in the analysis gives an active pressure coefficient $K_a = 0{\cdot}33$. However, the actual ϕ value in the field is more than 30^0 and the real value of K_a will be less than 0·33. This will ensure a factor of safety of more than 1·20 as desired. It is also observed that the FoS is very sensitive to the failure zone considered (particularly in case of local stability analysis).

Figures 3, 4 and 5 show the critical slip surfaces for global stability for static and dynamic loading conditions. Figures 6, 7 and 8 show the critical slip surfaces at local – 1 for static and dynamic loading conditions.

Typical input data and result sheets obtained by the Slope / W analysis are given in Appendix – A.

It is recommended that minimum FoS of 1·50 is desirable under static and of 1·20 under dynamic loading conditions.

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3040 My Commission Expires 25 Sept. 2008 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

1177

Table 3. Comparison of Factors of Safety for Local and Global Analyses.

Sl. No.	Type of Analysis	Type of Load	Seismic Coefficient	Disturbance Factor	FoS for Critical Surface	Remark
1	Global	Static	--	0·40	1·522	Without Retaining Wall
2	Global	Static	—	0·40	1·749	With Retaining Wall
3	Global	Dynamic	Vertical = 0·16 Horizontal = 0·1	0·40	1·360	With Retaining Wall
4	Local - 1	Static	—	0·40	0·349	Without Retaining Wall
5	Local - 1	Static	—	0·40	2·144	With Retaining Wall
6	Local - 1	dynamic	Vertical = 0·16 Horizontal = 0·1	0·40	1·571	With Retaining Wall
7	Local - 2	Static	—	0·40	1·745	Without Retaining Wall
8	Local - 2	Static	—	0·40	2·680	With Retaining Wall
9	Local - 2	dynamic	Vertical = 0·16 Horizontal = 0·1	0·40	2·031	With Retaining Wall

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3649 My Commission Expires 25 Sept 2012 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

1178

5. CONCLUSIONS AND RECOMMENDATIONS

1. The retaining wall is modeled for active lateral earth pressure for soil having $\phi = 30^0$ and $C = 0$.
2. Slope stability for Local – 1 is analysed for various combinations. The factor of safety is more than 1·50 under static loading and 1·20 under dynamic loading, for the local / global conditions, when retaining wall is provided.
3. The stability analyses show adequate factor of safety for Local – 2 and global under static and dynamic loading conditions.
4. The RCC retaining wall shall be designed to resist the shear at the base and also properly embedded in the soil / rock.
5. It is recommended that the retaining wall shall be designed for hydrostatic pressure for full height of the wall.

Adequate drainage should be provided around the retaining wall so that the excess pore pressure is not built up. Care should be taken to ensure that subsequent construction activity does not disturb the retaining wall.

Report prepared by

Hegde 7/5/08

Dr. R. A. Hegde

Dr. S. Y. Mhaiskar

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3643 My Commission Expires 29 SEP 2008 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

1179

PALI HILL - Slope Stability Analysis

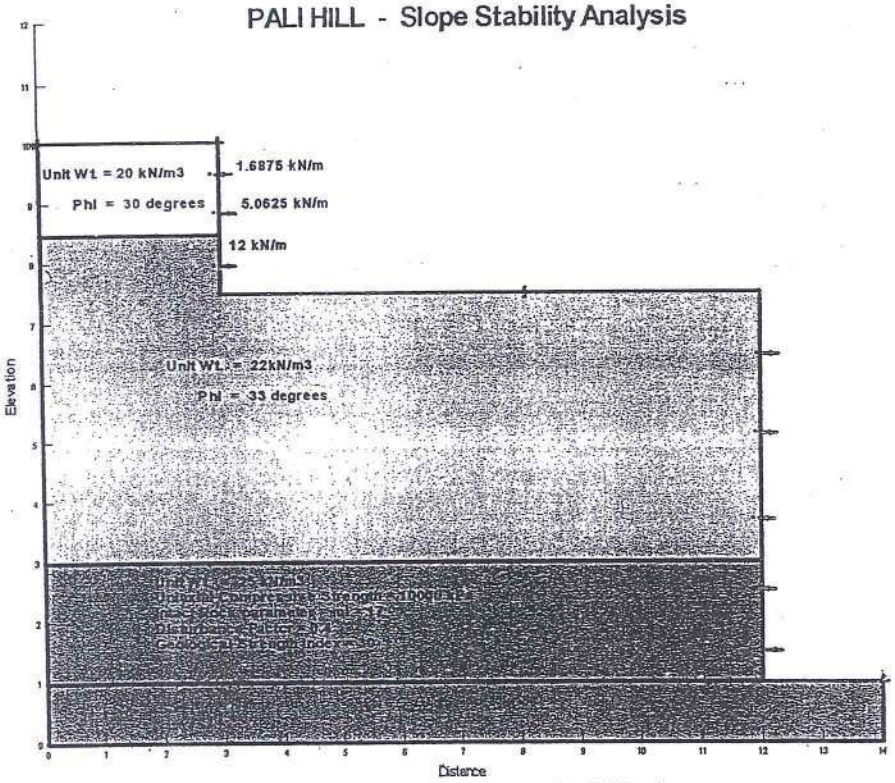


Fig. 2 Layers Showing Properties of Soil / Rock

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission
Expires
25 Sept. 2026
GOVT. OF INDIA

