

3 Contributions of Walter Ducat and Vasudev Kanitkar

This discourse on works carried out by Colonel Walter Ducat R.E. and Vasudev Bapuji Kanitkar in Deccan region enhance on their graph of work they executed and collaborative landmark at the summit of their career they produced in Poona. There is an attempt to establish and unveil Walter Ducat's contribution in the development of both bigger and small-scale towns in Deccan region such as Pune, Kolhapur, Ahmadnagar, Ahmedabad, Gokak and so on. Probably this documentation and analysis of Walter Ducat's service in the region try to perceive his involvement in architectural developments in the late nineteenth century at various levels as engineer, urban designer, town planner, irrigation expert and designer of minor projects those are milestones in colonial urban landscapes. This discussion will perhaps support his collaborative works with different agencies and local contractors in the process of actual implementation of several projects. Different social forces such as local intellectuals and reformists during revolts in 19th century against the colonial architectural expansions lead to a different manifestation in the perceptible form. Language, climate, cultural variations turn out to be advantages and hurdles at the same time for the new "technocratic regime". On the other hand set parameters of manuals, treatise, professional papers and major involvement of local artisans and contractors probably tried to contribute to the architectural vocabulary with their modified Indigenous solutions in local context. This discussion will probably try to elaborate more on Walter Ducat's work being a "product of Addiscombe"²⁷³ trained for different situations in India as well.

Whereas in case of understanding contributions of Vasudev Kanitkar architectural language he developed with and demonstrations in landmark projects in politically and economically important towns such as Bombay, Poona and Baroda is the main focus of further conversations. It perhaps enquires his relations with social reformists, philanthropists and royal engineers, being work in charge such as Walter Ducat.

Before we discuss directly the works of Ducat and Kanitkar it is important to know what was the background of engineering and architectural education in Indian context. How the western knowledge perpetuated in Indian soil and reached to royal engineers and local contractors. The image and vision of British officers had in their mind tried to manifest in a real sense could be termed as "Indian colonial Public landscapes". In Medley's lectures to burgeoning royal engineers he articulates the role of engineers in India such as "Every executive engineer is supposed to be consulting engineer and architect to the public generally, and the civil authorities of the district in particular, and if the magistrate is an energetic man (as he generally is), you may have to prepare designs for market- places, Serais (or resting places for native travellers), municipal offices, clock towers, and like: and if you area mechanical turn, you may be sure that you will be consulted about the machinery employed in the jail manufacturers, where you will find some mechanical appliances that will considerably astonish you."²⁷⁴ There are several evaluations about the works shaped by royal engineers during British reign in India. Perhaps the criticism was quite negative from the point of view of architects and artists like J.L. Kipling during late nineteenth century. Indeed these royal

273 Directors of East India Company in January 1809 founded an academy at Addiscombe near Croydon in England to cater insufficient supply of officers for scientific arms in India.

274 Medley Julius George, India and Indian Engineering Three lectures delivered at the Royal Engineer Institute, Chatham, in July 1872, (London, E.& F.N. Spon, 48 Charing Cross, 1873), 83.

engineers right from establishment of East India Company have helped to build British India. They were the key persons to handle local engineers, labor and several local communities in the process of building British sovereign. Sandes call these royal engineers, as “Excellent products of Addiscombe”²⁷⁵ though this sounds a superfluous glorification of the ruling agent to some extent probably was quite a datum from ruler’s point of view. Right from presidency towns, important trading towns, princely states, harbors to smaller towns the traces of their works could be seen at various levels in numerous types of tangibles in 19th century. Their intervention could be observed at various levels such as roads, bridges and railways to connect towns for vigorous transportation and command on regions, services such as drainage, water supply, and government structures such as offices, hospitals, GPOs, mint, Railway stations, markets around us as a important architectural layer in 19th century. Western and eastern scholars while writing about this specific period consider it as early modern period in Indian context. Many western concepts reached Indian subcontinent via these agents.

Public Works Department or PWD organized in 1854, lot of civil work activities were at boom but due to very few expertise military engineers got involved in the process of constructing infrastructure. It was mentioned in the handbook of Thomason College “Up to year 1855 Public works in India Were carried out under the orders of ‘The Military Board’, but in this year the department of public works was organized as a civil department. In March, 1855, a Committee was assembled at Agra to report on the education and employment of Native Assistants in the Engineer Department.”²⁷⁶ It was stated in the document of PWD that pertaining to the demand of staff increased from 200 engineers to 896 till 1869. After mutiny in 1857 connectivity and accessibility lead to increased works ultimately the works were divided in three branches such as Military Works branch, a Civil Works branch including irrigation and a Railway branch. Lectures delivered by Medley in 1872 perhaps elucidate the need for architects and designers for Department of Military Buildings. In PWD all royal engineers work as civilians, except the event of war. From Medley’s point of view royal engineers were most responsible category in the whole system of PWD who actually execute the work on ground with the help of intelligent foremen probably sometimes have to train the local contractors in the process of erection. They should be well acquainted with the local languages and culture for better communication and implementation of colonial thought in built form.²⁷⁷ Further discourse on contribution of Royal engineers such as Clair Wilkins, Trubshaw, Charles Mant, Chisholm, and Meliss had been discussed by scholars such as Christopher London, Tillotson, Gavin Stamp, Thomas Metcalf and so on. Peter Scriver specifies the PWD engineers as empire builders,²⁷⁸ who created image of standardized colonial landscape of 1860’s. Later development in the century under Victorian reign followed approach of functionalist Modern architectural vocabulary and

275 Sandes E. W. C. Lieut. Colonel, *The Military Engineer in India, II...cit.*,87.

276 Handbook of the Thomason Engineering College Roorkee, 1903

277 Sandes E. W. C. Lieut. Colonel, *The Military Engineer in India, II...cit.*, 3; Medley J.G., *India and Indian Engineering*, Three lectures delivered at the Royal Engineer Institute, Chatham in 1872, (London, E.F.N. Spon, 48, Charing Cross, 1873), 24, 44-46; British Library London, India Office records L/PWD Public works department (L/PWD/1-8, records 1839-1931, IOR list)

278 Scriver Peter, “Chapter 4: empire Building and Thinking in the Public Works Department of British India”, Edith Peter Scriver and Vikramaditya Prakash *Colonial Modernities: Buildings, Dwelling and architecture in British India and Cylon...cit.*,71-74.

planning. Major services, road construction, and architectural works implemented by known and unknown engineers. One of those names not yet discussed and known was Colonel Walter Mardon Ducat who has spent his twenty nine years of service under PWD in Bombay presidency had worked with several eminent personalities such as Charles Mant, Oliver in Kolhapur and John Ross, La Touche²⁷⁹ in Poona.

279 Brigadier- General (Temporary) C.D.U. La Touche (Born 11th July 1834)- joined the services as Ensign, 29th July 1850; arrived in the country, 24th Oct 1850; attached to 22nd N.I., 26th Oct 1850; attached to 14th regiment N.I., 25th Nov 1850; 9th Regiment N.I.; 1st Dec 1851; 14th regiment N.I. 7th Jan 1852; Poona horse, 12th Dec 1854; Lieutenant, Pona Horse, 23rd Nov 1856; on furlough from 14th to 31st July 1857; Captain Poona Horse (staff corps), 15th June 1862; major Poona Horse(staff corps), 29th July 1870; Lieutenant- colonel Poona horse (staff corps), 29th July 1876; Brevet colonel, Poona horse (staff corps), 1st July 1881; cantonment magistrate, Poona, 1st November 1883; on privilege leave from 19th April to 18th June 1886; officiating on the Brigade staff at Aden with the temporary rank of Brigadier General, 1st July 1887 (Source: British Library London, catalogue no. V.12.292, History of Services Bomaby 1886-1889, record Department, Page 156).

3.1 *Military training and service background of Walter Ducat in India*

While understanding early life of Walter Ducat and educational background extremely scarce information I could gather from archives or probably I was unsuccessful in finding his biography as such inscribed by any of the investigator. Even the letters available in British library London written by him discusses much about his correspondence related to Gokak water Mill project. Nothing much could be perceived about his early life as primary source, written by himself or any of his family members. As per the obituary published after his natural demise in 1902 and information accessible on websites like “find my past I could come across some information about his initial training. Walter Ducat son of Charles and Emily Matilda Ducat was born on 31st January 1837. Walter Ducat Educated in Kensington Grammar School and the Nature of education he received was Classical and mathematical as per his statement in the form he filled for admission in Addiscombe. When he applied for East India Company Military Seminary admission his father was no more but as per his answer written he was surgeon in Bombay.²⁸⁰ This means he was possibly familiar to the situations in India due to his father to some extent. Walter Ducat gained the Willock India Cadetship at Kensington School in 1854. On leaving the military college at Addiscombe, he was gazette to the H.E.I.C.S. Engineers in June 1856. Having completed a further course of study at Chatham he reached to India, and landed in Bombay in May 1858.²⁸¹ Working in British colonies was a prospect for many young engineer and designers as they could work on diverse scale and typology construction works in extremely different situations. **(Figure 92,93,94)**

Till late eighteenth century East India Company needed more skilled and efficient officers with scientific knowledge for Indian works to be carried out. Till early 19th century they obtained cadets from Royal Military Academy²⁸², and other Private academies. Directors of East India Company in January 1809 founded a Seminary at Addiscombe near Croydon to cater insufficient supply of officers for scientific arms in India. Major Carmichael-Smyth of Madras Engineers became head of institute in 1822 and military engineers from India started sharing administration of seminary. Total 3600 cadets passed out from Addiscombe and more than 500 engineers were posted to Bengal, Bombay and Madras presidencies. Later in mid of 19th century several technical institutions such as Thomason College of Engineering Roorkee (1847), Madras Civil Engineering College (1857), College of Engineering Poona (1859) opened in India as well to train British and local engineers following format of Addiscombe with additional modifications for local needs.²⁸³ This was well-planned attempt of East India Company to provide trained technicians for the colonies to establish their authority in all grounds. Starting with Addiscombe, it shows the link, in the whole process of

280 London, British Library, Microfilm IOR/L/MIL/9/233/296-303, year 1854-1855

Note: 39 of 1854 Addiscombe Season 18 states entry of Col. Walter Mardon Ducat in Military service of the company as a cadet for the Military seminary

281 1902 Obituary, Walter Mardon Ducat, Colonel R.E. retired, died at Las Palmas, Grand Canary, on the 12th January, 1902 Source: http://www.gracesguide.co.uk/Walter_Mardon_Ducat

282 Royal Military Academy at Woolwich established in July 1841 earlier known as Military school. They stopped recruitment of their cadets in India as Mentioned by Sandes in, *The Military Engineer in India*.

283 Sandes E. W. C. Lieut. Colonel, *The Military Engineer in India, II...cit.*, 348-349.

colonization of educational system in Indian technical pedagogy. Perhaps this standardization following western patterns in larger context in all parts of India supported colonial construction activities.

The syllabus of military training for royal Engineers covered diverse subjects and areas. This syllabus was great source of guidance in execution of various services and architectural works in India. Walter Ducat being the student of the military training organized by East India Company especially for royal engineers probably gone through reference material mentioned in syllabus of school. In syllabus students were possibly studying various manuals and books like Nicholson's *Principals of Architecture*, Pugin's *example of Gothic Architecture*, Rickman's *Gothic architecture*, Hunt's *Exemplars of Tudor Architecture*, *The illustrated Handbook of Architecture*, by James Furguson, *Tredgold's Elementary Principles of Carpentry*, edited by Barlow. *Tredgold on strength of cast Iron and other Metals*, edited by Hodgkinson construction techniques and architectural styles.²⁸⁴ Young officers to built, extent referred C.W. Pasley's "Practical Architecture" Published in 1826, repair various barracks, hospitals, and storehouses. These notes mainly meant to used as textbook for knowing how the work should be carried out on site.²⁸⁵

Engineering College at Cooper's Hill founded in England, eleven years after closing of Addiscombe. Similar fashion they structured their syllabus to train young British engineers to work as officers in India. Notes from memorandum 'the Civil Engineering College for India mention about the selection of students of age in between seventeen to twenty and other criteria. Except from the engineering subjects they had to learn general subjects such as English, History, Mathematics, classics, French, German, Chemistry, Physics, Geology and Drawings as well. The next stage of learning was intense theoretical and practical training to prepare for any kind of civil, accounts and works so on. Average yearly income to work in India was approximately 1000 pounds were quite a lot during the period.²⁸⁶ Before they get posted in different parts of India, they were trained for local languages and customs to understand the 'natives' and should be able to work with them in ease.

284 Windeyer George H., *Memoranda and sketches relating to the present course of practical architecture at the royal Engineer Establishment Chatham*, (Chatham 1858).

285 Pasley C.W., *Practical Architecture*, Lithographed notes 1926, (republished by Royal Establishment of Chatham, 1862).

286 Notes from memorandum the civil Engineering College for India, 7 Oct. 1870, Infra L/PWD/8/7; "The new Indian Service", anonymous article from *The spectator*, 10 Dec 1870, 1472, Infra L/PWD/8/7 p 11, Source: British Library London.

3.2 *Projects proposed and executed by Walter Ducat*

Walter Ducat after passing out from Addiscombe Chatham started his career in Bombay as probationary assistant engineer, on special duty in 1859. Further to brief his works under Bombay



Fig. 92, Royal School of Military Engineering at Chatham, Photo by Lavand Vaidehi

presidency he had employed his knowledge he gained during his military training and probably successful to large extent as technical expert and designer. During his service years till 1886 he held executive charge of public works in different parts of the Bombay Presidency. He joined as Special Assistant Engineer in Khandesh, Dhulia 12th June 1861. His major proposal of work for Bombay-Trombay land reclamation in 1862 got sanctioned for actual execution with lot of critique on project. His analysis of site, proposal and estimate made was a meticulous work admired and printed with plans in a volume of selections from the records of the PWD. He worked on Dockyards during his service in Bombay, and a significant landmark project that he designed and detailed out was Prongs lighthouse till 1868.

Walter Ducat was involved in Gokak²⁸⁷ Water Power Cotton Mills project from 1875 till 1889 his letters and documents related to the purpose and prospects of the project explains its importance as significant center producing cotton on great water resource and cheaper labor available in the vicinity as important trading place for British government.²⁸⁸ These confidential letters and papers were written in order to elucidate details of the project and use of surrounding natural resources for better product to support establishment of British hegemony in the region by improved trade and

287 Gokak is a town in Karnataka one of the states of south part of India located at the confluence of two rivers Ghatprabha and Markndeya. Gokak falls 6km near the town is beautiful site was major economic source for the city. As hydraulic power plant set up here was oldest in the region.

288 The catalogue of papers of col. Walter Mardon Ducat (1837-1902) (1875-1889) (Mss Eur F425) British Library: India office records and private papers.



Fig. 93, Residence of Walter Ducat stayed in London in the year 1900.

Address: 13, Devonshire Terrace, Hyde Park, London England. Photo by Lavand Vaidehi

commerce.

No significant information is available on the works he supervised as acting Executive Engineer in Aden when he joined there on 28th April 1871. He was later upraised as major on 5th July 1872 there. Further he was shifted as Executive Engineer to Kolhapur on 6th December 1872. Works he carried out in Kolhapur such as Construction of Rajaram College (1869-1874), garden designed and executed for Town hall (1877) both the buildings were designed by Charles Mant, additional water supply and restoration of Rankala Lake (1877) and bridge over Panchganga River (1878) was documented in Professional papers for Royal Corps in Chatham. Addition to this very important project of road connecting Kolhapur to Amba (48 Mile) and Amba *Ghat* connecting it further with the sea at Rutnaghiri was completed under his supervision.

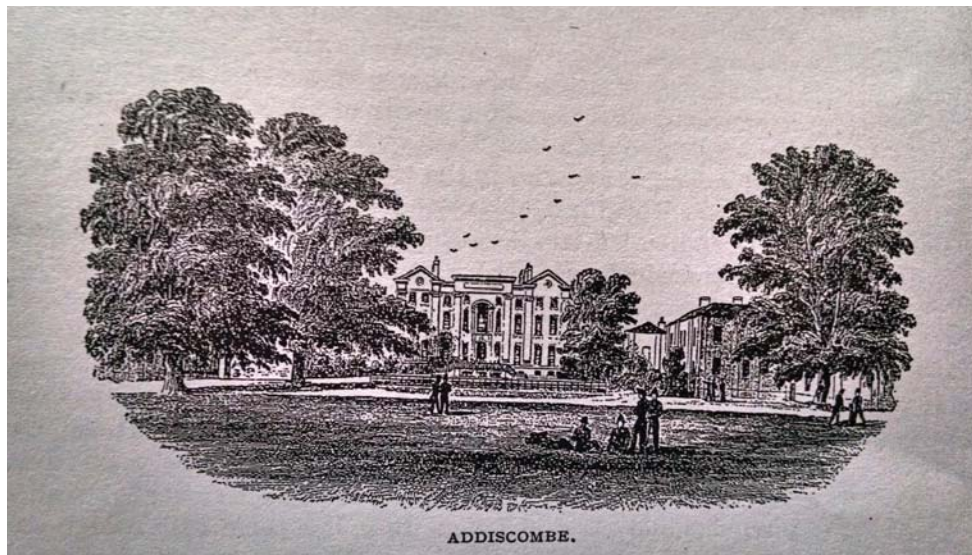


Fig. 94, Image of old Addsicombe college from Sandes E. W. C. Lieut. Colonel, The Military Engineer in India

During his late service period he transferred as first grade executive engineer in Poona and Kirkee on 10th December 1879, where he carried out more extensive and landmark projects those were two covered markets in old town and cantonment area which perhaps symbolize the ultimate

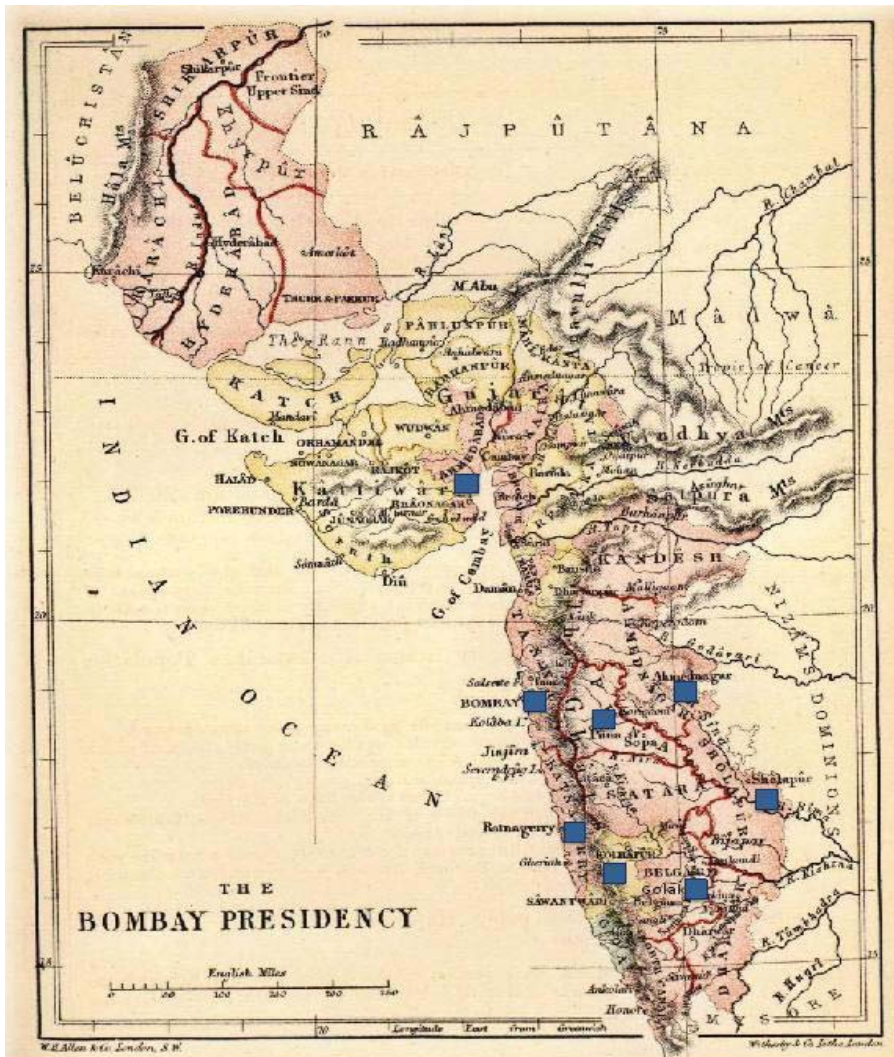


Fig. 95, Map of Bombay Presidency showing location of towns where Walter Ducat worked at.

transition in terms of his journey as engineer to designer and coordinator during his tenure. His contribution in the development of urban character of Poona intervening in old core of town and cantonment in coordination with local contractor and other British officers is perhaps significant to note. Simultaneously in addition to his own duties he was Executive Engineer of Poona and Sholapur Districts from 22nd September to 26th November 1880. He was upgraded to Brevet Lieutenant colonel by 1st July 1881 and Lieutenant Colonel on 12th January 1884.

Ducat's services lent to Ahmedabad and Sind Municipalities from 6th October 1885 to 21st February 1886 where he carried out drainage layout and water supply to Ahmedabad. As per his service records he was on subsidiary leave from 4th to 13th May 1887 and two years furlough to Europe from 14th May to 13th May 1889. From 14th May 1889 to 31st March 1890 he was on special leave.