M/s. SANDHU BUILDERS
MUMBAI

1180

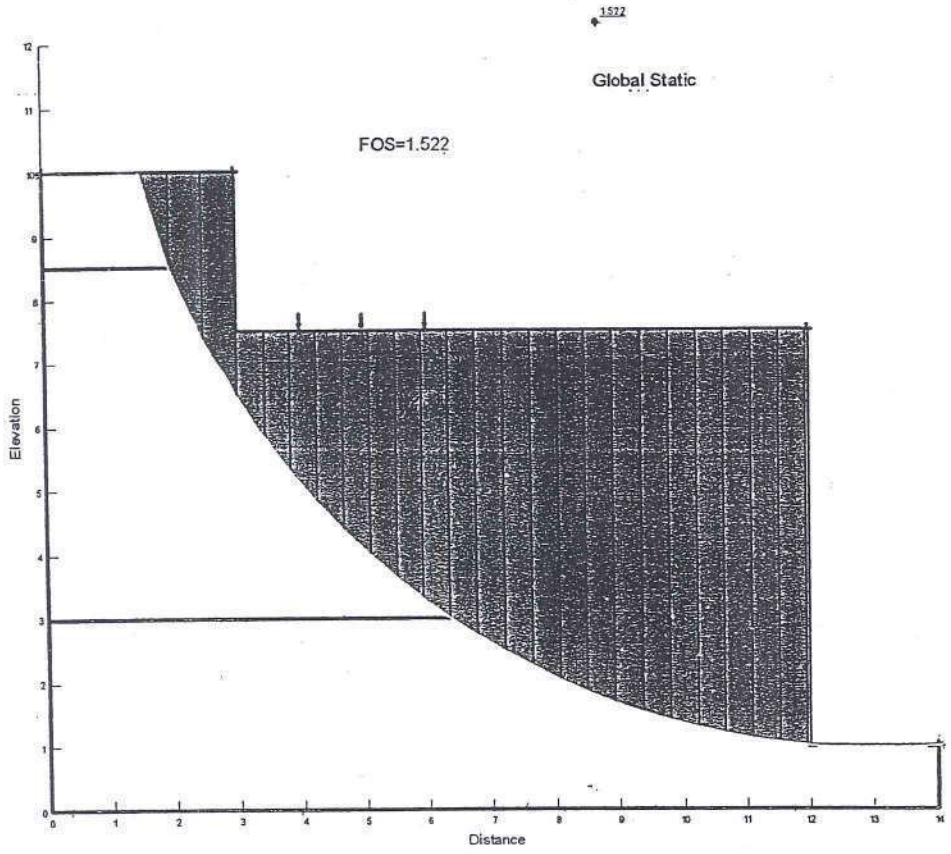


Fig. 3 Global Static Analysis (Without Retaining Wall)

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 2649
My Commission
Expires
25 Sept. 2009
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

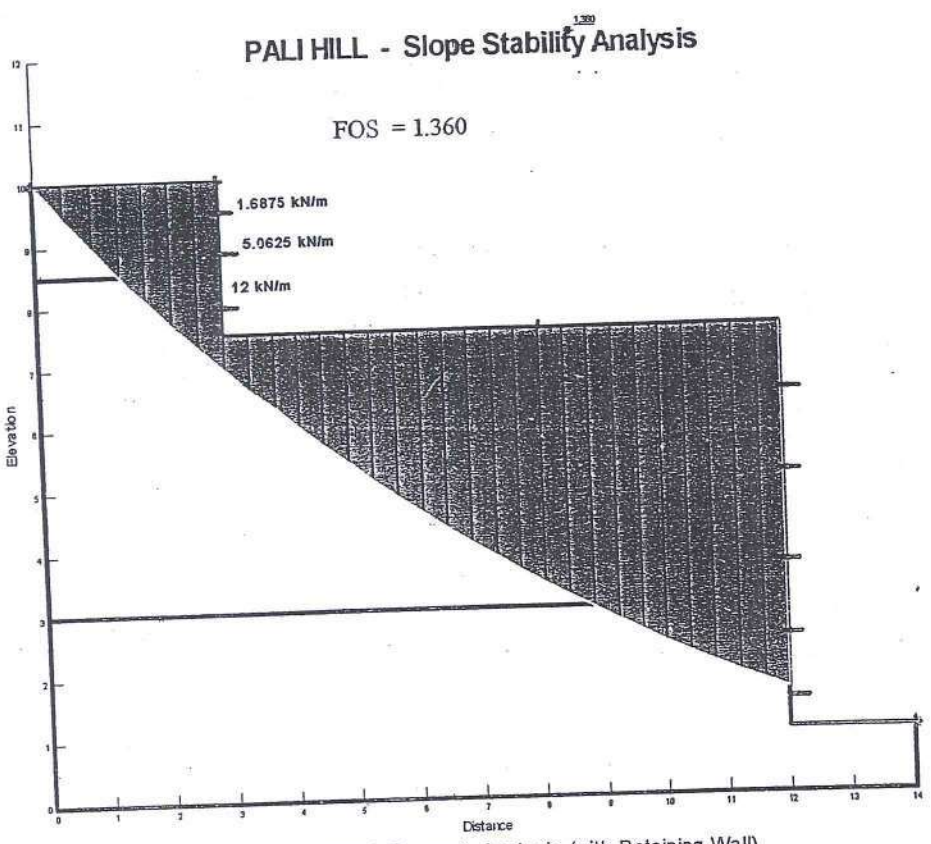


Fig. 4 Globai_Dynamic Analysis (with Retaining Wall)

1182

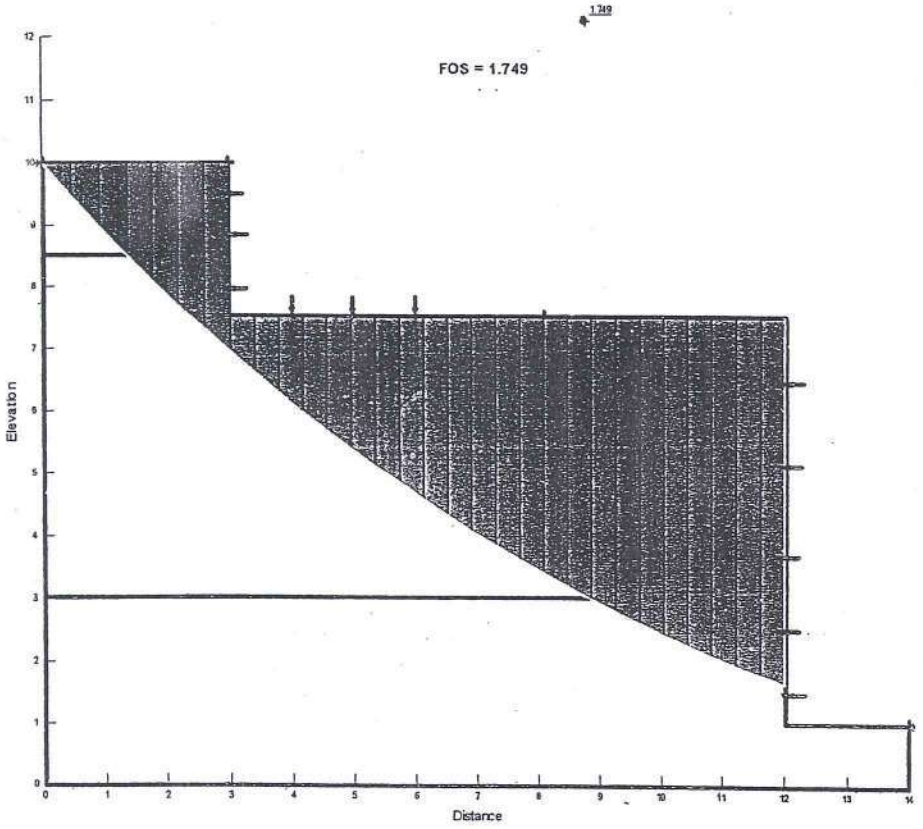


Fig. 5 Global_Static Analysis (with Retaining Wall)

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission
Expires
25 Sept. 2028
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

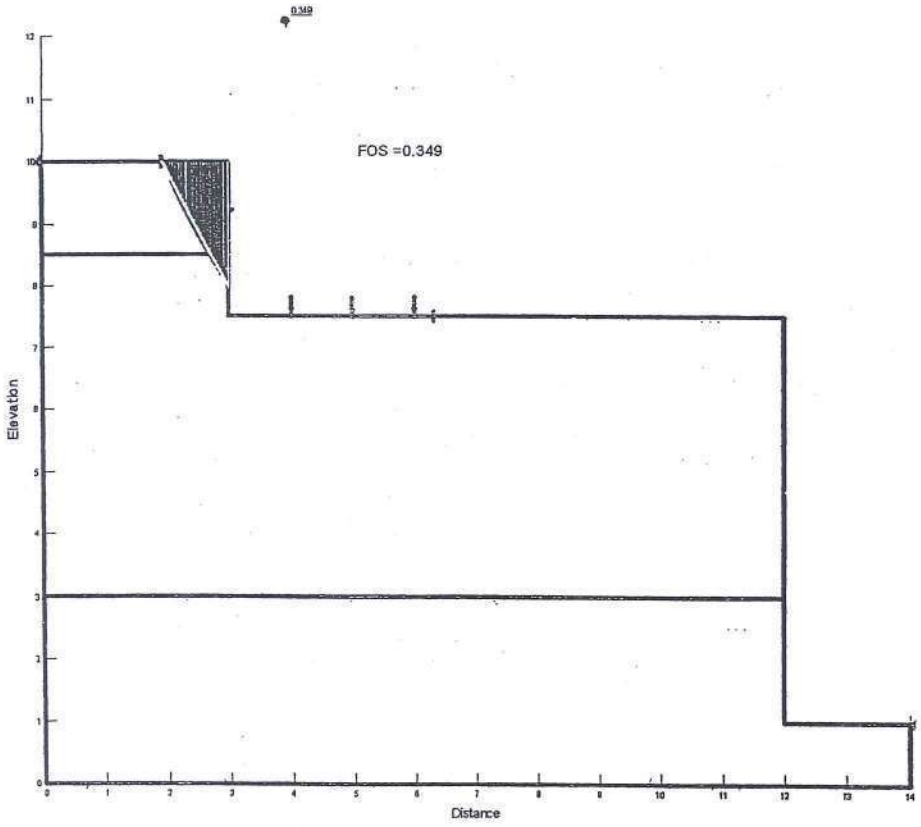


Fig. 6 Local_1_Static Analysis (without Retaining Wall)