After his career in India Walter Ducat entered into the service of the Local Government Board in the capacity of Engineering Inspector from April 1888 till September 1897 in London, England. He was a most valuable member of technical staff. Application to the Board on behalf of London county Council to alter and amend and add to certain of the regulations made by the water companies of London under the Metropolis Water Act, 1871, which was prepared by Walter Ducat after actual surveys and observations was appreciated document referred by Local Government

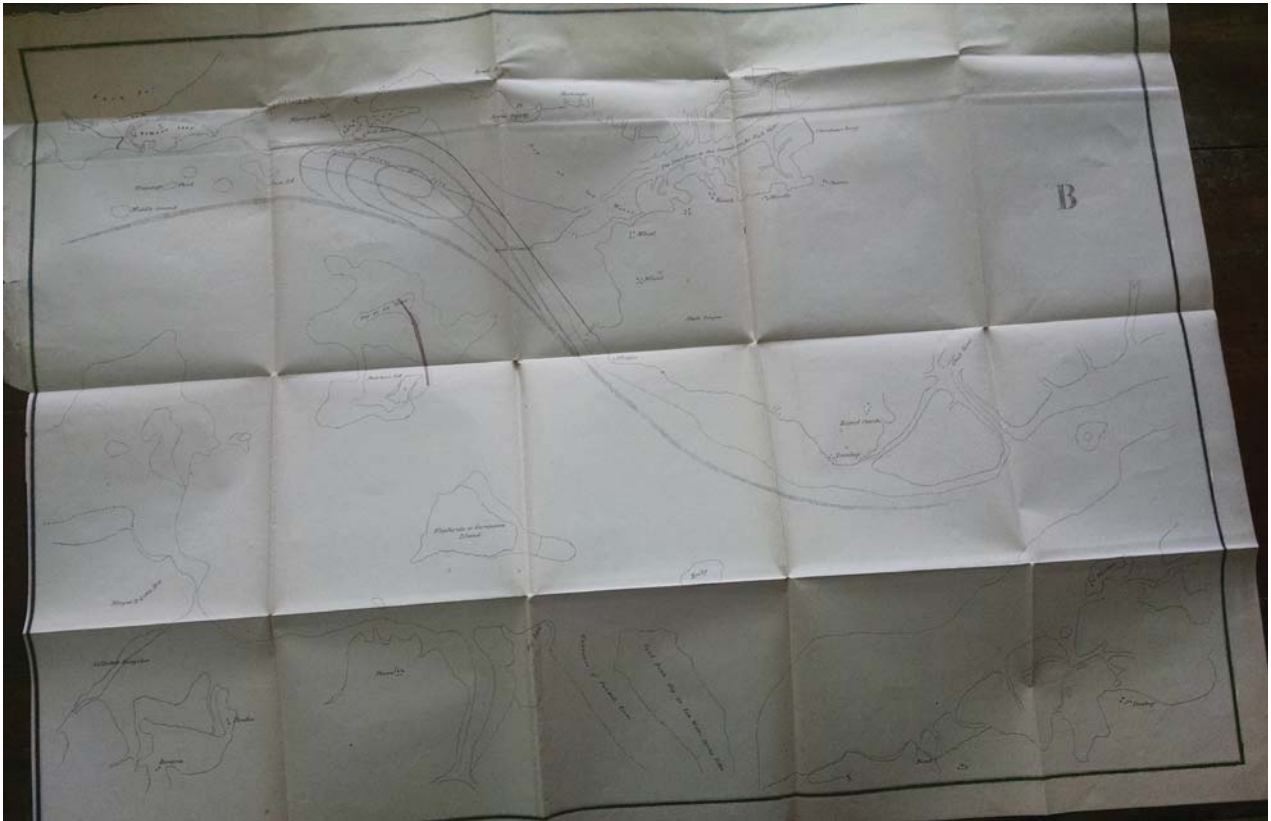
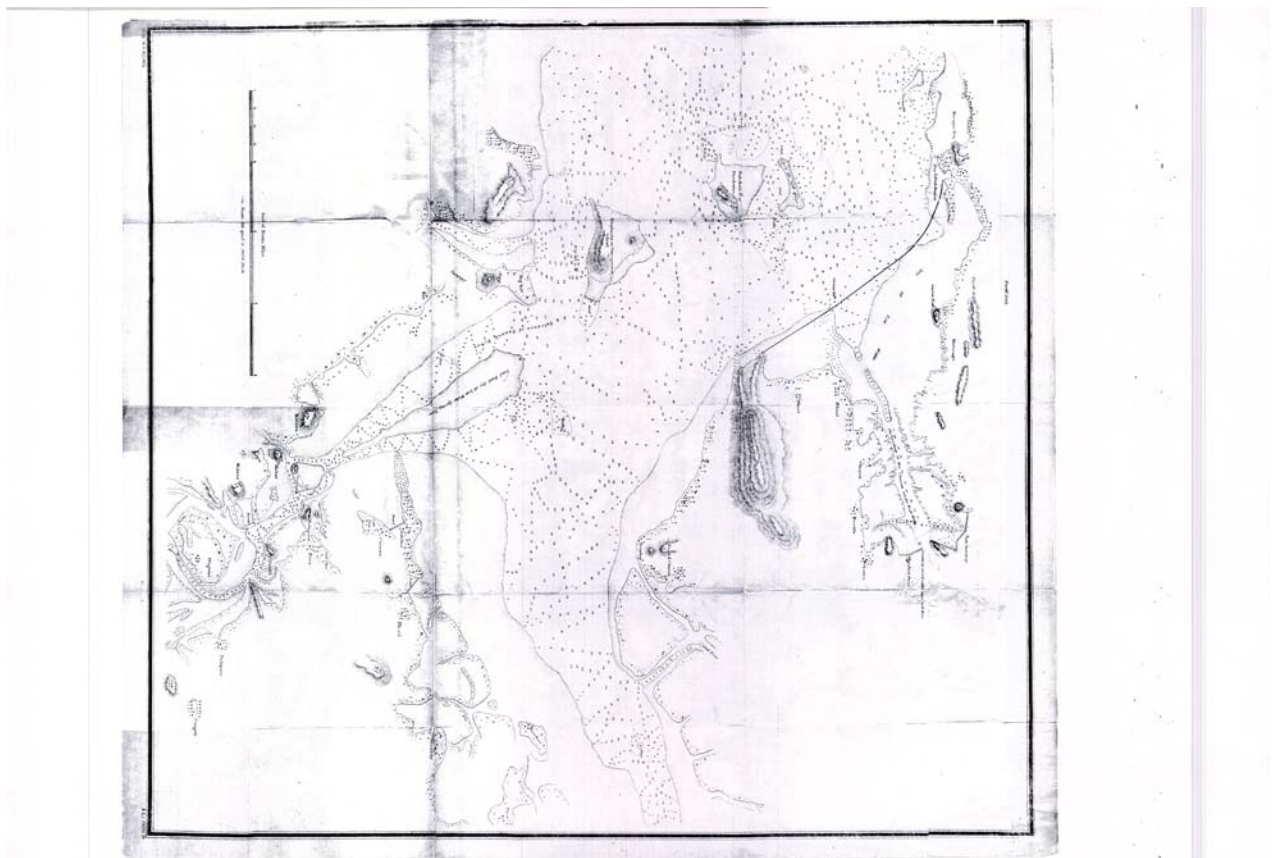


Fig. 96, 97 Map of Bombay Trombay land Reclamation project. Ref: Ducat Walter, Bombay and Tombay report on Project for Reclaiming land between Bombay and Trombay with Memorandum by DeLisle A., (Bombay, The education Society's press, Byculla, 1863).



board.²⁸⁹ Probably this overall brief introduction about the Walter Ducat's career under Bombay Presidency particularly in Deccan displays his journey as military engineer to designer. Further

289 London, British Library, Catalogue no. V.12.292, *History of Services Bombay 1886-1889*, record Department, 252, 253.

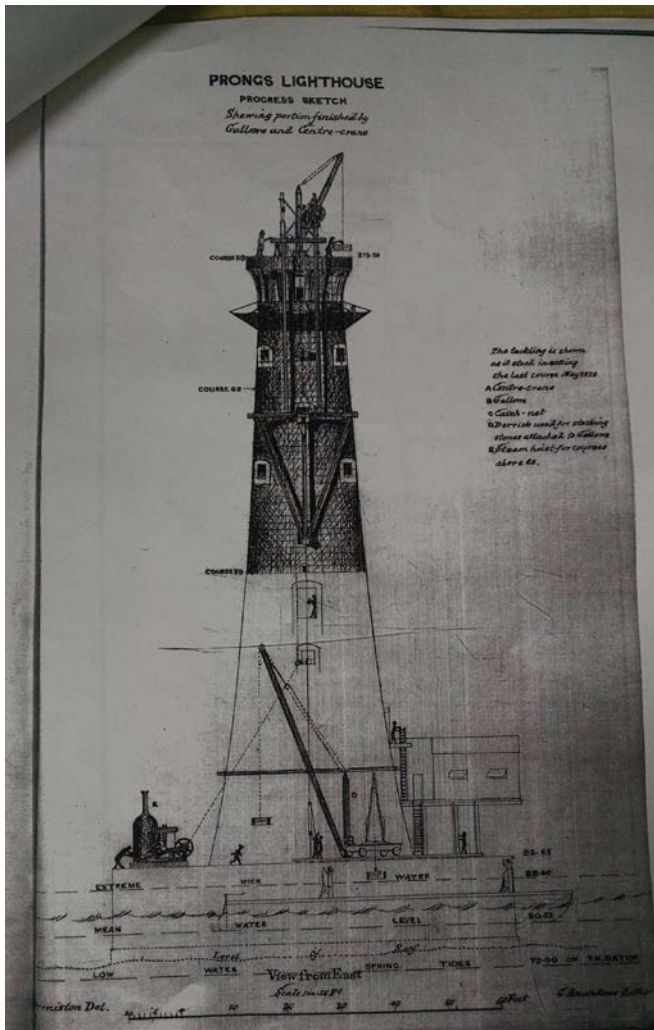


Fig. 98, 99, Prongs Lighthouse at Bombay, Ref: An account of the Building of the Prongs Lighthouse Bombay, Examiners press, Fort, 1876, Source: British Library London
discussion will be able to elucidate more about his decisions and thought behind his proposals for different contexts those were recommended at several levels and executed to larger extents.

Bombay was important harbor from a Britisher's point of view the words quoted here by James Douglas are quite expressive enough to portray the significance "Bombay, from its geographical position, was destined to become the key of India."²⁹⁰ Further he mentions that "Goa and Bombay are islands of about same size; they both have magnificent harbors. Upon the one the Portuguese sat down to exploit, and on the other the British."²⁹¹ Till the mid of 19th century Bombay became major economic capital of the country under colonial rule. Isle of Bombay, Colaba, Little Colaba, Mahim, Mazagaon, Parel, Worli, Trombay and Salsette amalgamated for growth of Greater Bombay for progression of this economic center. First reclamation project of constructing sea-wall to prevent the flooding approved by first governor of Bombay, William Hornby was started in 1784. Government with the help of private companies such as the Back Bay Reclamation involved in the process of reclamation and expansion of habitable areas catering further migrations in Bombay.²⁹²

Bombay-Trombay land reclamation was process of urban development connecting islands of Bombay for extending its limits in north direction. Report made by Walter Ducat being executive

290 Douglas James, *A Book of Bombay*, (Bombay, The Bombay Gazette steam Press, 1883), 12.

291 Ibid 35.

292 Burns Cecil, *Municipality of Bombay Victoria and Albert Museum*, Bombay, (The Times Press, 1918), 5,22,38.

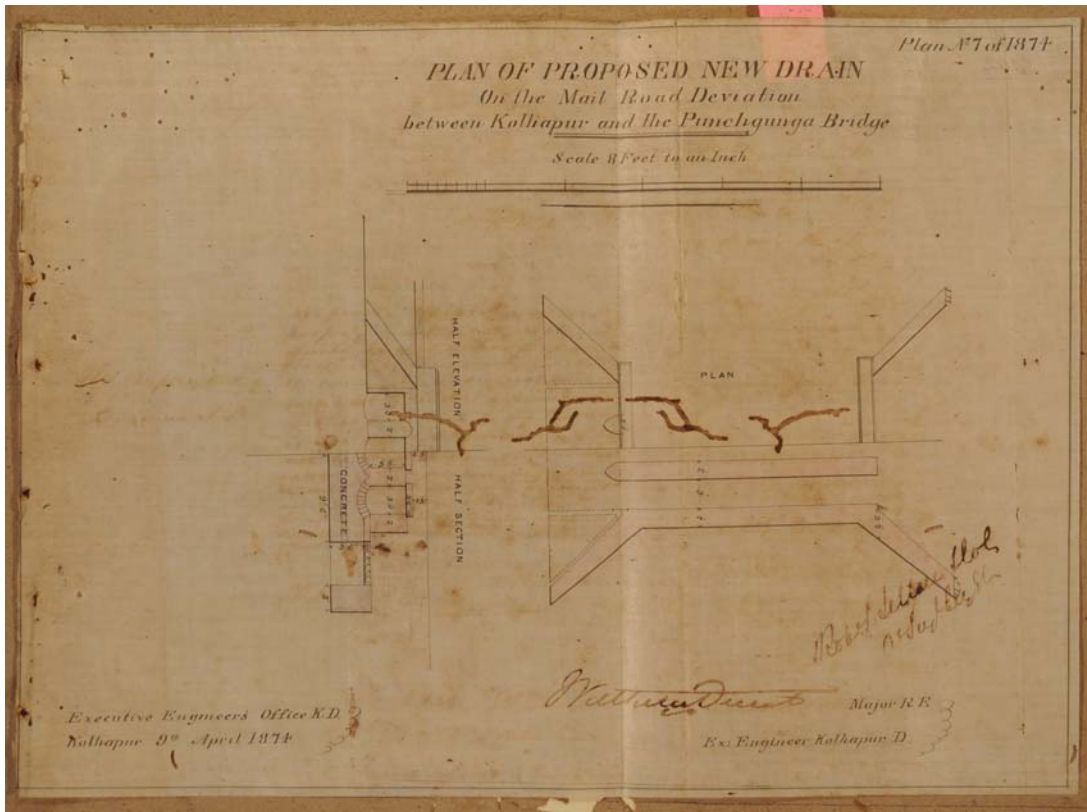


Fig. 100, New Drain between Kolhapur and Panchganga Bridge, Ref: Elphinston College State Archives, 1870 PWD catalogue No II Civil works

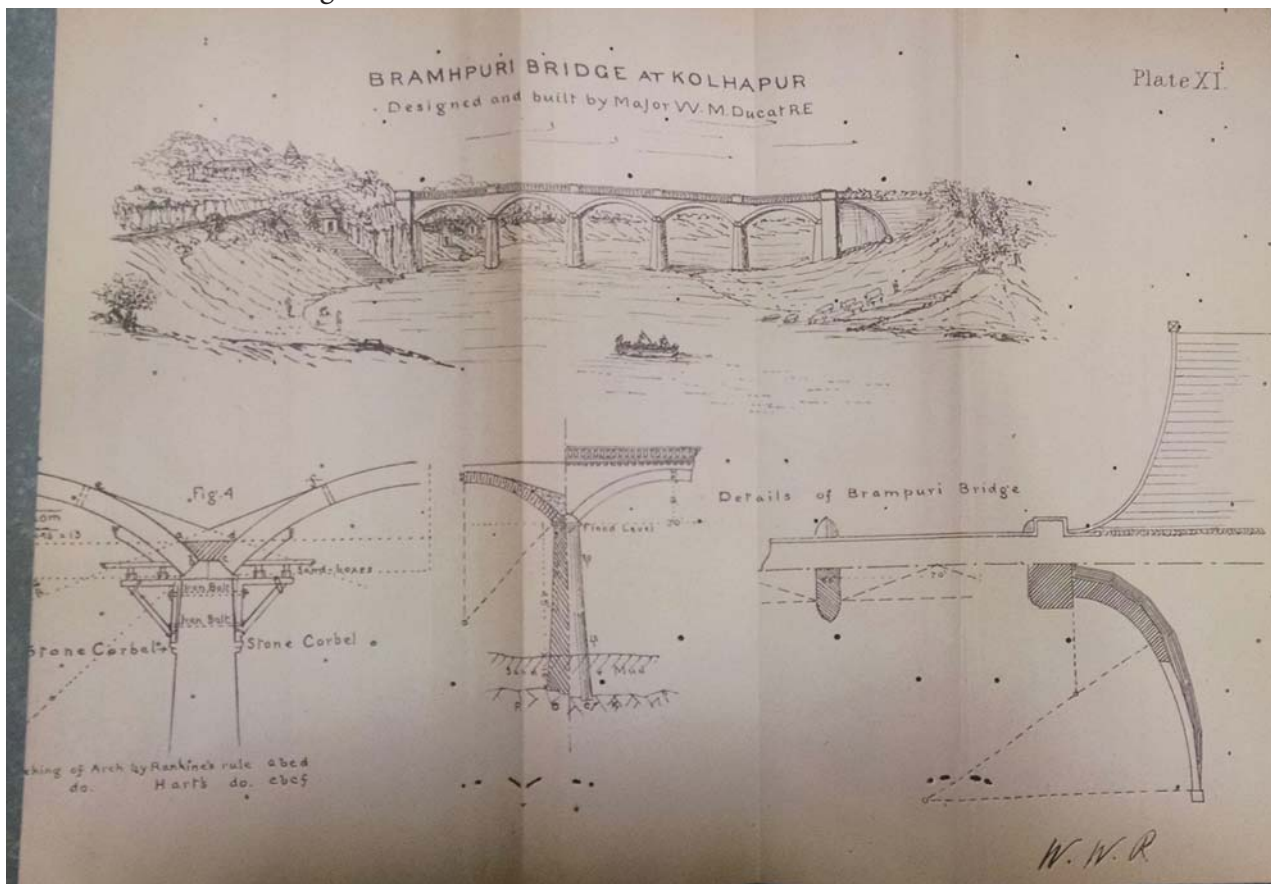


Fig. 101, Bhamhpuri Bridge / Panchganga bridge now known as Shivaji Bridge Kolhapur, Ref: Robinson W.W., "Road Making in Western India",

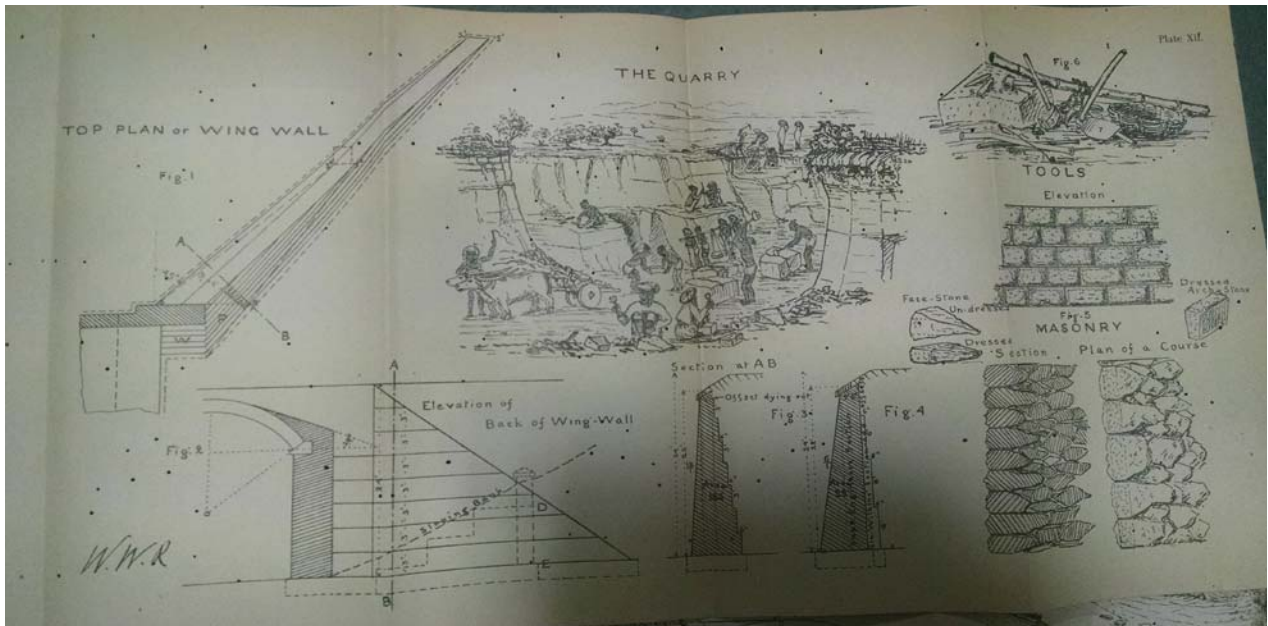


Fig. 102, The quarry, Ref: Robinson W.W., "Road Making in Western India"

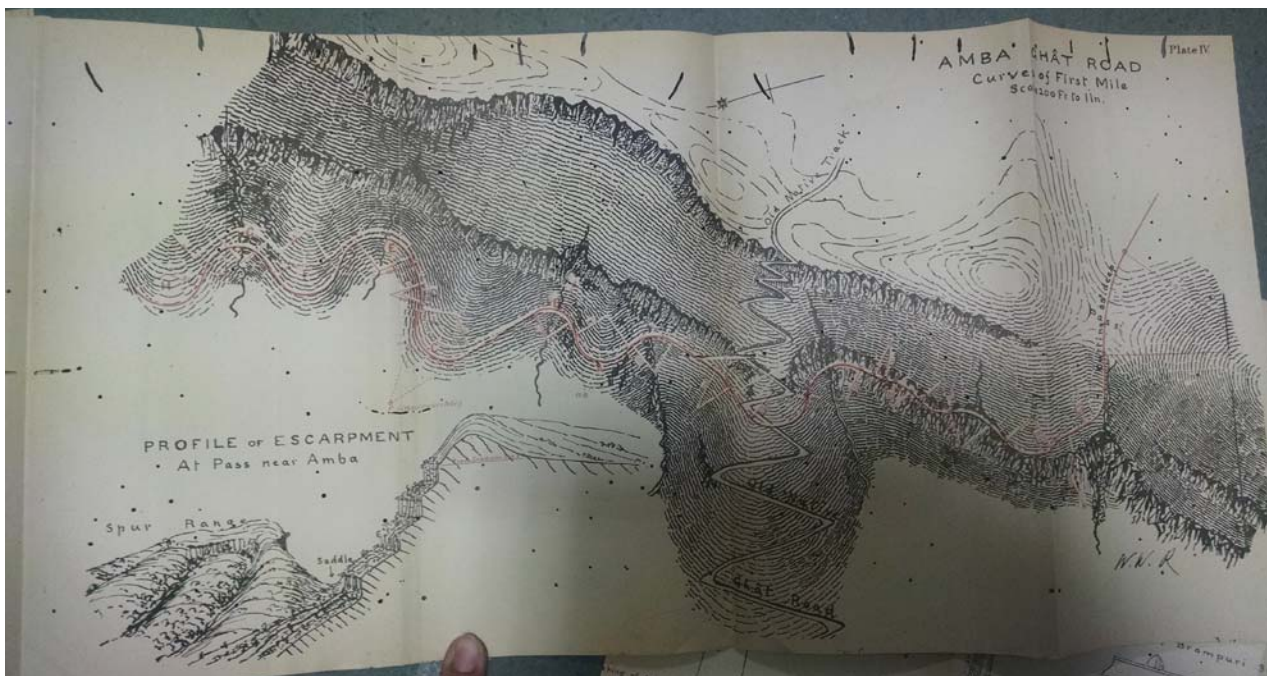


Fig. 103, Amba Ghat Road, Ref: Robinson W.W., "Road Making in Western India"

engineer of Northern land in Bombay rationalized the project of Bombay-Trombay land reclamation in depth with drawings and estimate of 79 lakhs in the year 1862. Report was divided in 25 points. Walter Ducat being employed in Bombay harbor for three years under DeLisle²⁹³ he had worked on the proposal for the Reclamation scheme. Its location connectivity, technical details and future developments are methodically worked out along with drawings. Commencing with its location, opportunities after connecting it with branch of railway and marking its silting problem he further explains need for reclamation and its prospects for possible settlement. As per his proposal this would have been provided 17 $\frac{3}{4}$ millions of square yards for building purposes, roads and 3 $\frac{3}{4}$ miles of wharfage. As per Walter Ducat this proposed project would have created healthy place for residential development of Europeans and 'natives'. Further discourse explains estimates for the