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission
Expires
25 Sept. 2028
GOVT. OF INDIA

M/s. SANDHU BUILDERS
MUMBAI

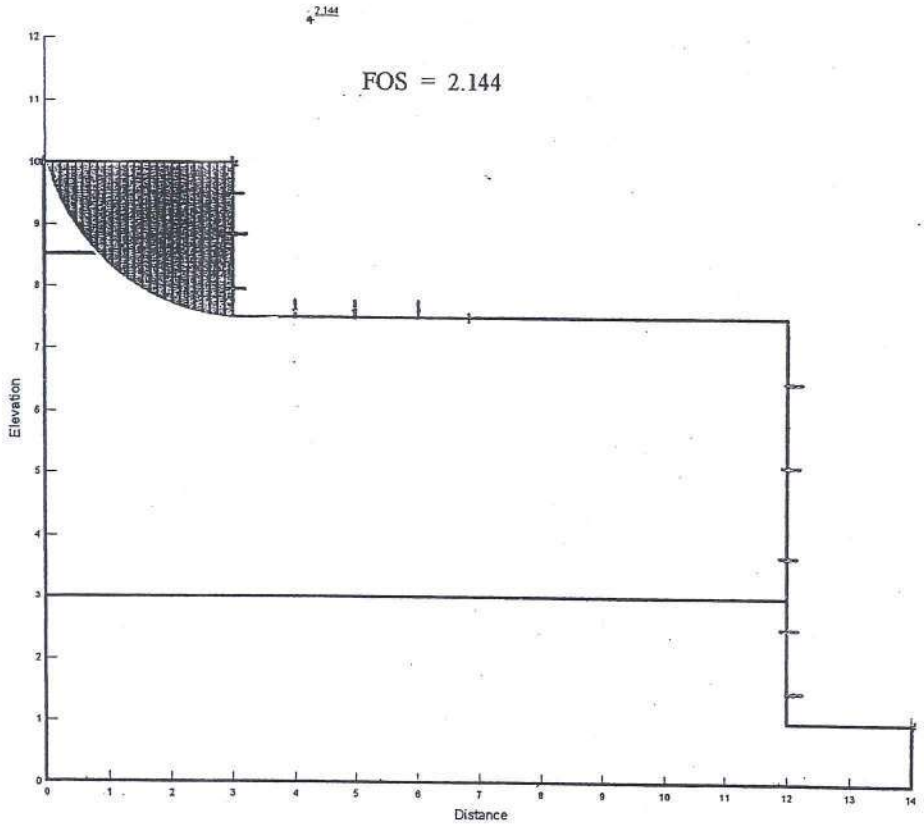


Fig. 7 Local_1_Static Analysis (with Retaining Wall)

1185

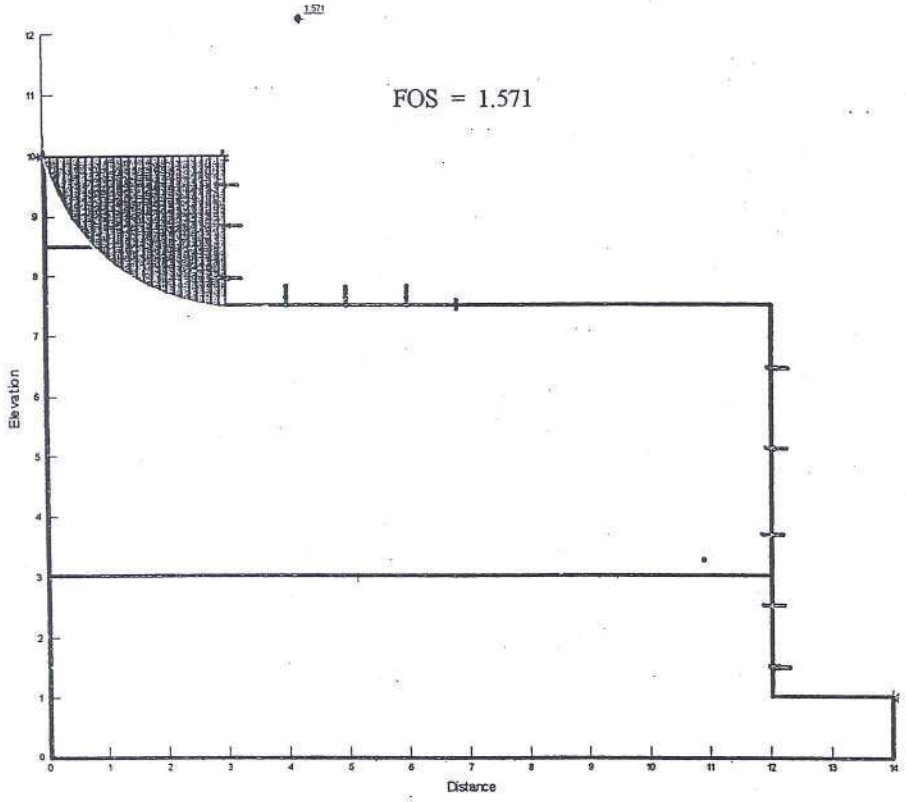


Fig. 8 Local_1_Dynamic Analysis (with Retaining Wall)

NOTARY GOVT OF INDIA

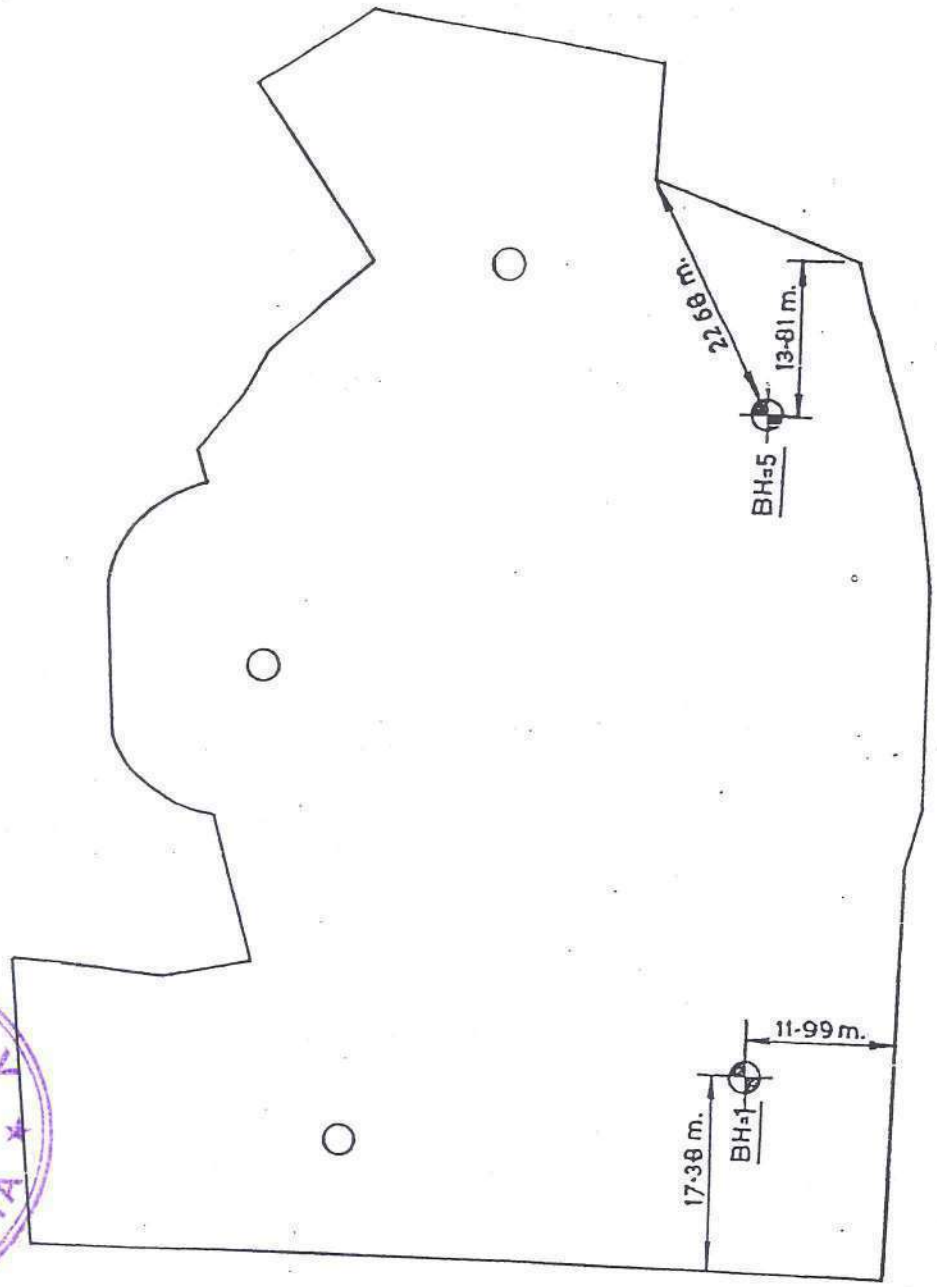
M/s. SANDHU BUILDERS MUMBAI

1156

CLIENT : M/s. SANJAY JAIN , MUMBAI.

PROJECT : SANDHU HOUSE 41 PALI HILL BANDRA (W.), MUMBAI.

A-1



LOCATION PLAN OF BORE HOLES

SAFE CORES AND TESTS
5, Citizen Apartments,
30th Road, Bandra, Mumbai 50.

SAFE CORES AND TESTS

NOTARY
S.M.H. ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission
Expires
25 Sept. 2028
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

1187

APPENDIX - A

Pali Hill 1

B-1

File Information

Created By: Dr. R. A. Hegde
Revision Number: 47
Last Edited By: Dr. R. A. Hegde
Date: 4/24/2008
Time: 3:26:04 PM
File Name: Palli Hill 1 with retaining wall local_1 dynamic.gsz
Directory: D:\civil\pali hill\

Pali Hill 1

Kind: SLOPE/W
Method: Morgenstern-Price
Convergence
    Minimum Slice Thickness: 0.1
    Ignore seismic load in strength: No
Number of Slices: 30
Optimization Tolerance: 0.01
Direction of movement: Left to Right
Allow Passive Mode: 0
Slip Surface Option: Entry and Exit
PhreaticCorrection: No
Side Function
    Interslice force function option: Half-Sine
FOS Distribution Calculation: Constant
Optimize Critical Slip Surface Location: No
Cap Suction: No
Rapid Drawdown: No
IncludeAirFlow: No
PWP Conditions Source: Piezometric Line
ConsolSatOnly: No
MovingBoundary: No
NumCritialSlipSurfaces: 1