293 DeLisle Lieutenant Colonel was consulting Engineer for Reclamations under Bombay presidency

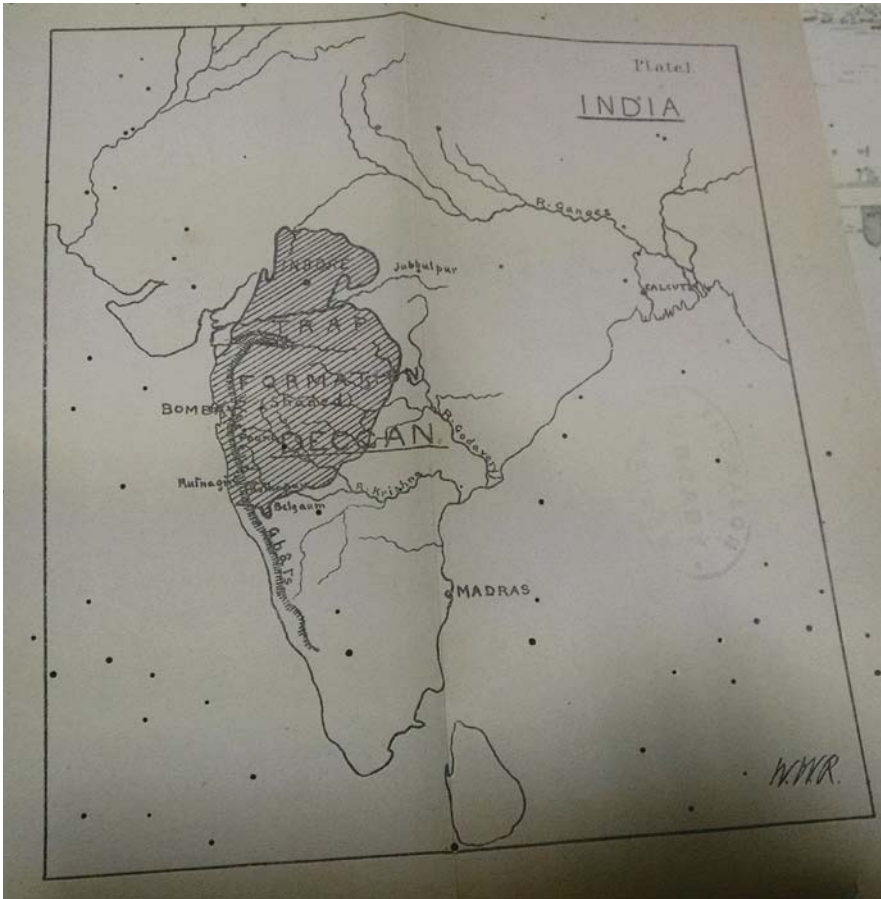


Fig. 104, Plan Shows Deccan Plateau, Ref: Robinson W.W., "Road Making in Western India"

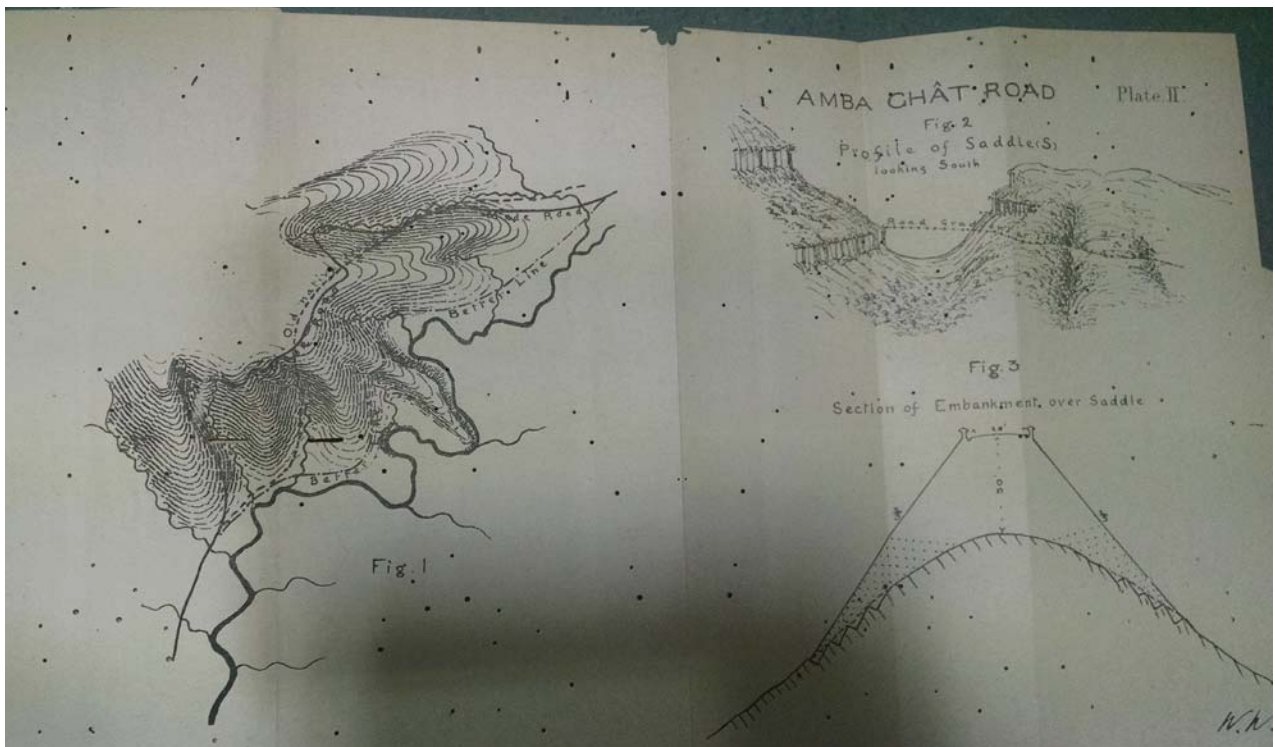


Fig. 105, Amba Ghat Road, Ref: Robinson W.W., "Road Making in Western India"

scheme considering sea wall and filling, compensations to landowners, main drain arch work and main roads. "Elphinstone Land Company" an enterprise of merchants in Bombay was presumed as major contributing funding agency for the project. He mentions at the end "I trust His Excellency

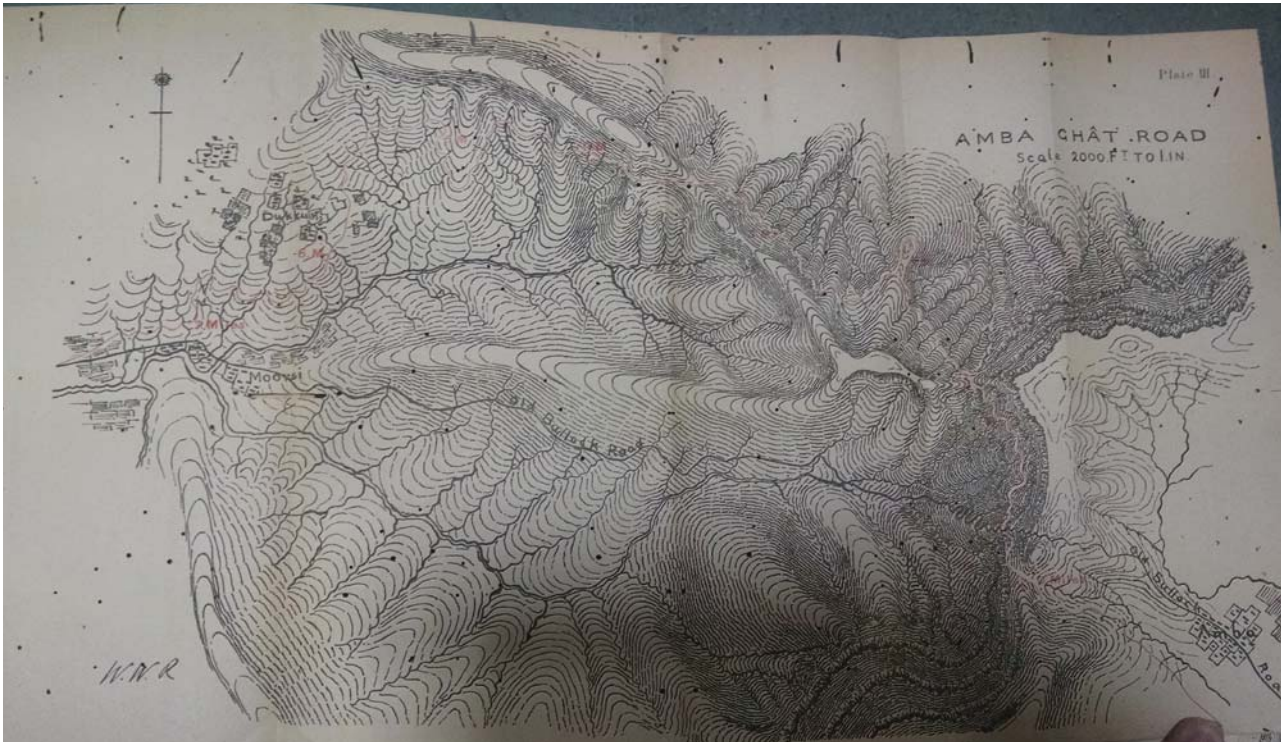


Fig. 106, Plan of Amba Ghat Road, Ref: Robinson W.W., “Road Making in Western India

Sir Bartle Frere will consider it advisable to have the scheme properly prepared.”²⁹⁴ Further fund raising options were explored for actual execution such as Company in Bombay or in London after presenting proper proposal with exact surveys and explicating the merits of the scheme.²⁹⁵ Here Bombay as an important harbor and cotton exporting commercial capital how probably expanded and exploited to certain extent by British government could be noticed with the intentions behind this proposal.

At the end of report of Colonel DeLisle was attached to Walter Ducat’s report where he comments on feasibility of the Bombay Trombay Land Reclamation proposal as unsatisfactory in the context. The reasons mentioned were firstly the region was too remote from the center of trade and from his point of view reclamation between Mazgaon and Castle would serve reclamation need for the some years to come. He had raised points that this reclamation may affect Harbor and main and minor currents in undesirable way. As per DeLisle’s point of view land cost eventually can’t be higher as proposed by Walter Ducat in the report and may take more time to develop. At the end he gave unfavorable opinion on the project. With reference to government resolution dated 15th January 1863 both the reports are considered as valuable and printed by PWD for reference in future. Eventually due to lack of economical support and higher estimated cost project wasn’t rally executed to its fullest till the end of 19th century. **(Figure 95,96,97)**

Construction of lighthouses was a most concerned work by military engineers in India as a part of command on coastlines and harbors. One of those important built near Bombay was

294 Ducat Walter, *Bombay and Trombay report on Project for Reclaiming land between Bombay and Trombay with Memorandum by DeLisle A.*, (Bombay, The education Society’s press, Byculla, 1863),8. Source: Poona, Gokhale Institute Library.

295 Ducat Walter, *Bombay and Trombay report on Project for Reclaiming land between Bombay and Trombay with Memorandum by DeLisle A.*, (Bombay, The education Society’s press, Byculla, 1863), 1-12. Source: Poona, Gokhale Institute Library.



Prong's lighthouse. Walter Ducat was involved in Prong's lighthouse project. Here his design was conceptualized and modeled on Scotland's Skerryvore Lighthouse. For Prongs Lighthouse in 1864-65 Lieut Colonel Jenkinn Jones prepared plans and estimates, those got rejected. Finally revised design in stone prepared by Walter Ducat was approved. When this was finished was one of the largest in world with an expenditure about 60000 Pound. Built mostly completed by Ormiston, its foundation had been prepared by Tremenheere. Thomas Ormiston made detailed drawings and sketches. Walter Ducat worked on the project for six months. "It was 127 ½ feet high, 42 feet in diameter at base and 16 feet at the top. Stone used for construction was hard grey

Fig. 107, Entrance to Rajaram College Kolhapur, designed by Charles Mant, Photo by Lavand Vaidehi



Fig. 108, Front View and Garden of Town Hall Kolhapur, Photo by Lavand Vaidehi

trap."²⁹⁶ The design and estimate was sanctioned but eventually revised replacing concrete at base

296 Sandes E. W. C. Lieut. Colonel, *The Military Engineer in India*, Vol II ...cit.,179, 180; *An account of the Building of the Prongs Lighthouse Bombay*, Examiners press, Fort, 1876, Source-British Library London; Nair Smita,

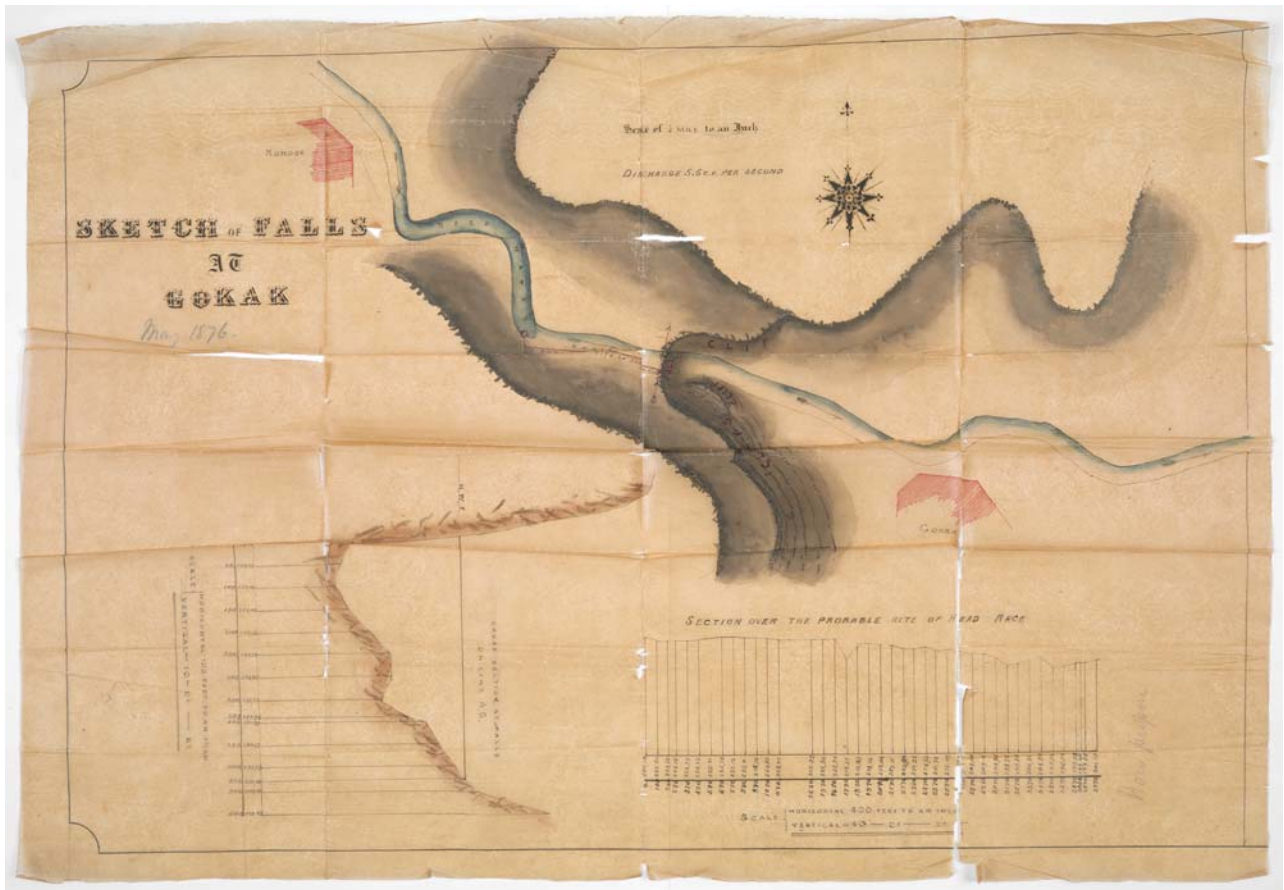


Fig. 109, Gokak Falls Sketch plan made in the year 1878, Ref: British Library UK, London and stone at top.²⁹⁷ **(Figure 100,101)**

Walter Ducat as an executive engineer shifted to Kolhapur on 6th December 1872. Till 1879 he worked on various projects in Kolhapur that was an important princely state in Deccan close to west coast known as Konkan region. Kolhapur one of the Princely states considered as culturally rich in tradition and education flourished Under Shahu *Maharaj*. Runkalla lake restoration, Panchganga Bridge, Rajaram College and garden near Town hall designed and executed by Walter Ducat these are few of the significant projects to mention at Kolhapur. Out of these Charles Mant designed Rajaram College and Town hall buildings. Kolhapur Rutnagiri Connecting road was important of the period that assisted linking upper “*Ghats*”²⁹⁸ to coastal line for transportation of wealthy natural resources available in the vicinity.²⁹⁹ References of few of them are available in State archives in Elphinston college Bombay. Perhaps several correspondences help in understanding important role of Walter Ducat in the development of Infrastructure and services in several towns. They suggest need for connecting towns to presidency towns to achieve proper control over trade. Use of natural resources such as water forests and variety of crops in the development materialized at different levels. While working on several urban scale proposals and research reports on natural resources, royal engineers also worked on proposals at local level as a part of development of public typology in Architecture. This was majorly need based and architects from England were not available for small-scale projects

“Keepers of light”, Source: archive.in Indian express.com, Nov. 2012.

297 *An account of the Building of the Prongs Lighthouse Bombay*, Examiners press, Fort, 1876, Source: British Library London, 14

298 Ghats referred to Deccan platur

299 *Obutary note* available on http://www.gracesguide.co.uk/Walter_Mardon_Ducat

in comparatively smaller towns than presidency towns.

As a part of connecting major towns with roads and bridges, Kolhapur town was proposed to have bridge on Panchganga River that connects west coast. Hand drawn drawings of Kolhapur Panchganga Bridge made in 1872 by Walter Ducat are available in Maharashtra state archives along with its estimates. In the administrative report on Panchganga Bridge, it was described as “The Foundation of the Panchganga Bridge have been laid, and the superstructure up to the springing of the arches will be completed by the rains of 1877. Estimate rs. 1,84274: expenditure Rs. 68671”³⁰⁰ Bridge at Kolhapur completed in the year 1878.

Its picturesque location near Panchganga Temple and *Ghat*/Steps leading to river is mentioned in the work progress report. Bridge is of masonry consisting 5 segmental arches of 70 feet clear span with 15 feet rise. These are carried on piers founded 82 feet below roadway. Corbelled cornice, open cut stone parapet gives appearance of lightness and finish to structure. Estimated cost was Indian Rupees 184374. Tapered form of pier enhanced appearance.³⁰¹ The Panchganga river bridge near village Brahmapuri on north of Kolhapur in today’s context is a very important connection to Amba Ghat. Its picturesque location adjacent to River close to old temples and *Ghat* is a very subtle intervention in the context.

No much reference other than obituary note is available to know about involvement of Walter Ducat in the erection of Rajaram School (1869-1874) Kolhapur built in typical Indo-Saracenic style with *Chattri* / Rajasthani Kiosks, *Jali* work and ornamentation in local Basalt rock. Charles Mant prepared the design; an engineer of great caliber who was contemporary to Walter Ducat. Rajaram School in Indo-Saracenic style and Town hall (1876) in Neo-gothic style both designed by Charles Mant at the heart of the town Kolhapur. These were two major Iconic projects probably collaborative works of Mant and Ducat perhaps could be considered as examples of Colonial Urban landscapes imparted character blending with architectural language of indigenous town of Kolhapur. **(Figure 107,108)**

In the lectures delivered by Captain W.W. Robinson where he tries to form a link between the instructions given at Chatham and the actual work executed in road making in Western India is important to note here. The Amba Ghat road (48 miles) was proposed (1877-78) to connect a town on the table land about 40 miles east of the watershed with a small port on the coast, about 30 miles from the foot of hill slopes. The challenging part of this project was the descent from the level of the tableland to that of the coast downwards. The “escarpment” of the Western Ghats was main challenging part in the process of execution. He specified the layout of this descent, or *ghat*, its designer Major W.M. Ducat, R.E. the executive engineer, whose assistant he had executed the project. Robinson mentions Molesworth’s Pocket Book or Aide Memoire, as reference manual used on site. They had followed two important rules one was 1) the gradient should not exceed 1 in 20

300 Mumbai, Elphinston College, Maharashtra State archives, V/24/3291, *Administration report of the pwd (building and road branch) Bombay presidency, 1877*, Point number 408, 41.

301 London, British Library, *Administration report of the PWD Bombay presidency: Building and road branch*, catalogue V/24/3291, 1877-78, 29; Smith J.T., Day F.J. Professional papers of the Corps of Royal Engineers, Royal engineers occasional papers, Vol.XI, (Chatham, Printed by W. & J. Mackay & co., Published by Royal Engineers Institute, Chatham, 1885), 27.

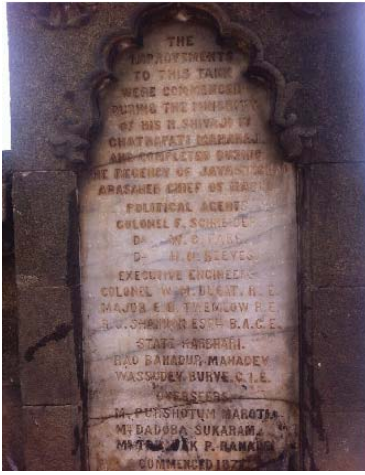


Fig. 110, Plaque on the walls of Rankala Lake, Photo by Lavand Vaidehi



Fig. 111, Rankala View, Ref: Internet

and secondly 2) no curve was to be of less radius than 60 feet, though, actually so sharp a curve was only side in one or two instances. “I have described the Amba Ghat road in detail, because it brings out strongly how important it is to gain length in order to ease gradient in working down a mountain side.”³⁰² This road connection to coast was a major challenging project during the context, which eventually turned out to increase trade, transport and occupational resources for the remote villages in Konkan or west coast region of Maharashtra. Earlier means of transports were only bullock carts or horses but due to increase in width and strengthening of roads rapid transport to sea link was possible. Perhaps this was major concern for the British officers to improve connectivity of remote towns. Here Walter Ducat had been given larger credit as designer and decision maker implementing theory on actual grounds. **(Figure 102,103,104,105, 106)**

Walter Ducat’s meritorious service during famine of 1876-77 under Olivier shared many fine works in Kolhapur state as Executive engineer. Town hall Kolhapur (1876) **(Figure 107)** designed by Charles Mant³⁰³ has extended garden laid out by Walter Ducat. The garden layout mainly followed English Garden style with fountain at the main entrance of opposite to the structure. Total 7 acres of garden lay out consists curved pathways, pavilion and lot of exotic trees. It is important to note varied projects royal engineers had to work on and they shaped the forms relating to their reminiscent memories of their motherland. All the elements followed English language of garden design usually laid around colleges or offices British built or botanical gardens they created with lot of Indigenous and Exotic species. Though the new use and later additions are made, but old trees and basic form of garden layout indicates its Exotic elements. **(Figure 108)**

During his services in Deccan under Bombay Presidency he was involved in the “proposal and execution of Gokak Cotton Mills” **(Figure 109)** which was the most prestigious project in south India and the first of its kind. He was mastermind in the project of Purposes and prospects

302 Robinson W.W., “Road Making in Western India”, Edith., Two Lectures delivered at the S.M.E. in March, 1885, Edith. Day F.J., *Professional papers of the Corps of Royal Engineers, Royal engineers occasional papers*, Vol.XI, ...cit., 5, 12; Administration report of the PWD (building and road branch) Bombay presidency, Source: British Library UK catalogue no. V/24/3291. Engineers largely used Molesworth’s Pocket Book of engineering formulae book published in 1788 by E & F Spon at London and students in the construction related activities.

303 Charles Mant : Royal Engineer from Military school of Chatham London known for his Pioneering work in Indo-Saracenic style in Deccan specially in new palace, Town Hall, Hospital in Kolhapur, Laxmivilas palace in Baroda, Royal Palace at Mudhol

of Cotton mills at Gokak fall from 1876-1885.³⁰⁴ Private papers related to Gokak mills in British Library archives perhaps explains government public partnership in the process of utilizing natural resources for the purpose of colonial expansions in south India. As mentioned in the Engineer's report by Steiner in the region while contextualizing importance of Gokak Cotton Mills he states, "The scheme itself possesses every conceivable element of success; the water- power is abundant, and assured by the Government guarantee; the space for the factories is ample, and very favorable for building on. Building materials of excellent quality are laying on the spot; labor is cheap and abundant; the climate and soil are very good; and nothing that can possibly tend to success is wanting."³⁰⁵ It seems Gokak Water Power and Manufacturing Company limited was established in the year 1885 but the research work for the practicality and prospects of project was carried out almost decade before that. Walter Ducat was involved in proposal of the project and probably finalizing its actual location and connectivity to the vicinity. Ultimately 5 directors located in England were involved as decision makers in the whole process of execution and raising funds for the project. Walter Ducat suggested connectivity of Gokak Mill project with Gokak Town by means of cart road eventually helping in opening new markets in town and increase in trade transport with surroundings. One of the correspondences refers to Walter Ducat's interest in the project as one of the shareholders, British government later criticized him and he was communicated not to extend personal interests in the project.³⁰⁶ Ultimately this project proved to be perhaps the best proposal to increase textile industry in south India, supported yarn export in later century. Perhaps this Gokak Cotton Mills eventually efficaciously helped strengthening process of colonization in Southern part of India.

The changing architectural vocabulary in Victorian London, concerned majorly of the health and hygiene of communities in Towns. During the process of urban planning probably these western models were directly used by Royal Engineers in India. As a result of the process Walter Ducat has worked on drainage layout of Pune and water supply of Kolhapur, Ahmadnagar, Sukkur, Ahmedabad followed the same process in Indian context.

Service oriented works such as additional water supply to Kolhapur city and Preservation of Rankala Tank (**Figure 110,111**) were important projects completed under observation of Walter Ducat during his tenure in Kolhapur. Progress report made in the year 1877-78 for Rankala project was described in words as "These fine water works, which have now been open to the public for 12 months, have been very nearly completed during the past year. The great masonry aqueduct on arches, leading to the service reservoir, has been extended, and is now completed, giving a total length of over 10 miles of piping laid in the town: the standpipes, 233 in number, have been erected:

304 London, British Library, *India Office Records and Private Papers, The Catalogue of papers of Col Walter Marden Ducat 1837-1902 and 1875-1889*, Mss Eur F425, additional Note: Colonel Walter Marden Ducat (1837-1902)

305 Steiner C., Escher, Engineer's Report on Water Power at Gokak- 40,000 Horse power, Report on The Utilization of the Water –power near Gokak In the Southern Maratha Country, India, (Bombay, March 22, 1884), 11.

306 London, British Library, *India Office Records and Private Papers, "The Catalogue of papers of Col Walter Marden Ducat 1837-1902 and 1875-1889"*, Mss Eur F425/13(1886), Mss Eur F425/15(1889), Mss Eur F425/20(1886). Further documents in private records refer to Ritchie Steuart & Co. owned by Campbell family was second oldest firm in Bombay after Forbes & Co. was one of the managing directors of Gokak Mills Project. Their Correspondence with Walter Ducat suggests his connection with the project. Further letter no 1064 of 1885 refer in detail the name of Walter Ducat as shareholder but being government employee he wasn't allowed to be part of any private company.



Fig. 112, Drainage layout of Poona 1880, Ref: Elphinston College State Archives

all the service connections and fittings have been attached and adjusted; and with the exception of a few minor details, such as horse troughs in the palace, and Rankala stables. The works may now be said to be complete. Estimates around Rupees 228928, utilized Rupees 105083”.³⁰⁷ This beautiful project located on western end of the town is one of the picturesque sites for visitors in Kolhapur. Reflection of Shalini palace built opposite to lake extends its charm.

Whereas for Rankala restoration report states “Rankala Tank at Kolhapur- This project for riveting the great Rankala Tank at Kolhapur, and utilizing the water in the town, and for irrigation has been divided into sections, for convenience in working and in accounts. This first section (the construction of which was commenced in January) provides for the walling of the eastern side of the tank with a revetment of massive coursed block ashlar face, backed with concrete, supporting a carriage drive and footpath with an ornamental stone parapet wall, with pillars on the tank side. About 1000 feet of foundations have been laid, and nearly 700 feet of revetment has been brought up above ordinary high watermark. A great portion of the drive, in rear of this length of walling, has been filled up to formation level. Estimates around rupees 87160, expenditure of rupees 14885 utilized at the stage.”³⁰⁸ These two very important accounts and documented in the form of reports

307 London, British Library, *Administration report of the PWD Bombay presidency: Building and road branch*, Catalogue V/24/3291, points 294, 296, 1877-78, 34.

308 Ibid

submitted to higher authorities in England perhaps are explanations prepared by officers from India. Several inquiries could be scrutinized those were why these works were so important? Was that a part of improvement in infrastructural facilities and better services provided during the process of urbanization of towns? Then to larger extent response was yes. As plaque mentions name of Shivaji IV or maharaja of Kolhapur a princely state commenced work of Rankala tank and later completed under supervision of Walter Ducat, Major Twemlow and Shannon. Though no much information I could gather regarding other two officers worked with Walter Ducat but the plaque explains the involvement of collaborative works of Maharaja of Kolhapur, Royal engineers and



Fig. 113, Porch and front façade of Peshwa Daftar/ Alienation office/ Poona Archives

local engineers. This is one of the landmark projects in Kolhapur represented as one of the important services oriented work for the city. This is still in use and added life in the city.

Walter Ducat transferred as first grade executive engineer in Poona and Kirkee on 10th December 1879. As per available documents Walter Ducat worked on several small scale projects like two covered markets in Pune, *Peshwe Daftar* / Alienation office (Archive) in Pune. Correspondence further mentioned explains his thought behind selection of site for Alienation office to store archival documents in Pune. Probably he was involved in the designing process of Office when the commencement of project was done in 1887 and later plan changed and executed by Mr. Adams then executive engineer in 1891.³⁰⁹

Waterworks of Poona is mentioned by Medley as designed and carried out to fulfill the requirement of water supply to native towns.³¹⁰ During his presence in Pune Walter Ducat's work on Poona drainage layout (1882) was appreciated and report was circulated to all parts of India for reference. Copies were sent to Britain too. Mr. Roawlinson's opinion on the report in his own words "report based on wide practical experience of such works in England, and the plans and estimates have been well thought out and devised."

To control on epidemics in "black and white towns", great concern with filth and sanitation caught up with Bombay in 1860s. Dr. Andrew Leith deputy Inspector General of Hospitals presented report on sanitary conditions of Bombay. Ultimately appointment of sanitary commissioners at center and the provinces were made. Sir Bartle Frere involved Leith as an in charge for inquiring sanitary conditions of Pune City in 1863. This was the first of its kind of survey in detail for both old and new town. As per Diddi And Gupta Leith was "unsparing" in the suggestions and criticism about

309 Gupta Samita, *Architecture and The Raj: Western Deccan 1700-1900...cit.,97.*

310 Medley Julius George, *India and Indian Engineering three lectures delivered at the Royal Engineer Institute, Chatham, in July 1872, (London, E.& F.N. Spon, 48 Charing Cross, 1873), 84.*

the situation in town. They also mentions that fortunately Leith's suggestions were not implemented at large very few of them really applied practically.³¹¹

On the other hand report presented by Walter Ducat specially focuses on technical details and practicality of proposal on ground. There are estimates suggesting surveyors and draftsman fees made by Walter Ducat. Very importantly while discussing placement of sewer farm he mentions while adapting English models of drainage layouts in India especially in case of Deccan local climate need to be considered at larger extent. Report by Walter Ducat was divided in several parts; firstly it explains the Physical features of the city and its surroundings. Then it tells about the Present arrangements for drainage of sewerage, late improvements and existing system of dry conservancy. Here he mentioned U shaped Gutter how useful to drain safe, speedy removal of rainwater. Further he discussed night soil of city, water supply and scope of scheme. The population mentioned was 99,421 and proposed scheme extended area over 1.84 square miles.³¹² As per T. Gillhsm Hewett "On all grounds this sewerage scheme may meet with the approval of government and the Municipality, for if carried out, I am convinced it will exert a most beneficial effect on the public health in this important city, and will I have no doubt materially decrease the death rate".³¹³ He also mentions this report suggests introduction of Water Closets in the Indian Town. Here major concern of narrow lanes, dealing with separation of rainwater and night soil was discussed in depth considering geography and settlement of town. Open markets in several wards were also considered as major concern of health and hygiene. Before the proposal of Drainage layout of Pune Walter Ducat had done survey in the city in that report he mentions various parts of city under unhygienic conditions and also open market area and bazaar areas not maintained well in monsoon season.³¹⁴ **(Figure 112).**

Colonel Ducat's report on the water and drainage scheme proposed for the city of Ahmedabad, Sukkur, and water supply to Ahmadnagar town were discussed in several correspondences.³¹⁵ These letters probably helps to understand the role of Walter Ducat as proposer of such urban level services and hygiene oriented solutions. It's important to note that while preparing the proposals, he was well aware of local situations right from geography study of local traditional systems and existing constructions techniques. Local engineers criticized practicality of such projects at the same time. To some extent at Municipal Corporation level decisions were also intervened by resident bodies formed in collaboration with local contractors and engineers. Perhaps at local level few of these evidences suggests democratic approach in policymaking. Though ultimate authority was given to British origin officer perhaps opinions were asked intriguing cognizance of local people and municipal members

311 Deddee Jaymala and Samita Gupta, *Pune Queen of the Deccan...*, cit., 201, 206. Author suggests Leith and Martin's suggestion of putting down walls of Shaniwarwada for better open space was not significant and sensitive to the context of old town.

312 Letter from Walter Ducat to the superintendent engineer Central Division on 21st December 1880 . Municipal Matters Drainage of the City of Poona L 315, Local 1872 PWD, Source: Mumbai Elphinston College, (1868-89 PWD Vol.no. 427 General).

313 Ducat W. M. , *The Sewerage of the city and cantonment of Poona*, (Pune, Pune Vaibhav Press , 1881). T. Gillhsm Hewett was Deputy Surgeon General Bombay army acting sanitary commissioner. He expressed his opinion on Ducat's report to the Government of Bombay.

314 Mumbai, Elphinston college, Maharashtra State archives, PWD report

315 London, British Library, P/ 2864, *Bombay general proceedings Medical and Municipal*, (1886), 43,77,88.

from towns.³¹⁶

*Peshwe Daftar*³¹⁷ or Alienation office (1887-1891) (**Figure 113**) was proposed to restore archival documents from Peshwa and British Period in Poona. During the reign of Peshwa Bajirao II it was located at Shaniwar *Wada* later shifted the closest mansion Nana *Wada*. It was decided to build a separate building to maintain records and all archival documents in 1877.³¹⁸

Need for a proper space to keep all the records various places were suggested by Walter Ducat those were mentioned in letter from the commissioner central division in 1884 as Col Ducat together with sketches map marked all the locations and states that five sites as mentioned below are suitable locations for proposed project,

- I. “In the collector’s compound for alienation office
- II. A site between Sassoon hospital and Railway over bridge near *Sungum*
- III. Vacant space near St. Paul’s Church
- IV. Vacant Space survey no 83 adjoining the compound of his excellency the commander in chief bungalow whit his excellency body guard now stands and directly opposite to council hall



Fig. 114, The Gymkhana now known as Poona Club designed by Walter Ducat, Ref: <http://www.poonaclubltd.com>

- V. Opp. Mr. Forrest’s house and adjoining Gen Hogg’s house and on which the rest camp now

316 Deddee Jaymala and Samita Gupta, *Pune Queen of the Deccan* ..., cit., 180. It is mentioned in the book Municipal body was made of only officials and nominated members. Magistrate and judge were at higher position. Collector was the president. Total thirteen members were nominated by government out of those seven were amongst the towns people.

317 In Marathi slang Peshwa generally pronounced as *Peshwe*. *Daftar* means office that carried all official records and documents related to land correspondence during the period. Now this office contains records from 17th till 19th century archived in various sections.

318 Chavan C.C., “*Pune Puralekhagarachi Imarat*,” *Pune Puralekhagarachi Smarnika*, (Pune Puralekhagar, 1991), 1-6; Shinde C.D, *Pune Puralekhagar Imaratisambandhi Mahiti/ Information about Building of Pune Archives*, *Pune Puralekhagarachi Smarnika*, (Pune Puralekhagar, 1991), 7-10.

temporarily placed”³¹⁹

Out of this Government approved option IV, as a site for the alienation office now known as *Peshwe Daftar* opposite to Council Hall. Unfortunately map marked with the locations is not available. Project was commenced on 1887 was completed under supervision of Mr. Adams then executive engineer in 1891. Basic layout of cortile planning was proposed by Walter Ducat was followed later for building after several changes made in room sizes and materials used.³²⁰

At the peak of his career in Indian services Walter Ducat’s projects of two covered markets located in black and white towns expresses his architectural contribution in urban colonial landscapes of Poona. Reay market now known as *Phule Mandai* for which the work was commenced in the year 1882 was supervised and executed by Vasudeo Bapuji Kanitkar renowned local contractor eventually finished the work in the year 1886 after lot of turmoil, oppositions and twists in the old historic core of Poona. Whereas work of Connaught market now known as Shivaji Mandai was commenced in the year 1882 and finished in 1886 designed by Walter Ducat. These two projects are very unique in Indian context in terms of their peculiar architectural language adopted and symbolism it carried further. Poona was the only town where two covered markets were built at the same time under British reign. Perhaps these two buildings were outcome of collaborative works of Walter Ducat with other British authorities, local contractors, local labor and local people. These two case studies are discussed in depth in later part of the thesis.

There was one more project designed and executed by Walter Ducat that was used for purely recreational purpose. It was Gymkhana club or now known as Poona club. **(Figure 114)** The foundation stone of Gymkhana Club was laid by H.E. Sir James Fergusson in January 1885 and completed in 1886. It was founded to offer all the sports activities supported by Gymkhana. It was located at the east of Edwards Garden. It was facilitated with cricket, football, hockey grounds, Tennis Courts, Badminton Courts, Croquet Ground and garden with carriage drive. As mentioned in Poona guide published in the year 1922, “Main buildings consist of a Ball Room with raised stage for theatrical performances, two rooms 30 feet by 23 feet for billiards and bar rooms, card room, office, etc. and on the upper floor two rooms are occupied by the United Service Library.”³²¹ The library had more than ten thousand volumes all officers’ naval and military services and members of the Civil Services resident in station could refer it.

After discourse on numerous projects proposed, implemented, carried out by Walter Ducat several points probably we observe. Those are being a technical expert and engineer he was employed on various scale and typology of projects. Mostly they were service-oriented projects at the initial phase of his career. Though as a designer he had not influenced much on architectural character of any structure he designed beyond certain limit, perhaps he revered approach of functionalist Modern architectural vocabulary and planning that was commonly followed in Victorian reign in Public landscapes developed under British officers. There is also a reference of design of Hospital in Kolhapur but finally Charles Mant was successful in putting his impression as a designer and

319 Mumbai, Elphinston college, Maharashtra State archives, *PWD general 1868-89* Vol no 557

320 Chavan C.C., “*Pune Puralekhagarachi Imarat*,” *Pune Puralekhagarachi Smarnika...cit.*,1-6

321 *Poona guide and directory...cit.*, 8.

his design was selected for final construction. But it is significant to note that several important structures were proposed and placed at strategic locations important in urban planning point of view, by Walter Ducat in Poona. Such as Peshwa Daftar, Poona Club and two important covered markets in totally different contexts with their unique language.

It's interesting to note that, his individual projects proposed and designed in Poona are located mainly in Cantonment area. This clearly shows the limits of white and black towns with no architectural incursion. Whereas local contractor Vasudev Kanitkar executed Reay market located at the heart of old town of Poona that was proposed by Walter Ducat. There was lot of opposition in the construction of Market in old town but the project got implemented in difficult circumstances. In depth discussion on the contribution of Vasudev Kanitkar is covered in the next chapter.

3.3 Architectural landmarks by Vasudev Kanitkar

In the process of actual implementation of public buildings on site many Indians were involved in the decision making at various levels. There were hurdles in the process of actual execution such as opposition by local people and availability of funds and so on. To some extent the colonial sovereignty was based on democratic principles. Perhaps documents such as old newspapers and municipal records are evident enough to ascertain that decisions appear to be implemented democratically with the consent of local leaders and communities. Municipal and PWD records show correspondence between officers and commissioners regarding decisions made in the selection of appropriate sites for particular projects and its character in general. Detailed estimates, selection of materials and local communities responding in the process of actual accomplishment appear in overall documentation, but very rarely names of local contractors seem to be recorded in papers related to public buildings built.

Numerous articles published in *Professional Papers on Indian Engineering* by Indian local contractors such as Teekaram who worked majorly in Lucknow, Babu Shumbhoo Dass works could be seen in Bahwalpur Pakistan, Rai Bahadur Kunhya Lal's and Sir Ganga Ram's³²² legendary projects in Lahore Pakistan, Muncherjee Beyzunjee at Hyderabad under Nizam reign are great resources indicating their contribution in architectural vocabulary in this period. Researchers such as Preeti Chopra states extraordinary works of Murzbaan in Mumbai in her book. On the other



Fig. 115, Vasudev Bapuji Kanitkar Portrait from Reay Market



Fig. 116, Vasudev Kanitkar with family, ref: Kanitkar Moreshwar

322 Preeti Chopra in her Book *A Joint Enterprise* on the page number 76 mentions name of Sir Ganga Ram as legendary figure who worked for PWD in Lahore now in Pakistan.



Fig. 117, Laxmi- vilas palace Baroda 1878 started and completed in 1890 designed by Charles Mant hand local engineers such as Narso Ramchandra, Vasudev Kanitkar from Poona and some other towns in Deccan were never got recognized and documented extensively for their contributions in the development of architectural character. These are important unexplored figures in the context of Poona. Their names and associations transiently appear in the history of Poona. This chapter seeks to review account of who built Poona in colonial context on ground. Further discourse tries to detail out development of Vasudev Bapuji Kanitkar **(Figure 115)** as an engineer and designer. Perhaps lack of resources and primary sources related to his own opinions for his projects he executed may lead in missing links in the few of descriptions. This is due to the negligence in documenting biographies of local engineers and exploring their influences in their social contexts.

I could uncover details of Vasudev Kanitkar’s family and his background, perhaps his contribution as a engineer to some extent with the help of books *Kanitkar Kul Vrittant*³²³ by Shankar Kanitkar published in the year 1948 and *341 Sadashiv va amhi* by Moreshwar Kanitkar published in 1992. As per the records mentioned in the book it had documented names and brief background of members of Kanitkar family in Maharashtra their decedents and family tree **(Figure 116)**. The books refer to details about Vasudev Kanitkar and his involvement in the field of architectural landmarks in brief though he was not formally trained as an engineer or architect. Vasudev Kanitkar was born in Baroda Gujarat in the year 1829 or 1830.³²⁴ His father was in the service of Patwardhan the then minister of the princely state of Baroda state. It is indispensable to mention that he had never went through formal engineering training like Murzbaan who was trained as an engineer in Poona Engineering College. Vasudev Kanitkar completed his education till old matriculation. He had good knowledge of engineering. He stayed in Karachi now in Pakistan for larger period of time where he worked on several construction sites and must have gained experience in the field of construction

323 *Kanitkar Kul Vrittant* the name of book suggests tidings of Kanitkar

324 Two different years mentioned in both the books, so not very sure about exact day and year whether 1829 or 1830.

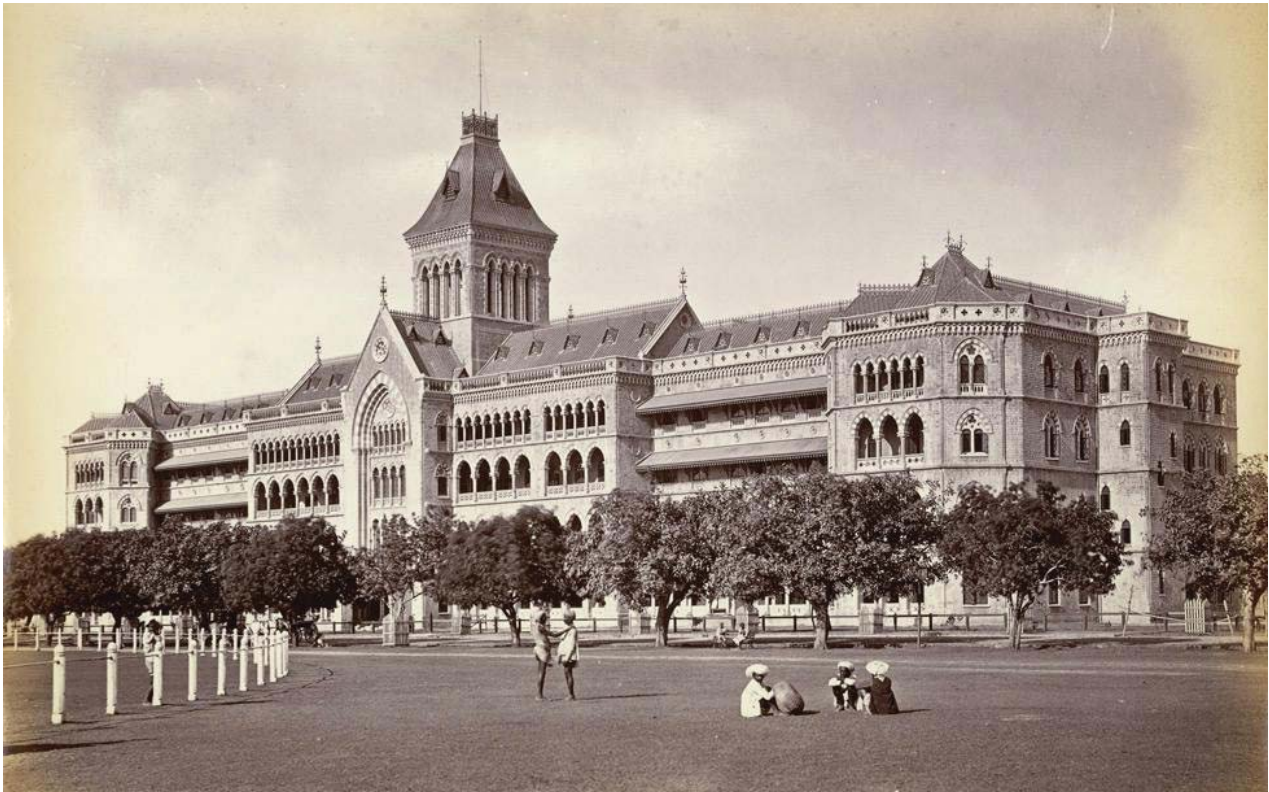


Fig. 118, Secretariat Building Bombay Ref:<http://www.bl.uk>

activity. Unfortunately this part of his life couldn't be traced much, due to lack of resources.³²⁵

Vasudev Kanitkar was honored as Rao Bahadur because of his proficiency in the field of architecture. The title was given to him as personal distinction on 1st January 1877, on the occasion of the Proclamation of Her Most Gracious Majesty as Empress of India.³²⁶ This was great honor, which was received by very few local engineers during the period for their best service for colonial government. Preeti Chopra in her book mentions Vasudev Kanitkar's name contemporary to Murzbaan as one of the important personalities in the building of civic structures during the 19th century.