Materials

Material 1: Reddish brown gravelly soil

Model: Mohr-Coulomb
Weight: 20 kN/m³
Cohesion: 0 kPa
Phi: 30 °
Phi-B: 0 °

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3540 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

Material 2: yellowish brown gravelly soil

Model: Mohr-Coulomb
Weight: 22 kN/m³
Cohesion: 0 kPa
Phi: 30 °
Phi-B: 0 °

Material 3: rock

Model: Shear/Normal Fn.
Weight: 25 kN/m³
Strength Function 1: rock analysis
Phi-B: 0 °

Functions

Shear/Normal Strength Fn. 1: rock analysis

Model: Spline Data Point Function
Function: Shear Stress vs. Normal Stress
Curve Fit to Data: 100 %
Segment Curvature: 100 %
Y-Intercept: 0.52010167
Data Points: Normal Stress (kPa), Shear Stress (kPa)
Data Point: (-0.7042624, 0.034697904)
Data Point: (1346.1593, 835.2694)
Data Point: (2485.1639, 1252.6629)
Data Point: (3561.2937, 1580.9341)
Data Point: (4601.5502, 1861.7889)
Data Point: (5617.572, 2111.8657)
Data Point: (6615.7139, 2339.8418)
Data Point: (7599.9191, 2550.9316)
Data Point: (8572.8426, 2748.5625)
Data Point: (9536.3771, 2935.1318)
Data Point: (10491.931, 3112.3952)
Data Point: (11440.586, 3281.6847)
Data Point: (12383.196, 3444.0399)
Data Point: (13320.449, 3600.2904)
Data Point: (14252.911, 3751.1114)
Data Point: (15181.052, 3897.0612)
Data Point: (16105.268, 4038.6076)
Data Point: (17025.899, 4176.1473)
Data Point: (17943.237, 4310.0206)
Data Point: (18857.535, 4440.5214)
Estimation Properties
Intact Rock Param.: 17
Geological Strength: 30 kPa
Disturbance Factor: 0
SigmaC: 10000
Sigma3: 15000 kPa
Num. Points: 20

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3540
My Commission Expires
26 Sept. 2023
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

1189

B-3

Regions

	Material	Points
Region 1	rock	1,7,2,3,4
Region 2	rock	1,5,6,7
Region 3	yellowish brown gravelly soil	5,8,9,10,11,6
Region 4	Reddish brown gravelly soil	8,12,13,9

Points

	X	Y
Point 1	0	1
Point 2	14	1
Point 3	14	0
Point 4	0	0
Point 5	0	3
Point 6	12	3
Point 7	12	1
Point 8	0	8.5
Point 9	3	8.5
Point 10	3	7.5
Point 11	12	7.5
Point 12	0	10
Point 13	3	10

Tension Crack

Tension Crack Option: (none)

Slip Surface Entry and Exit

Left-Zone Increment: 4
Left Projection: Range
Left-Zone Left Coordinate: (0, 10)
Left-Zone Right Coordinate: (3, 10)
Right-Zone Increment: 4
Right Projection: Range
Right-Zone Left Coordinate: (3, 9.937507)
Right-Zone Right Coordinate: (6.82364, 7.5)
Radius Increments: 4

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3640 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

B-4 1190

Slip Surface Limits

Left Coordinate: (0, 10)
Right Coordinate: (14, 1)

Seismic Loads

Horz Seismic Load: 0.16
Vert Seismic Load: 0.1

Line Loads

	Coordinate	Magnitude (kN)	Direction (°)
Line Load 1	(4, 7.5)	33.75	90
Line Load 2	(4.9878811, 7.4920265)	5	90
Line Load 3	(6, 7.5)	5	90
Line Load 4	(11.967606, 6.4638187)	6.75	0
Line Load 5	(11.881601, 3.6902069)	20.25	0
Line Load 6	(11.891774, 2.5165057)	33.75	0
Line Load 7	(11.931659, 5.1234168)	30	0
Line Load 8	(11.980686, 1.4882523)	36	0
Line Load 9	(2.880078, 9.4980391)	1.6875	0
Line Load 10	(2.9408419, 8.8354233)	5.0625	0
Line Load 11	(2.9205872, 7.9586872)	12	0

Critical Slip Surfaces

	Number	FOS	Center (m)	Radius (m)	Entry (m)	Exit (m)
1	14	1.571	(3.231, 10.795)	3.327	(0, 10)	(3.69307, 7.5)

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3540 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