As per the brief document by author Shankar Kanitkar there were almost 15 important projects those could be listed down where Vasudev Kanitkar shared responsibilities at various levels. Those were of several typologies such as residential, public and temporary structures for public meetings as well. Perhaps it was difficult to trace exact details of his overall contribution in all projects but very important residential kinds were Laxmi Vilas palace at Baroda (**Fig. 117**), Sangamashram residence of Dr. Bhandarkar. Whereas to mention cases of civic edifices significant to mention are Elphinston High school Mumbai, Secretariat building Mumbai (**Fig. 118**), some part of High court. There were religious structures such as Sabhamandap of Tulashi Baug temple and Kasaba Ganpati temple considered as most paramount deities located at the heart of old core of Poona. Despite the fact that he worked on so many prestigious projects in the core cities of Bombay and Poona he is not

325 Kanitkar Shankar Ramchandra, *Kanitkar Kul Vrittant*, (Pune, 915/1 Shivajinagar Vitthal Hari Barve, Aaryabhushan Mudranalay, 1948), 146; Kanitkar Moreshwar, 341 Sadashiv va amhi/ 341 Sadashiv and us, (Pune, Moreshwar Kanitkar, 1992), 89 it's a autobiography re written on Vasudev Kanitkar's step brother's son Balukaka Kanitkar. 341 Sadashiv was residential address of Balukaka Kanitkar. In the description about Vasudev Kanitkar very respectfully he mentions his kind nature and connections with several reformists and activists in Maharashtra. He raised Balukaka Kanitkar after his father's death that was a great support to the family.

326 Lethbridge Sir Roper, *The Golden Book of India*, (London, Macillan and co.,1893, reprinted 2013), 566-7, <https://archive.org/details/bookofindi00lethgoldenrich>



Fig. 119, Reay Market central tower Photo by Lavand Vaidehi

well known in the field of architectural studies. This part of the chapter will emphasize on his works and the architectural language he followed in the 19th century as the unique contribution in Deccan region.

To take a detailed review of landmarks of Kanitkar we need to understand his glorious career started in Bombay during Frere's administration. Bartele Frere the then Governor of Bombay and Conybeare (1823-1892) an architect and engineer had a great impact on the colonial image of Bombay built in the 19th century. Afghan Memorial Church (1847-58) imagined and built by both of them became prototype Gothic revival building in Bombay. Conybeare Gothic revivalist was the first architect to use polychromatic exterior facades using local Kurla and buff Basalt stone. Visiting British architect Thomas Roger Smith designed High Gothic dream around Maidans of the city based upon guidelines by George Gilbert Scott in the year 1870 and 1880.³²⁷ While this image building was in process there were local crafts people, artisans, contractors were getting involved in the activity for actual site works, and out of those very few were recognized in the colonial historiography.

Major civic structures in the Fort area around *Maidan* of Bombay were actually implemented by the exclusive efforts of local engineers such as Mukund Ramchandra, Murzbaan, Vasudev Kanitkar and so on. These structures defined the skyline and contributed in building Frere's imperial colonial language in neo-gothic style some examples are Secretariat building (1867-1874) designed by Clair Wilkins, David Sassoon Library and reading room (1867-1870), University building (1868-80), PWD office (1869-72), High court (1871-1878) designed by J.A.Fuller.³²⁸ These high Victorian Gothic erections expressed in Indo-European style followed European forms in terms of models and overall scale whereas details and materials were local to larger extent. This very unique image

327 London Christopher W., *Bombay Gothic...cit.*, 17,18,128.

328 Ibid 37-53.

in Indian context was an effort by the ruler and local people. Very important of the sequence in Mumbai significant presidency town were built by Vasudev Kanitkar such as Secretariat (1867-74), High court (1871-78) and Elphinston College.

Vasudev Kanitkar is generally given credit for supervising the construction of the Secretariat and during the same period assistant engineer Rao Bahadur Mukund Ramchandra was working on sculptures on the Rajabai Tower (1868-1880) that represent the various castes of Western India.³²⁹ As discussed in the earlier chapter the symbolism and the language mainly adopted by designer for the Secretariat building (1867-1874) was Neo-Gothic in style. Sir Clair Wilkins was a royal engineer employed under PWD was the mastermind behind the project. This was Frere's initiative intently desired to avoid the import of materials and expertise from Britain. Indian craftsmen and local resources were utilized in the whole process of execution to establish that the government could rely upon these resources that were extensively experimented in later phase of development of the city. The building was situated at the edge of *Maidan* facing west running north to south with a plan following the shape of inverted alphabet 'E, a simplistic flat façade and spatial configuration encouraged building a solid mass. Narrow width of the building similar to Barrack plans allowed breeze to penetrate in all parts of the building. Main emphasis was given upon façade treatment, use of polychromatic stones, arches and central staircase tower intervened forming skyline of the area. Central tower above the staircase is of 170 feet high that marks its presence predominantly. Polychromatic effect was achieved by the use of local stones such as buff colored Porbandar stone, Kurla basalt, local blue basalt, Poona red basalt, and Ransome's Patent stone. Minton tiles used

329 Chopra Preeti, *A Joint Enterprise: Indian Elites and the Making of British Bombay...Cit.*

for paving and Terracotta Broomhall tiles roofed over teakwood joists and planks.³³⁰ Scant original resources and correspondence between the designer and Vasudev Kanitkar are missing links in understanding architectural development. Perhaps Vasudev Kanitkar in his own designs in Poona such as Reay market, Fergusson College, followed Bombay Gothic models. Architectural elements, material and techniques, Anandashram extensively shows his proficiency in workmanship.

Second iconic structure partly worked out by Vasudev Kanitkar was High court Mumbai (1871-1878). John Augustus Fuller R.E. prepared design with Massive central tower, Turrets and Basalt rock resembling much to medieval castle. Earlier chapter discusses project in detail to understand the model followed and iconography it represented. The prominent central tower is covered with steeply sloped roof with number of dormer windows. Main access is through porch on western façade adjacent to which two octagonal towers of spiral staircase and pinnacles are located. Christopher London criticizes the overall composition as “exaggerated massing in the muscular neo-gothic style”.³³¹ Preeti Chopra in her discourse mentions that colonel Fuller proposed Vasudev Bapuji Kanitkar, Mukund Ramchandra and Muncherji Cowasji Murzban to be designated as assistant engineer in 1869. She also states the position of local engineers in colonial hierarchy and the link between rulers and local workers, which is very much relevant to Vasudev Kanitkar. Vasudev Kanitkar might have borrowed inspiration from prominent central tower with dormer

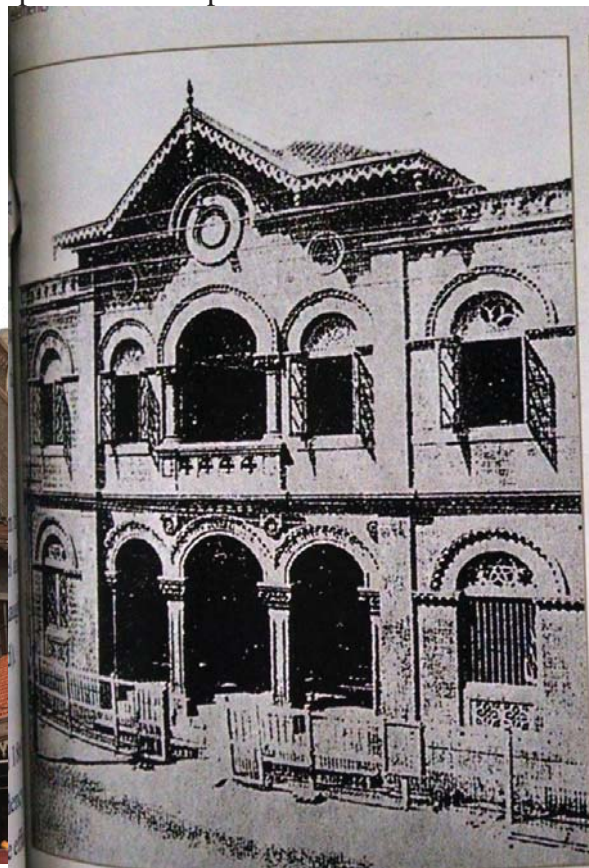
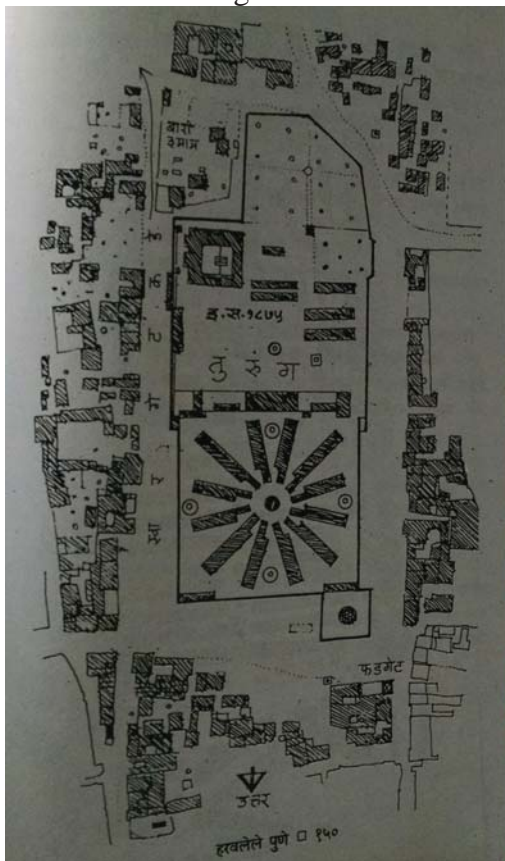


Fig. 120, Ref: Sowani Avinash, Haravlele Pune, 1998, 1875 conjectural map page 150

Fig. 121, Nagar Wahan Mandir or Poona Native library Ref: Diddi J, Gupta Samita

NED - New edition, (University of Minnesota Press, 2011), 75.

330 Chopra P.N. and Chopra Prabha, *Monuments of the Raj: British buildings in India, Pakistan and Myanmar...* cit.,27-29; Christopher W., *Bombay Gothic...*cit., 38,39; Samita Gupta, *Architecture and The Raj, Western Deccan, 1700-1900...*cit.,89.

331 London Christopher W., *Bombay Gothic...*cit., 53.

windows, finials at top and use of polychromatic scheme from High court and Secretariat for the model of Reay Market in Poona. Both of these examples mark their significance metaphorically as supremacy of sovereign. Being purely colonial structure built at the heart of the old town Reay Market followed similar language of prominence.³³²

Very unique structure designed and built by Vasudev Kanitkar was Reay market (1884-1886) (**Fig. 119**). It was the sixth market in the series of covered markets built in pre-independent India.³³³ Despite a lot of opposition from local communities the project was successfully raised at the heart of native town. Reay market later named as Phule Mandai was a unique design for a market in India. Spatial organization of market majorly resembles plan of a Jail. After studying various typologies and models followed in 19th century especially from *professional papers on Indian Engineering* and *Roorkee Treatise*, it could be observed that very simple plan of barrack and jail was preferred for designing this market. Its prominent central tower and rectangular flanges projecting out of eight sides indicates image of jail (**Fig.120**). Perhaps this was chosen with the concern of capturing ample light and cross ventilation in structure. Its probably expression of a bigger model of Lambert Market, Karachi detailed out with Neo-Gothic style. As Lambert market was located at the center of town at a junction of roads market accessible from all sides must have been the criteria in selection of that particular model. Unfortunately no much information is available on Lambert Market of Karachi so cant be discussed beyond certain point. Detail discourse on Reay market is explained in the next chapter. Prevailing form and fine stonework mark its exceptional presence in the medieval town of Poona. Grippingly, the building is visible from long distance on the main axis of old town connecting to the fortress of *Peshwas*. Residence of Vasudev Kanitkar is located at a close distance exactly behind Vishrambag Wada.³³⁴

On the same axis of the street a very important public library or *Nagar Vachan Mandir* (1884-1890) (**Fig. 121**) is located. Designed and built by Vasudev Kanitkar the library contains immense archival documents, books and various resourceful materials written in Marathi and English. In all the archival documents it was named as Poona Native General Library. As a part of inculcating modern education and governance amongst locals Sir George Clark the then governor of Bombay presidency proposed establishment of a library named as Poona Native General Library in the year 1848. Initially located in Budhwar Wada. The mansion was burnt down in 1879 that boosted a need for a separate space allocated to the library. Eminent personalities such as Justice Mahadeo Govind Ranade³³⁵, Lokhitwadi Gopalrao Hari Deshmukh³³⁶, Krishnashastry Chiploonkar and so on contributed

332 Kanitkar Shankar Ramchandra, *Kanitkar Kul Vrittant ...cit.*,146; Mehrotra Rahul and Dwivedi Sharada, *The Bombay Highcourt The story of the building 1878-2003...cit.*,39.

333 Before partition of 1947 Pakistan was part of India. Earlier examples of covered markets built were Lambert Market in Karachi (1864), Tollinton Market Lahore (1864) earlier built as community hall later converted in market by Rai Bahadur Gangaram well known local government engineer, Crawford market (1867) Mumbai designed by architect Sir William Emerson, Hogg Stuart Market Calcutta (1872) and Bolton Market Karachi(1883). Commencement year of Empress Market Karachi was probably same as Reay market (1886) it was 1884. In later decade of the century Connaught or Shivaji Market (1885-1886) and Moore market Madras (1898-1900) were built.

334 As Earlier residence of Kanitkar family was located behind Vishrambag Wada close to Pushkarni tank

335 Ranade: Mhadev Govind Ranade was social reformer, founding member of Indian National Congress, was judge in Bombay Highcourt

336 Lokhitwadi: Gopal Hari Deshmukh part of Freedom movement, scholar, social reformer. Taken strong stand



Fig. 122, Anandashram, photo by Lavand Vaidehi

largely in the process of establishment and running of the library. The location was selected after long discussions and the space was borrowed from Belbagkar family³³⁷ on 15th May 1882 at the cost of Rs 4000/-. Vitthalrao Vasudev Gujar proposed initial plan and estimate for the library. Later V. B. Kanitkar reworked on design and execution of the project. Library building was started in the year of 1887 and in two years two-storied building was completed. Earlier cost of the project was assumed to be Rs 24476/- but at the end of it costed around Rs 25176/-. Mumbai Government donated fund of Rs 12080/-, and Rs 12080/- collected from various philanthropists from Pune. Raja Holkar donated watch of Rs 500/- put on east façade at the entrance. Pune Municipality helped in getting service of maintenance of watch from Pendol Watch Company that was installed on front facade. Governor of Bombay Presidency Lord Reay invited for the opening of 2-storied library on 30th July 1889. Three clocks were installed on three different buildings at the same time, naming Sassoon Hospital, Reay Market and Nagar Wachan Mandir those were maintained by Pendol watch Company.³³⁸ Symbolism of using clock as modern age and industrialization in front facades of public buildings was becoming trend in all parts of the country.

As mentioned in the correspondence earlier brick building was proposed but local stone was stronger and cheaper so finally the structure was built in stone. As said in letter by superintendent engineer to A.C. Lyall it says “The superstructure is proposed to be of brick English pattern and lime, with ornamental cornices in fine brick and plaster. Most bricks in Poona are under burnt and the advantage of using brick is not apparent. Rs 32 is the rate allowed whereas very fair quality of

against child marriages, dowry, caste system

337 Belbagkar Raosaheb Mahadev Ballal Phadnis was one of the Ministers of Peshwas was one of the owners of precious land in the old town.

338 <http://www.punenagarvachan.org/>



Fig. 123, Sacchidanand shiva temple in Anandashram, photo by Lavand Vaidehi



Fig. 124, Staircase detail in Temple of Anandashram photo by Lavand Vaidehi

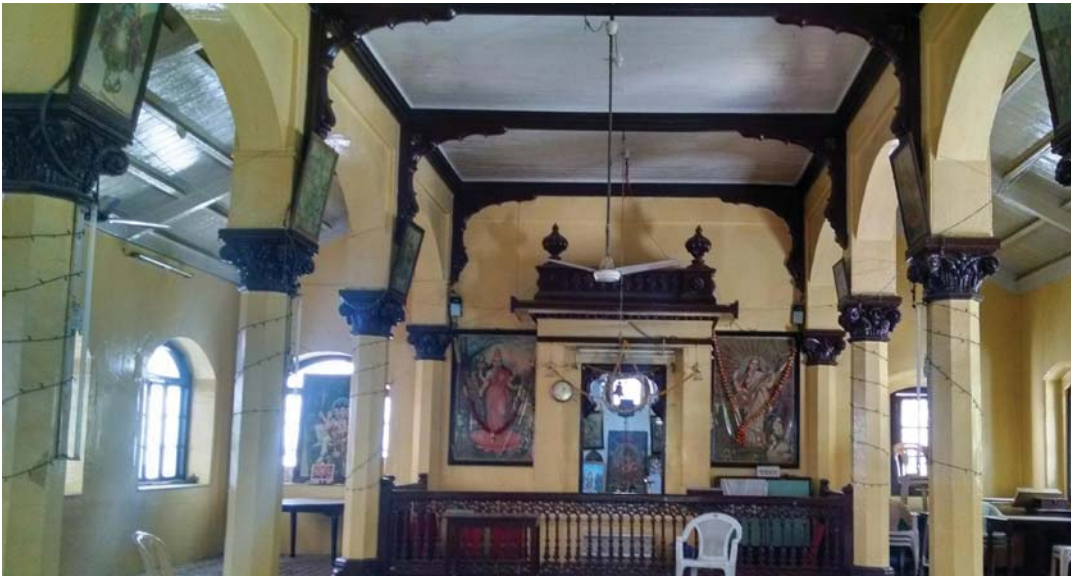


Fig. 125, Interior view of temple in Anandashram, photo by Lavand Vaidehi

coursed rubble masonry can be done for Rs 26.”³³⁹ Simple rectangular plan with plain façade was ; Dixit M. S., *Pune Nagar Vachan Mandir Didshe Varshancha Itihas 1848-1998...*,23,24; Shrigondekar G. N., *Pune Nagar Vachan Mandir Shambhar Varshancha Itihas 1848-1948*, (Pune, Sadashiv Keshav Nerugaonkar, nagar vachan mandir, 1949), 40,41; Mumbai, Elphinston college, Maharashtra State archives, *PWD General*, 1868-89 Vol. 563; Mumbai, Elphinston college, Maharashtra state archive, *Bombay public works proceedings imperial and local 1886*,135; PWD General Vol. 563, 1868-89, Elphinston college, Maharashtra State archives Mumbai; Correspondence mentioned in appendix 12,13,14 supports the details of expenditure and comments on sanctioning process of the building.

339 Mumbai, Elphinston college, Maharashtra State archives, *PWD General*, 1868-89 Vol. 563 this letter from



Fig. 126 Sangamashram residence of Dr. Bhandarkar Ref:
Karnataka S.N., Dr. Ramkrishna Gopal Bhandarkar yanche charitra

approved, semicircular arches and pillars with ornate capitals adorned the front side of the building. Lime cornice work at different levels highlights the building. After looking at A C Lyall's career, he was working at larger level decisions and was not be directly involved in small projects in towns such as Poona in 19th century. Walter Ducat was superintending engineer during the period that must have taken decisions in support of Native library Poona in 1886.³⁴⁰ This doubtlessly shows that there was the association of royal engineers and local engineers participated and played a crucial role in the process of sanctioning and actual execution of these projects. Later correspondence perhaps supports the role of British authorities and local reformists in funding and supporting the project.

Institute of Anandashram³⁴¹ (**Fig. 122**) was the next important project completely designed and constructed by Vasudev Kanitkar in the year 1891. The edifice is located in the same premise close to Reay market and Shaniwarwada. Reformist and Philanthropist Mahadev Chimanaji Apte founded the institute at the heart of old town. It comprises administrative office, library, and hostel for Brahmin boys from economically weaker families from nearby towns. Along with that a large temple of *Sachchidananda Shiva*³⁴² (**Fig. 123**) is located at the center of complex. A property and trust record of institute shows Vasudev Kanitkar was one of the trustees of the center. Stone and iron building built is one of the fine works in the vicinity and credit was solely given to Vasudev

AC Lyall / superintending Engineer central division to the secretary of government PWD Bombay. Sir Alfred Comyn Lyall was secretary to government of India foreign department. As documented his career in book by Sir Mortimer Durand published in 1913 available on archive.org online, named Life of the Right Hon. Sir Alfred Comyn Lyall Initially associated with Indian service as lieutenant Governor of north west province. This shows Mr. Lyall must not be involved in small scale projects of comparatively smaller towns so local engineers must be behind survey and decisions to be taken at different levels.

340 Mumbai, Elphinston college, Maharashtra State archives, *PWD General*, 1868-89 Vol. 563; Mumbai, Elphinston college, Maharashtra state archive, *Bombay public works proceedings imperial and local 1886*,135.

341 As per synopsis of activities briefly mentioned by institute, "Anandashram *Sanstha*" founded in the year 1888 by late Mahadev Chimanaji Apte was advocate of Bombay High court. Institute has great collection of manuscripts and books related to Sanskrit and Indology to support researchers in world.

342 Shiva is one of the important deities worshipped in India. *Sachchidanda* means total bliss.



Fig. 127 Dr. Bhandarkar Ref: Karnataki S.N., Dr. Ramkrishna Gopal Bhandarkar yanche charitr

Kanitkar.³⁴³ He was involved in designing and execution of the project. Overall plan follows introvert spatial planning. Which include typical Wada plan with central courtyard followed as a model for design. The Architectural details are Indo-western in at several levels. Construction materials such as Iron, lime concrete, colored glass, imported Minton tiles and local stone are wonderfully amalgamated in the composition. Exclusive woodwork in front façade and on temple reminds indigenous floral forms worked out by local craftsmen. Very important spiral staircase built in stone and finished with Marble tiles is exactly the same as one built in Reay market in wood (**Fig. 124**). External façade of the whole institute resembles a Wada or royal mansion in Poona, Whereas temple built in rectangular form with central nave and aisle on both sides. Minton tiles and glass windows remind old colonial structure in Bomaby. Wooden arches at the joining point of columns and ceiling follows *Mahirap/* Maratha Style cusped arch form typically used in Royal mansions of Maratha ministers (**Fig. 125**). Entry point to ground floor library adorned with segmental arch covered with ornamented overlooking gallery and three-arched door. On top of the sloping roof a small scale Shikhara³⁴⁴ is



Fig. 128, Fergusson College main building, photo by Lavand Vaidehi

placed as representation of temple. It is interesting to note though Vasudev Kanitkar worked on

343 Schedule “A” in will by Mahadev Chimnaji Apte, , Schedule “B” written in 1891, page no. 7, 11.

344 Shikhara is an ornamental pyramidal roof adorned with sculptures located on top of temples in India.



Fig. 129, Use of Polychromatic stone and window tracery work in Fergusson college photo by Lavand Vaidehi

restoration works of Tulasi Baug and Kasaba Ganpati temples he has not followed same pattern of language in this Shiva temple located at the center of the institute. As it was built entirely in stone, it has a very strong presence in the complex.

Two landmark structures built during the last decade of the century were residence of reformist Dr. Bahndarkar³⁴⁵ was known as Sangamashram³⁴⁶ (1892) (**Fig. 126**) and Fergusson College main building (1892-1895). Unfortunately, Sangamashram doesn't exist anymore but main building of Fergusson college still stands out in the whole campus. Both these buildings were built in local basalt rock are admired for their workmanship and character. Vasudev Kanitkar being good friend of Dr. Bhandarkar (**Fig. 127**) designed and built his own house in Pune at a confluence of two rivers. Perhaps Sangamashram described as one of the best amalgamation of western and oriental style in spatial arrangement by Kamalini Damale

and Sulabha Panandikar in their books.³⁴⁷ Various references and descriptions given by Sulabha Panandikar shows that the house was built for joint family so all arrangements and sizes of rooms such as halls, common rooms were of good enough size to accommodate all family members. Though layout wasn't explained much as per its glimpses in writings some inferences are discussed further. The model that was followed was rectangular and not a typical of Wada courtyard style. Perhaps resembling to old English house, orientalized with the use of several elements changed the pattern of design. Kitchen and toilets were detached from main house. This was generally followed in old Indian houses. Two gable ends were adorned with rose windows at top usually used in western style structure. Central part of the structure was covered with flat roof used as terrace known as *Gacchi* in local language. Simple straight planning followed in all respect. Layout was

345 Bhandarkar: Dr. Sir Ramkrishna Gopal Bhandarkar wellknown in late 19th century for his research work on Indian history and his extensive contributions in freedom movement in terms of literature, lectures he conducted in several Indian communities.

346 Name "Sangamashram" residence of Dr. Bhandarkar suggests its picturesque location of site near the confluence of two rivers in Poona. *Sangam* is confluence and *Ashram* is a secluded building generally used as religious retreat or instruction in Hinduism.

347 Damale Kamalini, *Shrimati Ahilyabai Bhandarkar Smriti Grantha*, (Pune, Shrimati Ahilyabai Bhandarkar Smarak Granth Prakashan Samiti Wadia College, 1966); Panandikar Sulabha, *Vyakti Titkya Prakruti*, (Pune, A.V. Gruha Prakashan, 1958).

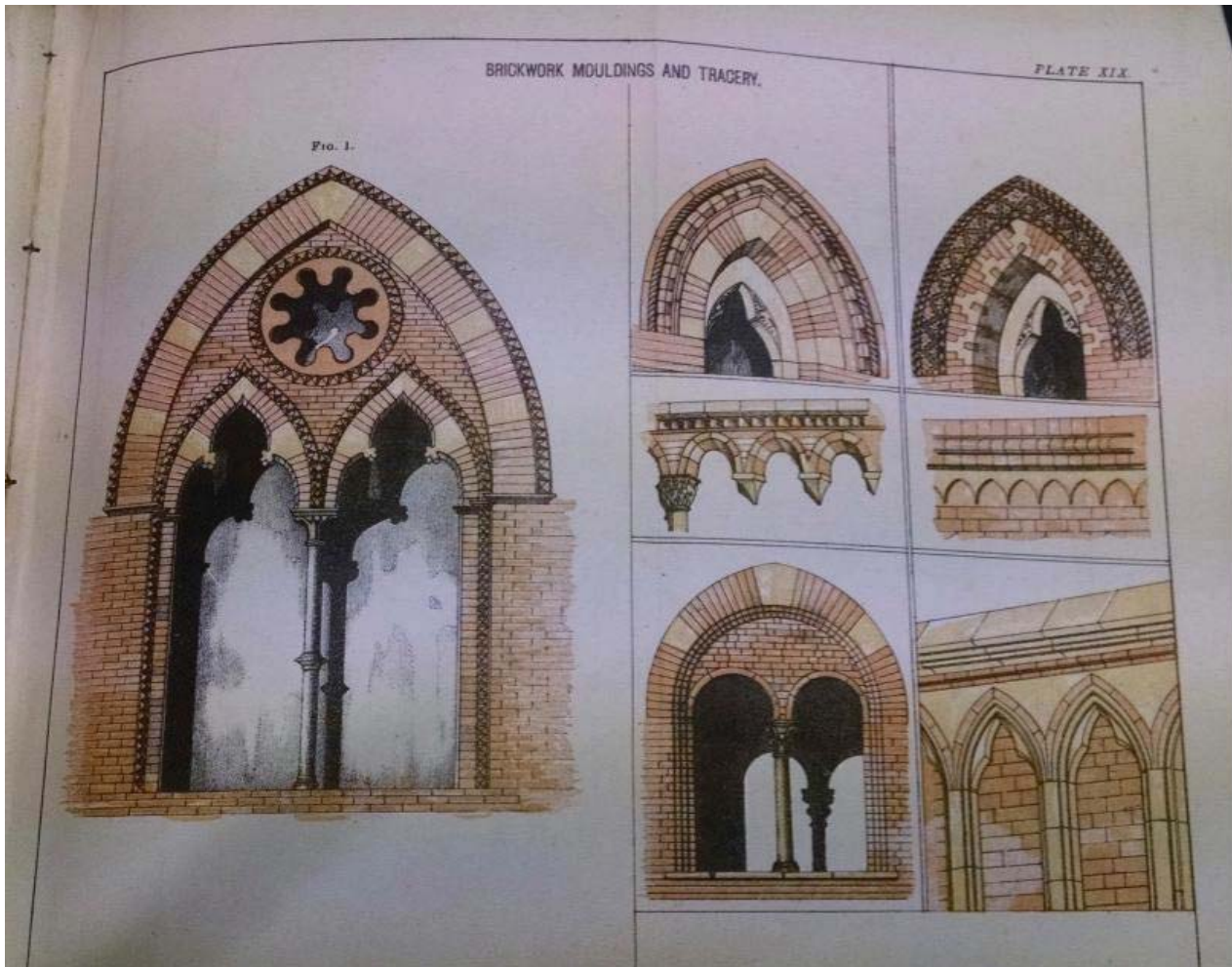


Fig. 130, Window tracery and arch details in polychromatic brick layers from Medley J.G., *The Roorkee Treatise on Civil Engineering in India Vol II*, (1877, Roorkee, Thomson College Press)

made to catch maximum southwest wind. Study room mainly used by Dr. Bhandarkar was located on the west. In addition it had semicircular arches in front façade highlighting the entry.³⁴⁸ Western comfort was seen in furniture design whereas in dining area Indian traditional seating arrangement generally on ground was used as per number of family members. Surrounding area was developed as a garden with several trees and plants. The building had a small tank as well. This house was passed on to another owner and was finally demolished due to unknown reasons. This place had great significance in terms of associational and architectural value.

Enterprise of education as an effort of the Government and Indian people resulted in dawn of new education system that could be termed as formal Indo-western style perhaps reflected in architectural style. Education policies initiated by British Government in India and focus was upon creating more workforces to support empowerment of colonial empire. But eventually it appeared that educational empowerment helped in increased number of reformists who fought in the freedom

348 Kanitkar Shankar Ramchandra, *Kanitkar Kul Vrittant...*cit. 146; Pananddika Sulabha, *Vyakti Titkya Prakruti* (Pune A.V. Griha Puublications, 1958), 199-208; http://www.fergusson.edu/upload/document/77939__History.pdf; Damale Kamalini, *Shrimati Ahilyabai Bhandarkar Smriti Grantha*, (Pune, Shrimati Ahilyabai Bhandarkar Smarak Granth Prakashan Samiti Wadia College, 1966), 6 this book particularly written as a biography of Ahilyabai Bhandarkar. She was grad daughter of Dr. Bhandarkar; Karnataki Shreenivas, *Guruvarya doctor Sir Ramkrushna Gopal Bhandarkar yanche Charitra*, (Pune, S.N. Karnataki, 1972), 67.

movement in various ways. Poona was the education hub during the 19th century. Wood's Educational Despatch (1854)³⁴⁹, the Educational Commission of 1882 and the Hunter Commission (1891) were suggestive of collective efforts of British Government and locals as enterprise of education. Several names of reformists such as Mahatma Phule, Maharshi Karve, B.G. Tilak, G.G. Agarkar and so on were associated in educational reforms focusing on philosophy of education for all despite of cast, class and gender of communities. One of the very important examples of those was Deccan Educational Society established by Vishnushastri Chiplunkar, Lokmanya Bal Gangadhar Tilak, Gopal Ganesh Agarkar, Mahadev Ballal Namjoshi, and Vaman Shivram Apte in 1880. In the year 1891 land of 37 acres was acquired at outskirts of old town on lease. Foundation stone was laid in the year 1892 was named after the then governor of Bombay James Fergusson (1880-1885). He donated Rs 1200/- for the construction of main building.³⁵⁰ Fergusson College (**Fig. 128, 129**) was one of earliest institute in Poona that was run in collaboration with Government and locals. Vasudev Kanitkar carried out design and execution of the main building.

Similar to other contemporary institutional models in India simple form of C shape was adopted. Porch is projected little out highlighted as entrance gateway. Semicircular arches are used throughout the structure. Rose windows are used on ground and first floor highlighted with lime plasterwork. Segmental arches are used at entrance porch. Unfortunately, as like the other structures designed by Vasudev Kanitkar original handmade drawings are not available for further research. But one of the finest works in institutional typology that is fortunately preserved well by the management of institution in good condition. English tracery (**Fig. 130**) is used for window details and façade treatment. Decorative wrought Iron and wooden railing are used for upper floors adorning the elevation. Decorative elements such as windows arches and overall composition in elevation are very similar to the Reay market building.

After the discussion on career of both the significant figures several points could be highlighted. It is quite evident that after looking at overall graph of works carried out by Walter Ducat, he was majorly involved in service-oriented large-scale projects and was a decision maker as an urban designer in many towns under Bombay presidency. Whereas in spite of not being architect or engineer Vasudev Kanitkar worked on landmark structures those represented urban public spaces in Bombay and Poona. While looking at the typology of projects both have carried out, mainly public oriented projects in association with government and local philanthropists. Reay market in Poona being a first of its kind stands out in whole, which marked its presence dominantly in old town that later triggered further extension of town towards south. It was built at the peak of career of both. This structure has importance in the context of urban landscape of Poona, as it changed the skyline and brought covered market as an important typology for citizens in the context.

There are names of Walter Ducat and Vasudev Kanitkar mentioned in Bombay University

349 Wood's Educational Dispatch (1854) speaks about right to education for all and discourse on inculcating western knowledge in "Natives". This was in order to create a class of civil servants for empire. Charles Wood was the President of the Board of Control of the East India Company.

350 http://www.fergusson.edu/upload/document/77939__History.pdf

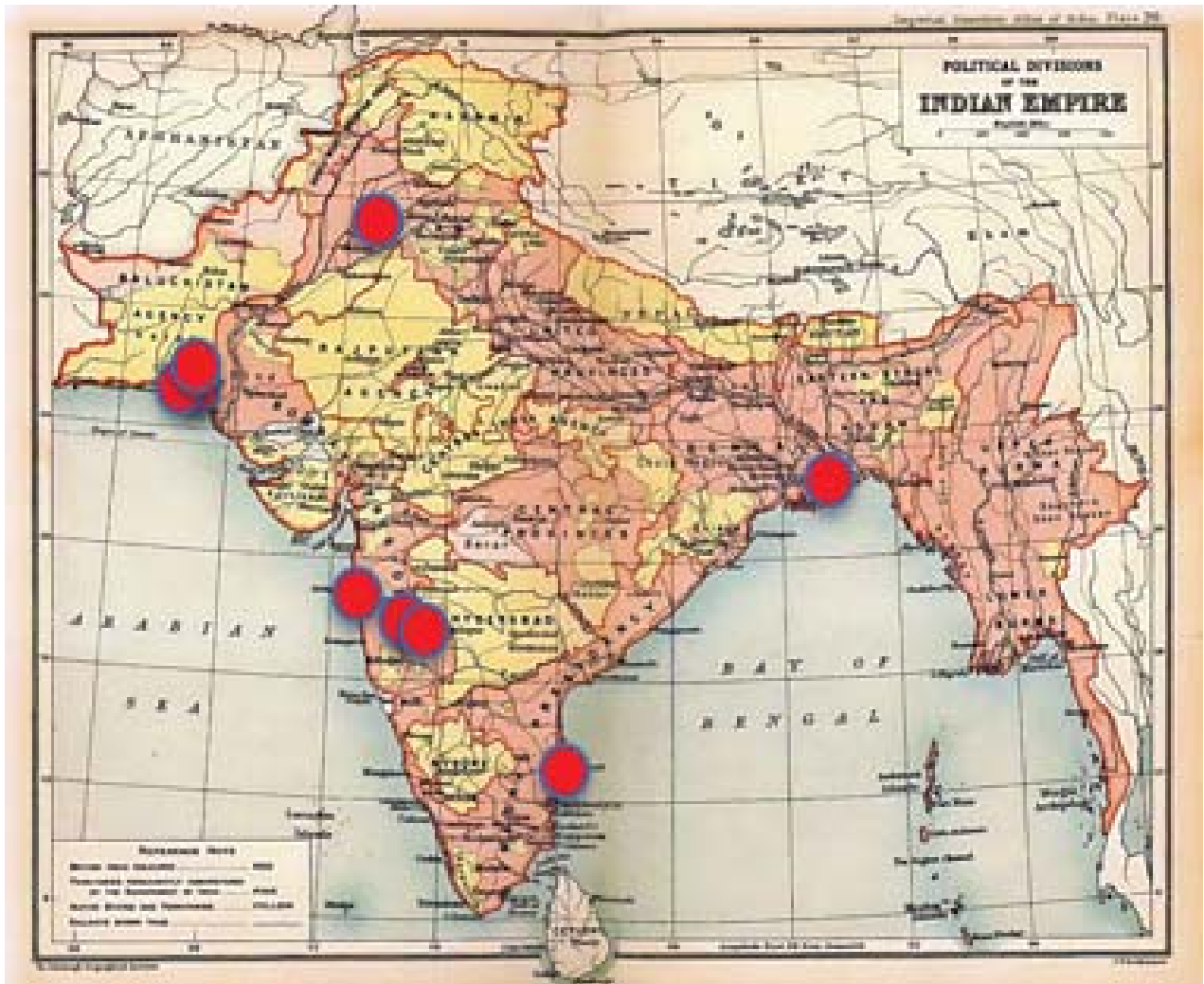


Fig. 131, Map of India and location of Covered Markets at various towns in three Presidencies in late 19th century

Calendar³⁵¹ under the list of faculty of civil engineering in the year 1868 and 1874 simultaneously. Unfortunate demise of both Walter Ducat (1902) and Vasudev Kanitkar (1905) happened in the same decade. Ascending graphs of the works of both are noteworthy in the Bombay Presidency those are important cultural heritage sites in the context.

; Sundaram M.S., “A Century of British Education in India 1857-1957”, *Journal of the Royal Society of Arts*, Vol.107, No.5035, (June 1959), 491-507, Stable URL: <http://www.jstor.org/stable/41368746>. Author in his article mentions “There was a network of autonomous, self-supporting decentralized school system all over the land. The village priest and the village craftsmen played the role of teachers in addition to their religious and occupational pursuits.” This explains the state of indigenous education system at the beginning of 19th century. Educational Commission of 1882 and the Hunter Commission (1891) gave emphasis on primary secondary education of masses in India. William Wilson Hunter was one of the members of the Indian Civil Service well known as statistician, later he was Vice President of Royal Asiatic Society.

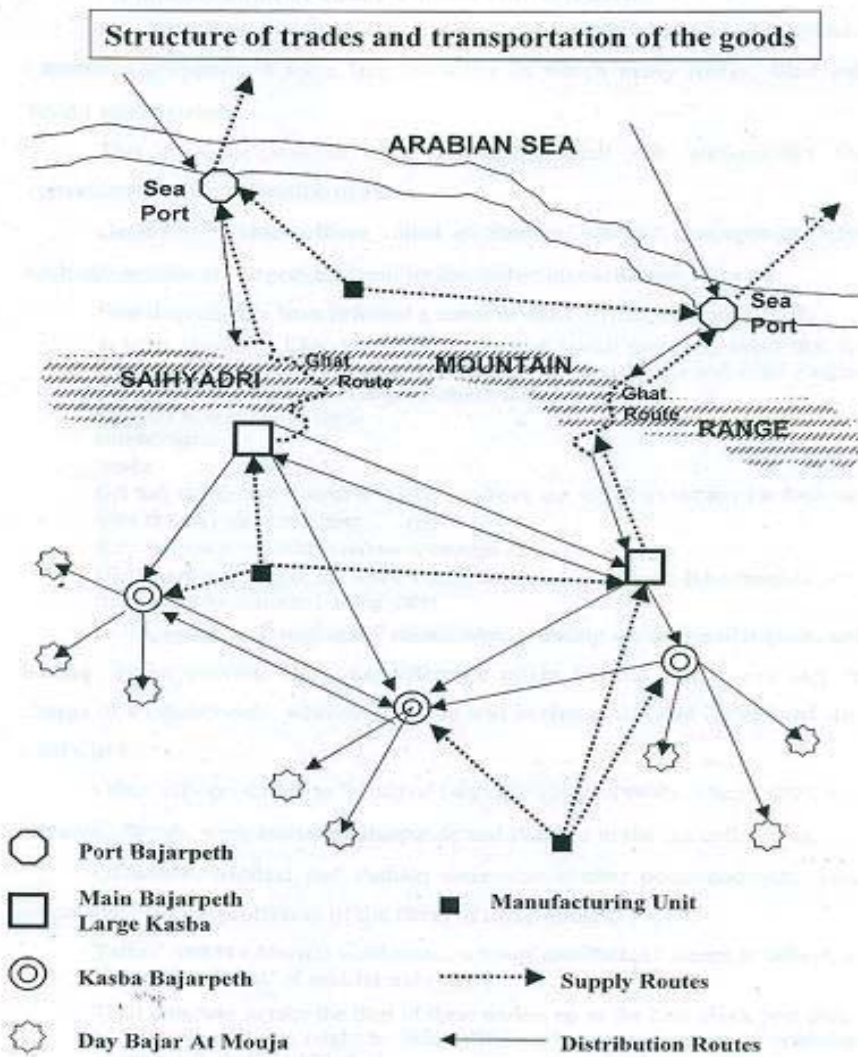
351 The Bombay University Calendar for the year 1874-75, (Bombay, Thacker Vining & co., 1874)

4 A case study: covered markets in Poona

Hegemony on trade and commerce in India was the most important factor for British government as compared to any other colonies they acquired in the world. India was the largest British colony as well it was supplying maximum raw materials such as cotton, sugar, indigo and so on along with abundant minimum wage labour. Rather establishing rule on Indian subcontinent, abundantly available raw material and low cost labour was the main attraction for them. While establishing dominance on whole economic system in India. A lot of efforts were taken on studying, documenting and analyzing existing situation in various parts of India. This was in search of various approaches in intervening administration and economic system in Indian subcontinent. Various British officers, social scientists reframed, rewrote or reformed documentation on framework of Indian social history, caste system, earlier administrative system and economic conditions and dependence from colonial point of view. After studying and documenting these social administration conditions colonial regime attempted to follow or break the existing customs, to some extent for their purposes. Various infrastructural facilities in the process of connecting various towns and, villages such as construction of roads, railway routes, canals, bridges and so on came in to the process of development. Use of English as official language unanimously



Fig. 132, Open Market in front of Shaniwar Wada, Ref: Diddi J., Gupta S., Pune Queen of Deccan



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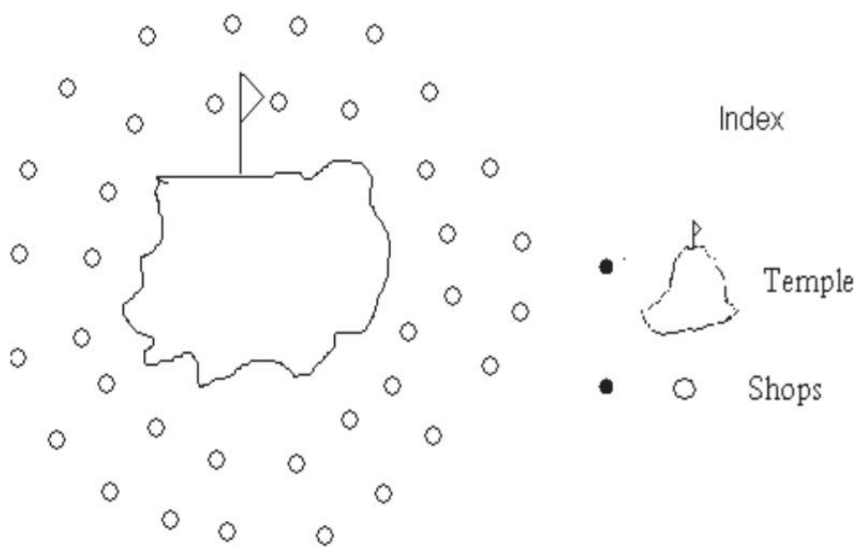


Fig. 133, Schematic diagram of Oval or circular pattern one of the type of open Market form at nodal junction in a historic town, Ref: T.D. Gajar...cit., 116.

in multilingual country and educational reforms were the important tools majorly explored by British government for “organized” administration.

Ultimately, this administrative political intervention reflected in the form of architectural developments took place in the century under British rule. Though this architectural creation was actually implemented by locals, they had major western influences in terms of typologies, models, material techniques and detailing. Various

Fig. 132, Map showing relation between market and surrounding small scale towns in Deccan, Ref: Dr. Avinash Sowani,

typologies such as public buildings, residential bungalows and palatial edifices were indepth

studied by various researchers. Less importance was given to covered markets emerged in Indian subcontinent in 19th century which marked history of monumental scale covered shopping culture developed to large extent in the 20th century India after open market system. But in the context of 19th century development of “hygienic” covered market was symbolically represent capitalist agendas of British sovereignty. All these covered central markets emerged specifically in major trading towns connected with sealinks, railways and traderoutes for example Calcutta, Bombay, Madras, Karachi, Lahore and Poona. These were well planned public interventions in terms of urban colonial landscapes of these towns. (Fig. 131)

Before this public intervention, open central Bazaars, weekly or monthly, were fulfilling the needs of small settlements, villages, towns or cities. These were components of Market morphology of specific town as named by Saxena.³⁵² In case of Poona, such open *Bazaars* or markets were organized by locals at various wards. Till late 19th century huge open Bazaar was organized in an open space opposite Shaniwarwada twice in week i.e. on Wednesdays and Sundays. (Fig. 132) Besides that there were small scale neighbourhood shopping areas serving basic food, grain needs of small communities around. Several terminologies such as *Bazaarpeth*, *Ganj*, *allies*, were used for these neighbourhood shopping and commercial areas around. These were evident with different names in several parts of India at various scales as per size of the town. These were generally established and further extended by Ministers of ruler or feudal lords or middle men known as Shete or Shetya. The revenue generated from these commercial areas was more than agricultural income, so such commercial activity was always promoted in the process of development of the town. Importance, scale and population of town were influential factors for the number of established Bazaarpeths and frequency of centrally organized Bazaars.³⁵³ In the process of understanding significance of covered markets emerged in India, we need to understand the situation of these vibrant organically rather informally developed commercial spaces and Bazaars in Deccan region.