Slices of Slip Surface: 14

	X (m)	Y (m)	PoreWater Pressure (kPa)	Base Normal Stress (kPa)	Frictional Strength (kPa)	Cohesive Strength (kPa)
1	0.05869265	9.810784	0	1.8438186	1.1521457	0
2	0.1760779	9.4847095	0	5.0062935	3.1282794	0
3	0.29346315	9.2371675	0	7.5072589	4.691056	0
4	0.41084845	9.032562	0	9.5907674	5.9929766	0
5	0.5282337	8.856792	0	11.421846	7.1371618	0
6	0.64561895	8.7024275	0	13.115109	8.1952297	0
7	0.76300425	8.5649555	0	14.754768	9.2198021	0
8	0.8822053	8.43966	0	16.429515	10.669452	0
9	1.0032223	8.324752	0	18.373303	11.931762	0
10	1.124239	8.2206675	0	20.4402	13.274021	0
11	1.2452555	8.1261325	0	22.679528	14.728258	0
12	1.3662725	8.040159	0	25.135655	16.323285	0
13	1.4872895	7.9619645	0	27.845311	18.082957	0
14	1.6083065	7.890918	0	30.835826	20.025019	0
15	1.7293235	7.826505	0	34.1246	22.160774	0
16	1.85034	7.768301	0	37.710459	24.489458	0
17	1.9713565	7.715953	0	41.573078	26.997872	0
18	2.0923735	7.669166	0	45.667418	29.656768	0
19	2.2133905	7.627693	0	49.917201	32.416609	0
20	2.3344075	7.591327	0	54.215027	35.20765	0
21	2.4554245	7.5598955	0	58.421387	37.939292	0
22	2.576441	7.5332565	0	62.36982	40.503435	0
23	2.6974575	7.5112925	0	65.880864	42.783533	0
24	2.8184745	7.4939095	0	68.772102	44.661125	0
25	2.9394915	7.481036	0	132.95755	86.343645	0
26	3.0577555	7.4727125	0	0.78046533	0.50684011	0
27	3.1732665	7.468709	0	0.88346211	0.573727	0
28	3.2887775	7.468721	0	0.87445741	0.56787928	0
29	3.4042885	7.472748	0	0.75367518	0.48944239	0
30	3.5197995	7.480805	0	0.5258215	0.34147247	0
31	3.6353105	7.492922	0	0.19893247	0.12918826	0

NOTARY S.M.HUZAIDI Mumbai & Thane Dist. Reg. No. 3248 My Commission Expires 26 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

IInd Letter -

1192

<Dial 18002666868> <Wear

EM238409991IN IVR:697723840999

SPP BANDRA WEST S.O <400050>
Counter No:1,07/08/2023,12:57
To:MAHARSHTRA PO,1ST FLOOR
PIN:400022, Sion SO
From:SANDHU BUIL.SANDHU PALACE
Wt:1035gms
Amt:59.00(Cash)Tax:9.00
<Track on www.indiapost.gov.in>
<Dial 18002666868> <Wear Masks, Stay Safe>

sairakeshpt@gmail.com

EM684776282IN IVR:697768477628

SP BANDRA WEST S.O <400050>
Counter No:1,07/08/2023,12:57
To:SUB REGIONAL .1ST FLOOR
PIN:400022, Sion SO
From:SANDHU BUIL.SANDHU PALACE
Wt:15gms
Amt:29.50(Cash)Tax:4.50
<Track on www.indiapost.gov.in>
<Dial 18002666868> <Wear Masks, Stay Safe>

sairakeshpt@gmail.com

EM684776296IN IVR:697768477629

SP BANDRA WEST S.O <400050>
Counter No:1,07/08/2023,12:57
To:REGIONAL OFFICER .1ST FLOOR
PIN:400022, Sion SO
From:SANDHU BUIL.SANDHU PALACE
Wt:15gms
Amt:29.50(Cash)Tax:4.50
<Track on www.indiapost.gov.in>
<Dial 18002666868> <Wear Masks, Stay Safe>

sairakeshpt@gmail.com

EM684776044IN IVR:697768477604

SP BANDRA WEST S.O <400050>
Counter No:1,07/08/2023,12:57
To:NUMBLE MEMBER .8
PIN:400022, Sion SO
From:SANDHU BUIL.SANDHU PALACE
Wt:30gms
Amt:29.50(Cash)Tax:4.50
<Track on www.indiapost.gov.in>

sairakeshpt@gmail.com

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3649
My Commission
Expires
25 Sept. 2028
GOVT. OF INDIA

M/S. SANDHU BUILDERS
MUMBAI

Sign In Register

1193

हिन्दी

India Post

You are here Home>> **Track Consignment**

Quick help

Track Consignment

* Indicates a required field.

* Consignment Number

EM238409991IN

Track More

Booked At	Booked On	Destination Pincode	Tariff	Article Type	Delivery Location	Delivery Confirmed On
Bandra West S.O	07/08/2023 12:57:41	400022	59.00	Speed Post Parcel Domestic	Sion SO	09/08/2023 17:26:40

Event Details For : EM238409991IN

Current Status : Item Delivered(Addressee)

Date	Time	Office	Event
09/08/2023	17:26:40	Dadar H.O	Item Delivered(Addressee)
09/08/2023	16:43:13	Dadar H.O (Beat Number:39)	Item Delivered [To: postman (Addressee)]
09/08/2023	09:37:19	Dadar H.O	Out for Delivery
09/08/2023	08:38:46	Dadar H.O	Item Received
07/08/2023	15:46:48	Bandra West S.O	Item Dispatched
07/08/2023	12:57:41	Bandra West S.O	Item Booked

NOTARY S.M.H.ZAIDI Notarial & Trade Dist. Reg. No. 1340 My Commission Expires 15 Sept. 2028 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

Sign In Register

1194

हिन्दी

You are here Home>> **Track Consignment**

Track Consignment

Quick help

* Indicates a required field.