352 Saxena, P.B. (1974), *Kota: A study in Market Morphology*, Geog. Rev. Of India, 36-1.

353 Bhagwat H.R., *Pune Shaharache Varnan/ Description of Poona City...cit.*, 60.

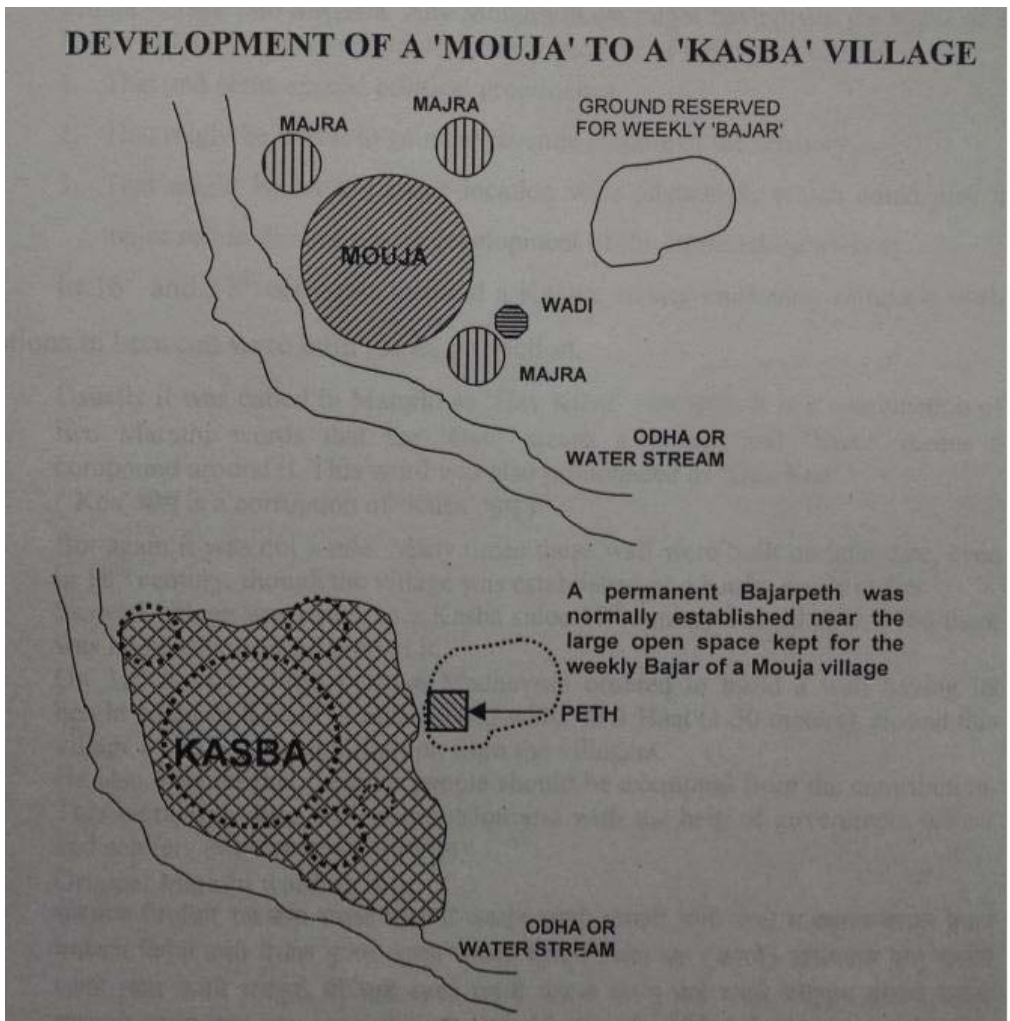


Fig. 134, Schematic Map for development of Mouja Village to Kasaba Town, Ref: Dr. Avinash Sowani...cit., 188.

4.1 *Market places and the town throughout the centuries*

Being important trading destination in world map, Indian *Bazaars* played foremost role in generating economic means for various communities. Spices, grain, cotton, sugar, Indigo were some of important trading goods exported all over the world throughout centuries. Traditional *Bazaar*³⁵⁴, *Bazaarpeths*³⁵⁵, market squares were most happening places in historic towns of India. Their accessibility, openness, flexibility, meandering surprises, colors, and crowd pertains its own character. These are most flexible and organic setups evolved over the period of time responding to political, economical and cultural setup of that place. *Peth, Ganj, Ali, Katta* generally referred to variety of *Bazaar* roads or shopping areas developed in historic towns. From the point of view of Mark Casson and John Lee, “Distinction between markets and shops were not always clear cut. Shops (fixed or retail outlets) could be found both within and outside the marketplace and the presence of fixed retailers and wholesalers could blur distinctions between what was traded inside and outside markets.”³⁵⁶ *Kasba* or market town is very common terminology used in most of the parts of India. Term *Kasba* or *Qasbah* as explained in C.A. Bayly’s *Rulers, townsmen and Bazaars* refers to place where residence of gentry who served as soldiers or administrators for the regional states are located. Classification of settlements, villages, towns and cities were based upon statuses of the mercantile facilities provided in the area. As per the convenience of means of transport and patronage, importance of *Kasba* towns either increased or decreased over the period of time. This gave rise to metropolitan cities like Poona in later centuries.³⁵⁷ Poona was known as *Kasba* town had great influence in the Deccan region for larger period of time. Till Peshwa reign various wards of town were developed considering provision of various mercantile facilities to neighborhood communities. To understand role of market places in Poona it is important to understand its context and various terms used in Deccan context for such spaces purposely developed as a part of expansion of town in the form of larger city. (Fig. 133)

As per dictionary meaning *Bazaar* means a marketplace or a shopping quarter, especially one in the West Asia. Word *Bazar* itself inculcated in Indian traditions from Persian dialect, spaces such as allies and squares serving as commercial spaces for the communities around, were important small-scale neighborhood resources for basic needs of day today life. Generally open market square was left vacant for weekly *Bazaar* and public gatherings in

354 *Bazaar* mainly used for rural context or in later period used for open market mainly weekly *Bazaar* at the center of the town.

355 *Bazaarpeths* were different wards specifically developed for particular trading communities were named after those communities, usually followed cast based system of development in Indian historic towns.

356 Casson Mark, Lee John, *The Origin and Development of Markets: A Business History Perspective*, *Business History Review* 85 (Harvard College, spring 2011),17. They further say that shops usually were forming centers of production such as workshops and family dwellings of artisans. This characteristic of space is quite similar to the mixed-use typology followed in various wards in historic towns of Deccan.

357 Lavand vaidehi, ‘Traditional Indian Bazaars’ *The Cultural Heritage of India*, Proceedings of National Conference on Emerging Trends in Architecture & Allied Fields, NCETAA – 2014, 27 & 28 February, 2014, (Pune, Success Publications, 2014); Morphology and centrality of market Centres chapter V, http://shodhganga.inflibnet.ac.in/bitstream/10603/54431/13/13_%20chapter%20v.pdf



Fig. 136, Otta or a raised platform of road side residence used as workspace or display area of shop, sketched with a tailor, Ref: Crawford Arthur...cit., 215

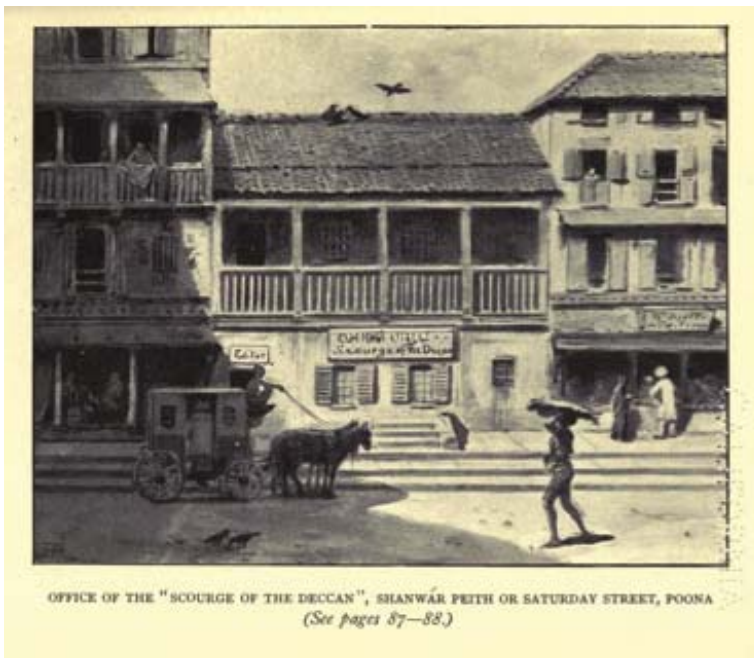


Fig. 137, Street view of Shanivar Peth, Crawford Arthur, Our Troubles in Poona and The Deccan, (Westminster, Archibald Constable & co., 1897), 86.

Indian villages and towns until colonial regime. Markets were established at nodal transport centers where important trade routes intersected. Other special attractive locations such as royal residences, military administration places such as castles and barracks or open spaces with important religious significance were most appropriate for establishment of such market places. As religion played important part in the settlements in India, many a times these squares were located close to important temples of the town. This space is used as open market place serving communities around. Routes around market would be opened up from various directions to transport and supplies for inhabitants around. These places eventually became local and regional hub in developing urban landscapes. Several components of Market Morphology as discussed by T D Gajar are location of market center, accessibility to the rural areas, distance from the bus-station/ railway station, the main street of the

village, and common open space of holy place. Several types of market forms evolved over a period of time such as linear pattern, rectangular/ square form, circular or oval pattern, and star pattern at the nodal junction of several roads converging at a site.³⁵⁸ In case of Reay market nodal junction at city center was selected for the building a structure that could be seen from larger distance. (Fig. 134)

Dr. Avinash Sowani has researched many aspects of town planning systems in Deccan region considering market places and trade as major impacting factor in the development of historic town. It is observed throughout the history of traditional town planning and administrative systems that revenue and income generation in *Bazaarpeth* or bigger scale *Kasaba* towns trades and manufacturing activity had more income than that of agricultural revenue. Major economy of ruling state was dependent upon collection of revenues; promotion of trade and commerce resulted in extension of towns with areas specially allocated for certain trading communities. Number

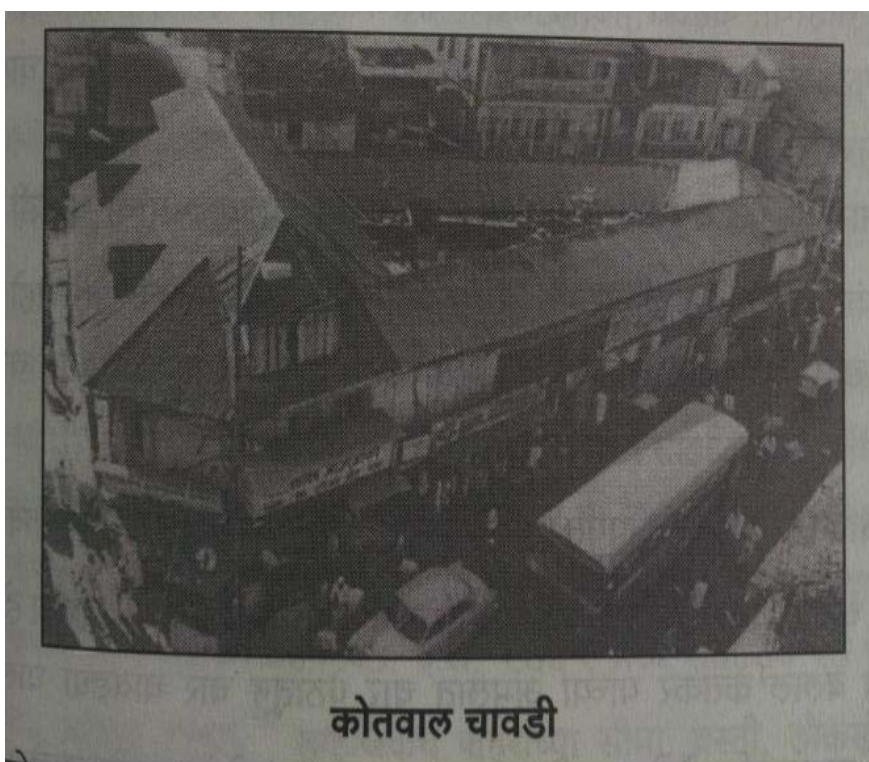


Fig. 138, View of Kotwal Chawadi a headquarter of Police stations

358 Casson Mark, Lee John...cit,36; Ayyar, C.P. Venkatraman, *Town Planning* in Early South India, (Delhi, 1987); T.D. Gajar, Morphology and centrality of market Centres chapter V, http://shodhganga.inflibnet.ac.in/bitstream/10603/54431/13/13_%20chapter%20v.pdf

of *Bazaarpeths* and their revenue income was a key factor in extending a small-scale town to *Kasaba* and then to *Shahar*³⁵⁹. *Setya/ Shete* was the agent of ruler helping in the establishment of *Bazaarpeths* in towns. In this process traders and *Khum*³⁶⁰ were invited in town to establish new wards for commercial activities. Their houses were specially designed for mixed use. In this particular typology ground floor was used for commercial activity such as workshops and display of goods whereas upper floors had residential facility for owner of that particular occupation. Main focus was on encouraging business, for escalation of revenue. Since *Bazaarpeth* was the main factor for collection of revenue income, more attention was paid on the prosperity of *Bazaarpeth* as key element of development of town. (Fig. 135)

Further, in order to discuss the historical context of market spaces in Poona city it is important to take cognizance of political systems changed over a period of time and how it influenced built and un-built forms in terms of market spaces. As mentioned by Dr. Avinash Sowani in his thesis on Maratha Town and City Planning five different statuses existed rather developed till the end of 18th century. This system of administration was existed right from Hindu rule till the end of Peshawa reign in several parts of Deccan region. He states that there were five categories of settlements existed such as *Wadi*, *Majra*, *Mauja*, *Kasba*, *Shahar* in Deccan. Amongst this *Wadi*, *Majra* were smallest category of villages. These were generally incorporated in nearby *Mauja* villages, Whereas *Kasbah* was important market town at district or other town level. Small villages were mainly dependent on weekly Bazaars, and communities of local artisans and businessmen called as *Balute*. System of *Bara Balutedar*³⁶¹ was followed in various parts. Separate merchants, artisans' guilds existed at local and regional level. Large villages such as *Kasaba* were provided with separate *Bazaarpeth*.³⁶² Initially, in all settlements general pattern of open *Bazaar* system could be seen for the purpose of serving communities nearby, in later phase these open *Bazaar* areas were converted in to *Bazaarpeths* with commercial, residential facilities with permanent infrastructure. Along with that, weekly *Bazaar* was organized in various *Peths* or wards or a large open space or open grounds at central

, 110-117 (2015)

359 *Shahar* originally from Persian language used in Hindi Marathi for a big scale city

360 *Khum* were artisans working in *Bazaarpeth*. There was tradition of using term *Athara Khum* that is eighteen numbers of artisan communities but more than that were actually working earlier period of time.

361 *Bara Balutedar* was a servant cum caste-based system in Maharashtra frequently names were given as per their economic functions. As per researchers "Bara Balutedars, the village artisans, who held rent-free land in village, served in sphere of economic and social needs of the society. They were assisting to the *Patil* or the head of village in various social and festivals and ceremonies." They rendered valuable service to whole village in its economic activity and growth. There were much more than *Bara* or 12 subcategories present in several parts of India but usually known as *Bara Balutedar*. D.D. Kosambi Indian historian and scholar of Sanskrit and Mathematics widely published his scholarly articles and research, books on Indian History, culture, Castes and caste-class based economic systems developed in India. He particularly mentions in his book *The Culture and Civilization of Ancient India in Historical Outline* that development of tribes in to castes and new settlement happened reflected extensively on organization of village settlement and trade in India.

362 Sowani Avinash, *Maratha Town and City planning with reference to the systems of Village development during 17th and 18th centuries*, (Unpublished thesis work submitted to Tilak Maharashtra Vidyapeeth, Poona 2011); Ray Himanshu Prabha, "Early historical urbanization: The case of the Western Deccan", *World archeology* volume 19, 1987 issue 1: Urbanization; Word *Kasaba* came from Persian dialect.

locations accessible with easy transport. (Fig.136,137)

There are some references of trade evident in Satavahan period (30BCE-20 CE) with reference to Kasaba area of Poona, which is the oldest settlement in the city. Islamic rulers concurrently had major contribution in the development of the town. In Maratha period hometowns of either *Vatandars* or *Jahagirdars*³⁶³ were developing towns with commercial activities. In case of Poona references of prominent *Bazaar* and *Bazaarpeth* could be traced back from Nizamshahi in 17th century. In case of Maratha rule from Shahaji and later Shivaji period (1627-1680), after the construction of Lal Mahal and development of areas around existing *Kasaba* area references of *Bazaarpeth* in open areas near fortification wall are available. During Peshwa period as discussed in earlier chapters cities like Satara, Poona were developed to their maximum extents as ruler's seat. There are references available for the establishment of open Bazaar from Peshwa period such as in the year 1734 new *Bazaarpeth* was established for the purpose of weekly *Bazaar* on Friday that was named as Visapur Bazaar later that ward called as Shukrawar peth. Today's Reay market is located in the same ward. This *Bazaarpeth* was established to serve the military camp of Peshwa army placed at Poona. Whereas Appaji Munde till the end of 1775 established Sadashiv Peth. There are indications of crowded shops and *Bazaarpeth* in Sadashiv and Malakapura or Aditwar now known as Ravivar Peth. Especially two important references of open *Bazaar* or *Mandai* in Ravivar Peth and other Kotwal Chawadi (Fig.138) were famous in the old town. Out of these first one was an open market Whereas the latter one was a two storied building which had seat of Kotwal or police in Peshwa reign. This building had eight sides; Nandaram Naik was the owner of the structure. As per Joshi and Mahajan in their narration on historic Poona in 18th century there was a probability that open bazaar from nearby street was shifted and as a result, some shops were incorporated in this particular Kotwal Chawadi. Lot of property related issues were tackled in the same premise. This police station probably must be the headquarter of all other police stations in Poona or Kotwal must be controlling law and order in the city from this particular place. It is described that it has eight sides and first floor was accessible by staircase. If this is true then this could be the first evidence of covered market place actually utilized as a separate market space in the context of Poona. There is another reference available about the location of central open market before Peshwas that was probably in Kasaba Peth behind Zambare Chawadi. While referencing export of Poona looms all over India particularly Bombay, Parasnis in his book *Poona in Bygone days* narrated situation of 18th century market spaces based on earlier travelogue and evidences such as, "Frenchman, Du Perron, a scholar and traveller, who visited Poona writes that Poona was the union of four villages with a common market and some one-storey houses. The market was a cross street which crossed the town end to end, and contained shops exhibiting merchandise from Asia and Europe."³⁶⁴ Till the end of Peshwa reign total 18 wards were developed, incorporating for various activities such as *Bazaarpeth*, mercantile activity and residential facility. In **Appendix 16** all 18 wards developed till the end of 18th century in Poona along with their year of establishment and purpose are listed down.³⁶⁵

363 Vatandar or Jahagirdar were feudal lords in several regions of India.

364 Parasnis D.B., *Poona In Bygone Days*...cit.,84.

365 Sowani Avinash, *Maratha Town and City planning with reference to the systems of Village development during 17th and 18th centuries*...cit.,320, 334; Joshi N. V., Mahajan S.G., *Pune Shahrache Varnan*, (Bombay, Oriental press,

Vibrant street culture of Poona in the 19th century could be seen through descriptions of Poona by Arthur Crawford in his book as, “Shopkeepers are shopkeepers all the world over, but in the city of Poona it is remarkable how Mahommedans and Hindoos, Khojas and Borahs, Moochees (Shoemakers), Chambars or Curriers, Katiks or Mahratta Butchers, Sweetmeat sellers and petty grocers, work amicably together.”³⁶⁶ Perhaps this was not the unanimous experience throughout town. There were wards such as Sadashiv Peth mainly occupied by Brahmin population at the heart of the town famous for the dominance they pertained over the centuries. Especially during Peshwa reign Brahminical authority covered all sectors in society right from administration and commerce. Other religion and lower casts communities were unhappy with their supremacy and caste discrimination they experienced over the centuries. Arthur Crawford mentions in his description as “Mahommedans may not love us, may despise us for our fatuous folly in dealing with our real enemies, but they hate Brahmins with an intensity that cannot be gauged by European standards” he further explores chances of Mahommedans joining British in the course of time to break the Brahminical hegemony. The question of caste from his point of view needs to be repressed not pampered. He further states “Let the public service be rendered more accessible for other castes and races, not kept well-nigh closed for all but Brahmins.”³⁶⁷

Very few evidences of centrally located closed market places could be traced in Poona and the region around. Small-scale shops or shop houses were largely used for the purpose of commercial activities. As mentioned by Jaymala Diddi and Samita Gupta in Pune Queen of Deccan various wards of Poona developed by several ministers of Maratha and Peshwa Empire till early 19th century. In colonial rule access via roads or sea link and revenue from trading was the main focus in the development of any town.

It can be seen that over a period of time, food culture, civic culture, and local shops catering to neighborhood needs fostered individual community cultures specific to that region. Academicians and researchers such as Morrison Kathryn prominently discussed unique identity of public markets and their role in shaping civic consciousness. Civilizing public spaces by providing well equipped market hall, planned water supply and drainage layout, paving, lighting, road widening and policing streets were important elements of urban landscape during mid and late 19th century.³⁶⁸ Though Morrison Kathryn with several examples shows evolution of shopping culture and central markets in England similar model was tried to be implemented by designers and engineers in various important Indian towns such as Bombay, Calcutta, Madras and so on.

Neighborhood shopping areas were serving immediate nearby communities Whereas weekly or monthly Bazaars were serving whole town and surrounding towns with food, grain, vegetables and fruits along with important day to today needs. These Bazaars were organized at central locations considering the major factor of accessibility and transport. They were organized in informal way either open to sky or in temporary shelters. These centrally located market spaces were inconvenient

1868), 25. As per the descriptions mentioned in the Thesis by Dr. Sowani Shukrawar Peth, Guruvar Peth was encouraged to establish as Bazaarpeth by Peshwa. Shetya we appointed to enhance the Bazaarpeth by inviting shopkeepers such as Vani, Udami, Bakal till the end of 18th century.

366 Parasnis D.B., *Poona In Bygone Days...*cit.,84.

367 Crawford Arthur, *Our Troubles In Poona And The Deccan...*cit., 252.

368 Morrison Kathryn, *English Shops and Shopping*, (London, Yale university Press, New Haven & London, 2003), 109,110.

especially during rainy season. Till the colonial hegemony the question of health and hygiene probably was not much discussed at large. After formation of local municipalities and wave of expanding old towns these health and hygiene issues were discussed at various levels. Laying out drainage lines, road widening, and cleanliness in Bazaar areas were considered as most priority public works majorly implemented in several towns. Bringing this “unorganized”³⁶⁹ market place under controlled systems and administration proposals of covered markets were raised in several important towns in India.