* Consignment Number

EM684776282IN

Track More

Booked At	Booked On	Destination Pincode	Tariff	Article Type	Delivery Location	Delivery Confirmed On
Bandra West S.O	07/08/2023 12:57:41	400022	29.50	Inland Speed Post	Sion SO	09/08/2023 13:46:09

Event Details For : EM684776282IN

Current Status : Item Delivered(Addressee)

Date	Time	Office	Event
09/08/2023	13:46:09	Sion SO	Item Delivered(Addressee)
08/08/2023	12:01:32	Sion SO (Beat Number:14)	Item Delivered [To: mpcb Bord (Addressee)]
08/08/2023	09:25:13	Sion SO	Out for Delivery
08/08/2023	08:26:37	Sion SO	Item Received
08/08/2023	05:08:11	Mumbai NSH	Item Dispatched
07/08/2023	23:27:25	Mumbai NSH	Item Bagged
07/08/2023	15:45:20	Bandra West S.O	Item Dispatched
07/08/2023	15:40:47	Bandra West S.O	Item Bagged
07/08/2023	12:57:41	Bandra West S.O	Item Booked

M/S. SANDHU BUILDERS MUMBAI

1195

Track Consignment

Quick help

* indicates a required field.

* Consignment Number

EM684776296IN

Track More

Booked At	Booked On	Destination Pincode	Tariff	Article Type	Delivery Location	Delivery Confirmed On
Bandra West S.O	07/08/2023 12:57:41	400022	29.50	Inland Speed Post	Sion SO	09/08/2023 13:46:09

Event Details For : EM684776296IN

Current Status : Item Delivered(Addressee)

Date	Time	Office	Event
09/08/2023	13:46:09	Sion SO	Item Delivered(Addressee)
08/08/2023	12:01:32	Sion SO (Beat Number:14)	Item Delivered [To: mpcb Bord (Addressee)]
08/08/2023	09:25:13	Sion SO	Out for Delivery
08/08/2023	08:26:37	Sion SO	Item Received
08/08/2023	05:08:11	Mumbai NSH	Item Dispatched
07/08/2023	23:27:25	Mumbai NSH	Item Bagged
07/08/2023	15:45:20	Bandra West S.O	Item Dispatched
07/08/2023	15:40:47	Bandra West S.O	Item Bagged
07/08/2023	12:57:41	Bandra West S.O	Item Booked

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Reg. No. 3649 My Commission Expires 25 Sept. 2028 GOVT. OF INDIA

M/S. SANDHU BUILDERS MUMBAI

Track Consignment

Quick help

* Indicates a required field.

* Consignment Number

EM684776044IN

Track More

Booked At	Booked On	Destination Pincode	Tariff	Article Type	Delivery Location	Delivery Confirmed On
Bandra West S.O	07/08/2023 12:57:41	400022	29.50	Inland Speed Post	Sion SO	09/08/2023 13:46:09

Event Details For : EM684776044IN

Current Status : Item Delivered(Addressee)

Date	Time	Office	Event
09/08/2023	13:46:09	Sion SO	Item Delivered(Addressee)
08/08/2023	12:01:32	Sion SO (Beat Number:14)	Item Delivered [To: mpcb Bord (Addressee)]
08/08/2023	09:25:13	Sion SO	Out for Delivery
08/08/2023	08:26:37	Sion SO	Item Received
08/08/2023	05:08:11	Mumbai NSH	Item Dispatched
07/08/2023	23:27:25	Mumbai NSH	Item Bagged
07/08/2023	15:45:20	Bandra West S.O	Item Dispatched
07/08/2023	15:40:47	Bandra West S.O	Item Bagged
07/08/2023	12:57:41	Bandra West S.O	Item Booked

True Copy
PMD
Advocate

NOTARY S.M.H.ZAIDI Mumbai & Thane Dist. Regd. No. 3640 My Commission Expires 15 Sept. 2026 GOVT. OF INDIA

M/s. SANDHU BUILDERS MUMBAI

BEFORE THE NATIONAL GREEN TRIBUNAL (WESTERN ZONE) AT PUNE
(Under Section 18(1) read with Sections 14, 15, 16 and 17 of The National Green Tribunal Act, 2010)

APPLICATION NO. 31 OF 2015

IN THE MATTER BETWEEN:
Chetak Co-operative Housing Society Limited ... Applicant

versus

State of Maharashtra and Ors.
... Respondents

AFFIDAVIT ON BEHALF OF RESPONDENT NOS. 8 TO 11 (in reply to the Affidavit dated 18.07.2023 of Respondent No. 7)

Dated this 7th day of September 2023

NOTARY
S.M.H.ZAIDI
Mumbai & Thane Dist.
Reg. No. 3640
My Commission
Expires
25 Sept. 2028
GOVT. OF INDIA

Parikshit Desai and Fawia Misquitta
Advocates for Respondent Nos. 8 to 11.
C/o. Himank Desai and Co.,
Chartered Accountants,
Office No. 2, Ground Floor, Gokul Kunj building, opposite Bank of India,
Chitrakar Dhurandhar Marg, Danpada,
Danda, Khar (West), Mumbai – 400 052.
Email :- PHdesai.84@gmail.com
Phone :- 98215 46105.