Mark Casson and John Lee in their paper on origin and development of markets mention, “The open public market, while undergoing change, remained an important part of the early modern economy.”³⁷⁰ Authors further mention in his descriptive historic narratives that markets became integral parts of urban economics in case of London, trade and expansion of towns lead in the development of wholesale and specialist, markets. Though phenomenon of covered market as a great infrastructure built for public in the vicinity, it’s observed over the period of time that these models were deeply rooted in Bazaar traditions.³⁷¹ I would like to emphasize on this very important point, in case of two covered markets emerged in Poona. Though exterior of both the structures were purely Victorian Gothic, the location, usage and response to climate, cognizance of traditional market systems, culture, tradition and end user were given priority in final execution. Detailed discourse on markets is covered in next chapter.

No doubt lower caste communities were quite hoping for better social order under colonial rule rather anarchy of Peshwa reign in 19th century. Essay *Mangmaharanchya Dukkavishayi Nibandh*³⁷² published by Dyanoday discusses troubles imposed by upper Brahmin cast community to lower caste people in the 18th till the mid 19th century. At the end the author expresses colonial reign would be better than Peshwa as at least they could breath freely in public spaces. I find this notion of freedom in public space theoretically and to some extent practically implemented was very essential and turned in the form of built infrastructure such as covered markets developed at the center of town. Rulers always try to establish their power in various practices such as construction of tangible intangible placed for their subject, social welfare and so on. It is important to mention that in the later phase lower cast communities and women too were involved with their full strength against British governance.

369 Bazaars were not so unorganized as emphasized in various documents and reports made by British officers. Generally different “native” agents were controlling these Bazaars. This was the problematic element for colonial regime. Bringing the activity under covered space was a part of controlled economy and administration of commercial activities under one rule.

370 Casson Mark, Lee John, *The Origin and Development of Markets: A Business History Perspective*, *Business History Review* 85 (Harvard College, spring 2011),18. In this paper they discuss historic narratives of various market spaces in European context. They talk about concept informal and formal market spaces and their development that can be checked and analyzed in Indian cases.

371 Morrison Kathryn, *English Shops and Shopping*,...cit.,308.

372 Joshi N. V., Mahajan S.G., *Pune Shahrache Varnan*...cit.,101-103.

4.2 Phule Mandai/ Reay market

Emergence of central covered market was a result of accessibility by means of railway routes to various towns at various places in Indian subcontinent. This was a one point regulatory body on prices in wholesale and retail market and transporting and supplying large quantity of perishable food.³⁷³ Looking at various locations of covered markets in India they emerged at central locations of towns accessible for locals and closely connected to railway routes. The process of promoting trade in fresh food was possible due to connectivity between towns. (Fig.141)

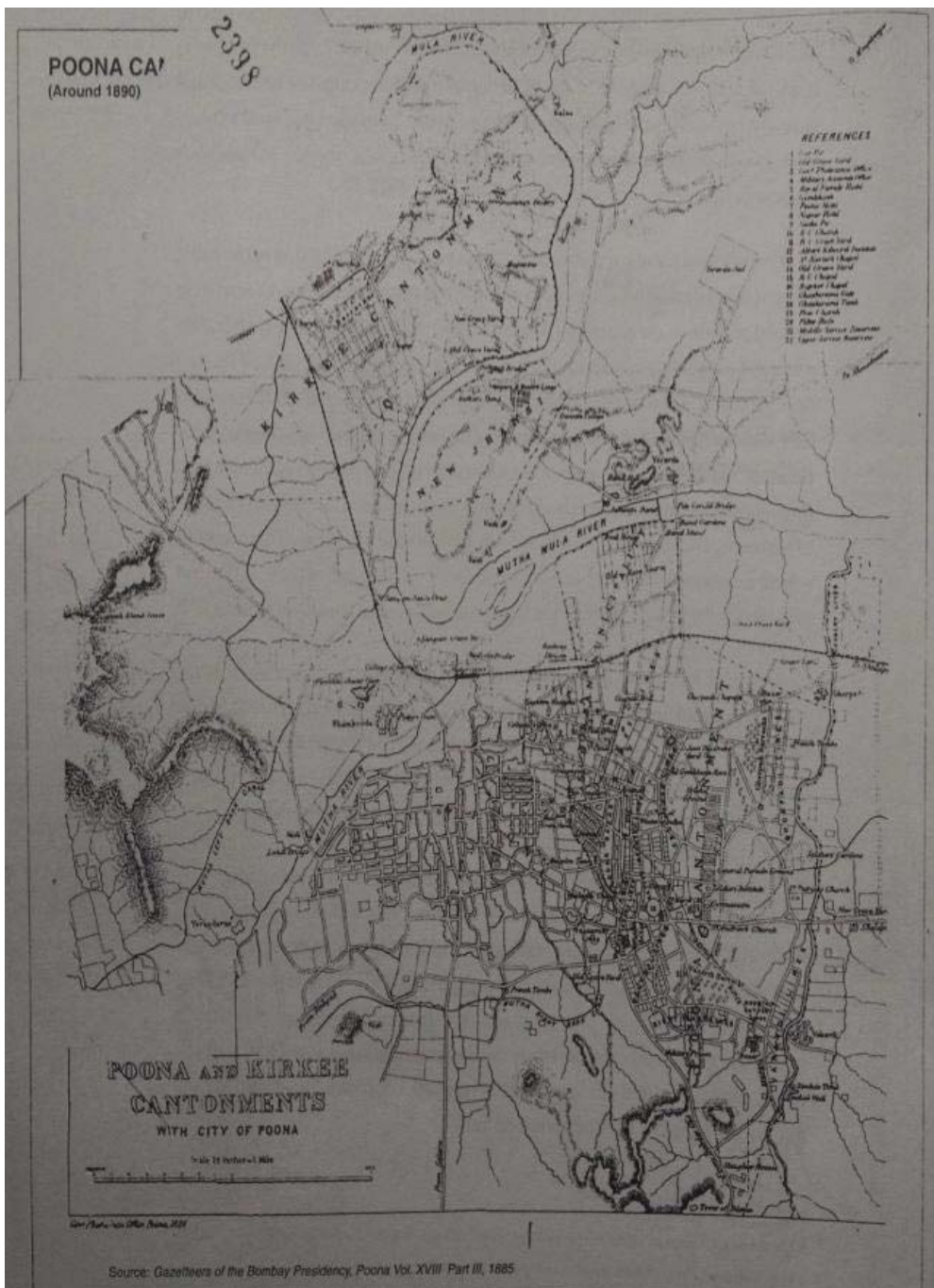


Fig. 141, Map Poona in 1890 with the cantonments developed around old town and railway line reached in Poona the year 1853, Ref: Diddi J, Gupta S

373 Helen Tangires, Public Markets, (New York, W.W. Norton & company, 2008), 231.



Fig. 142, Reay market/ Phule Mandai (1886),
Source: Lavand Vaidehi

Victorian markets in England were considered as icons of civic culture of society. Especially iconography, cast iron ornamentation was used to bridge the gap between functional and aesthetic values of the structure. It was commonly seen, that for the purpose of large spans and getting maximum light in markets, iron columns and glass were used. Market buildings were much like railway stations, exhibition halls and warehouses. From the point of view of Paul Dobraszczyk, the term civic is used in relation to market halls in England “the representation and enactment through a combination of spatial reorganization, architectural aesthetics, public ceremonies and legislation of a certain set of middle class values that came to dominate the planning of municipal buildings from 1840 onwards.”³⁷⁴

Public welfare motifs implemented in India followed similar models from contemporary architectural vocabulary in England. Bringing open Bazaar under a roof was a prominent effort implemented by local authorities such as Municipalities. Earlier and contemporary covered markets emerged in India. Earlier examples of covered markets built as a prominent civic center were Lambert Market in Karachi (1864), Tollinton Market Lahore (1864)³⁷⁵, Crawford market (1867) Mumbai designed by architect Sir William Emerson, Hogg Stuart Market Calcutta (1872) designed

374 Paul Dobraszczyk, Victorian Market Halls, ornamental Iron and Civic Intent, *Architectural History*, Journal of the society of Architectural Historians of Great Britain Vol 55, 2012, 173, 194

375 Lahore and Karachi now located in Pakistan which was part of India before partition of 1947; earlier built as community hall later converted in market by Rai Bahadur Gangaram well known local government engineer,



Fig. 143, Connaught market/ Shivaji Mandai(1886)



Fig. 144, Decorative relief work at the entrance of Craford market by J.L Kipling and his Students

by Roskell Bayne and Bolton Market Karachi (1883). The year 1884 demarcate commencement of Empress Market Karachi; later Reay Market (1886) designed and built by Walter Ducat and Vasudev Kanitkar and Connaught Market (1885-1886) designed by Walter Ducat and La Touche. Moore Market Madras (1898-1900) was designed executed by RE Ellis.

In Poona Municipality 1885-86 report by Narso Ramchandra secretary Municipality of Poona writing to the collector of Poona for the development of new industries and the growth of existing ones in Poona City as “Poona City in the course of past ten years has been gradually developing as a centre of manufacturing industry. This fact will be borne out by the following table which shows the imports of raw materials used in manufacturers in the town and the exports of prepared articles during the past 5 years.”³⁷⁶ In the next discourse he mentions soil of Poona is not

376 Narso Ramchandra, Poona Municipality Appendix Z. to administration report for the year 1885-86, No. 1116 of 1886, (Poona, Dnyan Chakshu Press, 1886), 1,2. Several municipal reports are available to see in Gokhale Institute Library Pune. As mentioned by Dorabjee Pudumjee president of City municipality Poona in the Poona Municipality report in the year 1886-87, Rao Saheb Narso Ramchandra Godbole (Diploma engineer), had handled post of Muncipal Secretary for about 12 years and conducted his duties with great ability and energy, resigned it at the close of the

good for agricultural produce so its becoming centre of Industry. He further mentions very relevant point to understand the process of changing face of Maratha settlement into a new urbanized industrial town in his own words, “This is a progress on the right lines and it diverts the restlessness of the Marathas into modern channels of manufacturing life.”

Two major public interventions in the core city of Poona by Walter Ducat and Vasudev Kanitkar were Reay Market and Connaught Market in Cantonment area marked their importance as colonial urban landscape at the heart of two “culturally”³⁷⁷ different towns. Both the works were completed in the year 1886. From 1876 there was a suggestion by collector of Pune that city should have a centrally located covered market space. Very important landmark structure as a covered market was built already in Bombay was known as Crawford market (1867). Sir William Emerson designed this iconic structure at the corner junction of main roads in south Bombay. Very unique site responding spatial organization could be seen here with landmark corner tower and flanges coming out of it. The structure followed high Victorian Gothic style; students of J.L. Kipling and local artists, craftsmen executed sculptural details. Indigenous forms, market scenes and various Indian communities carved in Indian stones. Decorative drinking water fountain was placed at center of hall gifted by local philanthropist, was one of the important character of complex. This market was the triggering point in establishing need for the similar covered market in Poona as well. (Fig.142,143,144)

Selection of site for Reay market in old city core was decided in a meeting where Colonel Ducat, Richardson, Rav Bahaddur Mudliyar, K.P. Gadgil, and R. S. Gupte were present. Mr. Kashinath Gadgil suggested open space in “*Shukrawar Peth*” owned by minister and *Kotwal*³⁷⁸ of Peshwa Mr. Khajagiwale. This was “Chakale Bagh” that was a privately owned garden named as Chakale garden. This was ideal location for covered market as located at closest point to existing market wards and residences around. Four acres of land has been purchased at the cost of Rs. 40000. Over a night, the area was captured by the Ramchandra Naraso Godabole, was mentioned in *Nagari Jeevan Shatabdi Visheshank* by Khole³⁷⁹. Honap in his article on Reay market mention about the proposal for market was discussed since 1876. In 1878 collector of Poona further discussed the need for covered market and its practical implementation. On 4th December 1882 the final memorandum was about to be confirmed but just before that as there was lot of opposition by local leaders and people of Poona, on 1st December they organized

year. During his tenure of office the Municipality introduced several reforms and he deserves special praise for the devotion with which he carried them out.

377 In several narrations by Parasnis, Arthur Crawford, Moledina, Jaymal Diddi and Samita Guta on old Poona, cultural difference between old Brahmin dominated Peshawa town and Cantonment developed after Colonial reign in Poona emphasized in various ways. Particularly Sadar Bazaar area adjacent to cantonment and old Poona developed as traders’ area serving British Raj for example Parsi, Muslim, Christian, Hindu communities settled in the area were non Brahmin had different set of tradition and culture compared to old core.

378 Joshi and Mahajan in their book *Pune Shahrache Varnan* published in the year 1868 give reference of Jivajipant Anna Khasagiwale one of the landlord and *Kotwal* under Peshwa was famous for various reasons one of those was he gave space on rent to various prostitutes a common residential facility near his mansion welknon as Bavanna Khani Chawl.

379 Khole G. S., “Punyachya Mandaichi Ek Hazar Varshanchi Vachaal”, *Nagari jeevan Mahatma Phule Mandai Shatabdi Visheshank*, September October 1986, (Pune, Devavrat Mehta, 1986), 26.

open meeting against the proposal explaining as there is no funds available in municipality it will be additional burden of this construction for common man. Still the proposal was worked out further explaining benefit of revenue generation from this covered market. Initial proposal upraised by Walter Ducat and discussion with other Municipality members happened on predefined date that was on 4th December 1882. The incident of land acquisition mentioned by Honap says Ramchandra Naraso Godbole acquired the land from Khasagiwale that suggests the strong connections between the collector of Poona and local engineer Godbole. There was opposition by the landowner Khasagiwale for the acquisition of his property. He convinced governor to put stay on order of acquisition. He news was conveyed to Godbole by Collector of Poona and on the same day during night time the garden was destroyed and acquired before the order reached to Municipality formally in 1882. **(Fig.145,146)**

The news covered the event for opening of Reay Market in Times of India and a article published by Honap V.N. throw a light on the architectural intervention by Walter Ducat and Vasudev Kanitkar. Still very few evidences and material available to cross check and get more details about the meetings and decisions made in regards to Reay Market. Colonel Ducat proposed design in Municipality meeting and several suggestions given by members, such as Ganpatrao Sangaliker, R.B. Khanderao, Vishwanath Raste, Dorabji Padamji, Vijayrangam Mudliyar, Kashinath Parshuram Gadgil and Khan Bahadur Dastur Hoshangji. Unfortunately detailed minites or all the comments by members are not available to see. In this meeting Hari Raoji Chiplunkar and reformist Mahatma Jyotiba Phule opposed the proposal of covered market. This was due to the reason that Municipality approved only rupees 1 lakh whereas colonel Ducats plan and estimate extends to 3.25 lakh. So finally plan was approved after removal of 160 shops outside and keeping 210 shops in octagonal building at the cost of rupees 2.30 lakh. Local diploma engineer Lt. Naraso Ramchandra Godbole worked for the initial work of acquiring site and basic sanctioning procedure at preliminary stage. As per records it seems Rao Bahadur Vasudev Kanitkar took charge of the building on first July 1885 who worked on actual execution of the project. Whole has been detailed out and executed under his supervision. In Poona Municipality report description of drainage system laid by Walter Ducat and its expenditure mentioned.³⁸⁰

Total 474 shops were accommodated in the design. The work was commenced in the year 1882. Foundation stone was laid on 20th March 1883. Local basalt rock from nearer stone quarry from Chinchwad was used for the construction as this stone is considered as best for its durability, quality and superiority. In 1885 project was under construction and opened by Duke of Connaught³⁸¹ and the then governor Lord Reay. Hence, it was named after him as Reay market that was later changed to Mahatma Phule market.

In the Municipal report 3 important events are recorded in the year 1886-87 those were opening of Reay Market by Duke of Connaught, Second was reception given to His excellency the Viceroy and Governor general of India and thirdly celebration of Her majesty's Jubilee year when multiple celebrations conducted in town were noted very proudly. This was an effort of putting the work of municipality in main focus of administrator and public around. It was big event of opening

380 Honap V. N., "Pune Mandai Shtabdi", ", Nagari jeevan Mahatma Phule Mandai Shatabdi Visheshank...cit.,18; "The Opening of Reay Market at Poona", The Times of India Archives Mumbai, Oct 7, 1886, 5.

381 Duke of Connaught was the title given by Queen Victoria to her third son Prince Arthur who visited Indian towns.

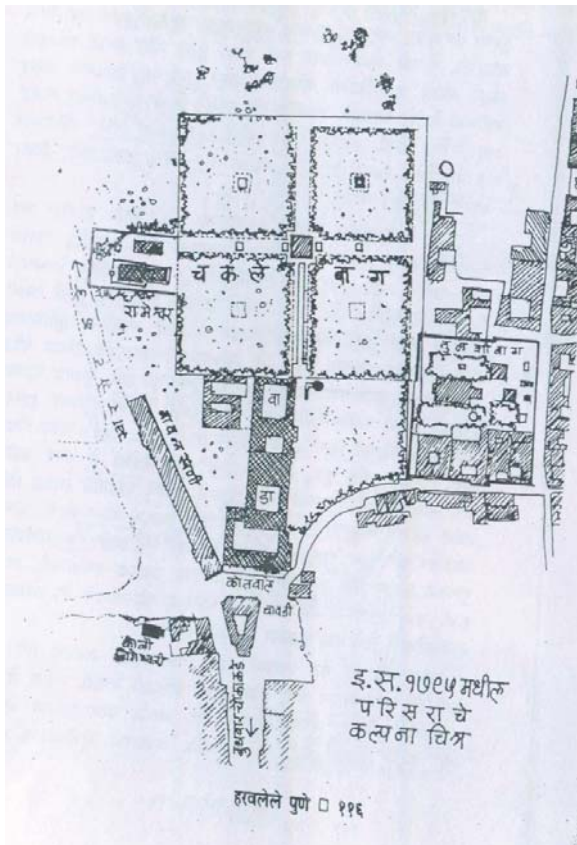


Fig. 145, Chakale Baug an open garden owned by Khasagiiale, Ref: Sowani, "Haravlele Pune" 1795 conjectural map

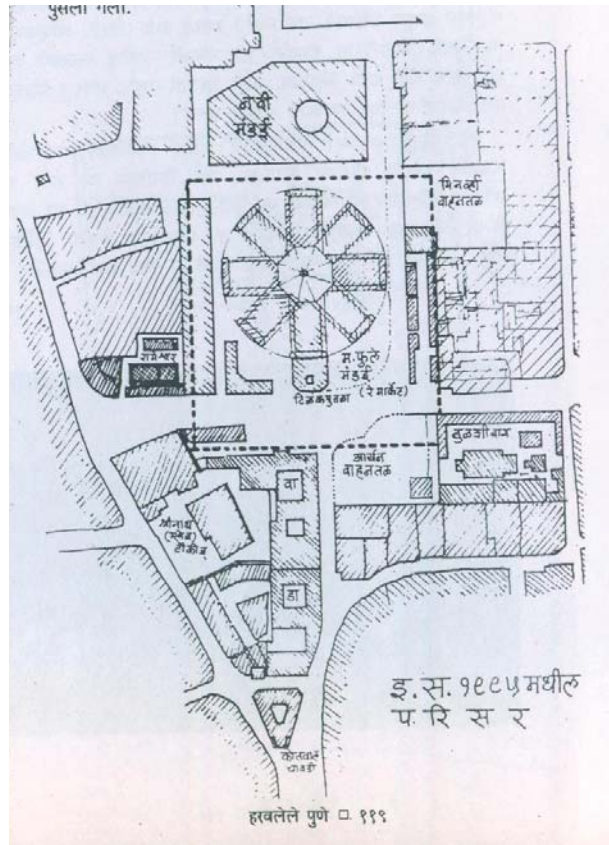


Fig. 146, Open Space in Shukrawar Peth with Reay Market, Ref: Sowani, Haravlele Pune 1995 map

ceremony of the market. ³⁸²

Article published in *The times of India* on 7th October 1886 "The opening of Reay Market at Poona" narrates the event of opening ceremony organized for unveiling memorial tablet by His Royal Highness Duke of Connaught. Article portrays the appearance of structure and its function as an important civic structure was kept in view. Its further states that, "While it will not be lacking in pleasing proportions when viewed from the exterior. Anything like a superabundance of useless architectural embellishment has been carefully avoided, while as regards the interior arrangements solid and durable construction, admitting of cleanliness and good ventilation, is plainly perceptible." Circular building surmounted by a tower with radiating sheds is peculiar building not seen in India. Design of arrangements below sheds for stalls of vendors followed similar model and spatial arrangement like in Crawford market Bombay. Large quantity of Iron was imported from Messrs. Sorabjee Shapurjee, iron founder of Bombay. Later public speech was addressed by Dorabjee Pudamjee being president of municipality praising the first iconic civic structure built by local governing body for the convenience of people. He also praised the governorship of Lord Reay under whom several public works granted for the city of Poona. So the name Reay market was given as token of gratitude towards his governance. Further in the speech of Duke of Connaught he compared the public works and civic structures raised in England as welfare of society and similar models opted for well being of people around in several cities of Poona as significant sign of modernization, improvement in commerce and inculcating

382 Gadgil D.R., A Survey of the Marketing of fruit in Poona, (Pune, Gokhale Institute of Politics and Economics Publication No.3, 1933), 121.



Fig.147,148,149,150 Decorative wooden Barge Board, Minton Tiles, Polychromatic stone on facade, and Roof tile made in France, Photo by Lavand Vaidehi

practical education in society.³⁸³ This discourse perhaps very essential to understand views of ruler and local bodies appointed by them towards local communities. Structures such as public market was very symbolic and element of changing attitudes of modernization. Though there were several oppositions and hurdles in execution of project it got executed with the several catalysts worked at various levels to bring it in reality.

In the annual expenditure records by Municipality name of Ducat occurs at regular interval whereas, rarely name of Vasudev Kanitkar mentioned in records. Expenditure on building and drainage system planned is almost equal even though drainage system planned emphasized more in description.³⁸⁴ This may be due to efforts of highlighting more service-oriented works carried out

383 "The Opening of Reay Market at Poona", The Times of India Archives Mumbai, Oct 7, 1886, 5.

384 Municipality report in the year 1886-87

around market.

Eight flanges coming out of the central octagonal tower having clock at one of its face is the model implemented for the market. It is imperative to mention about the materials largely used was Iron and Glass this followed the Victorian market style developed in England. As said by Helen Tangires Architects and designers improved their designs considering functional, aesthetic and economic qualities of iron and glass in covered markets. This was purposely to achieve desired height for light and air with minimum interior supports to get unobstructed floor space for better visibility and clear usable space in markets.³⁸⁵ Purely Gothic structure does have polychromatic stone used for its façade with pointed arches and exclusive tracery work. Column capitals carved in sandstone with floral pattern along with motif of lion face at four corners. Only one gargoyle survives at the moment, which was carved in the form of face of monkey. Rose window pauses your eye at the end of gable end. Rooftop decorated with stone carvings, cornices. Iron, glass and Minton Tiles brought from Bombay Whereas fine quality stone was used from local quarry near Chinchwad. Roof tiles imported from France name engraved on tile is GRANDE ECAILLE POUR TOILURE BREVETS D.G.D.G. SIHENRY-MARSEILLE ROUX-FRERES.³⁸⁶ Large quantity of Ironwork used in the building. Whole has been made in India by Messrs. Sorabjee Shapurjee, Iron founders

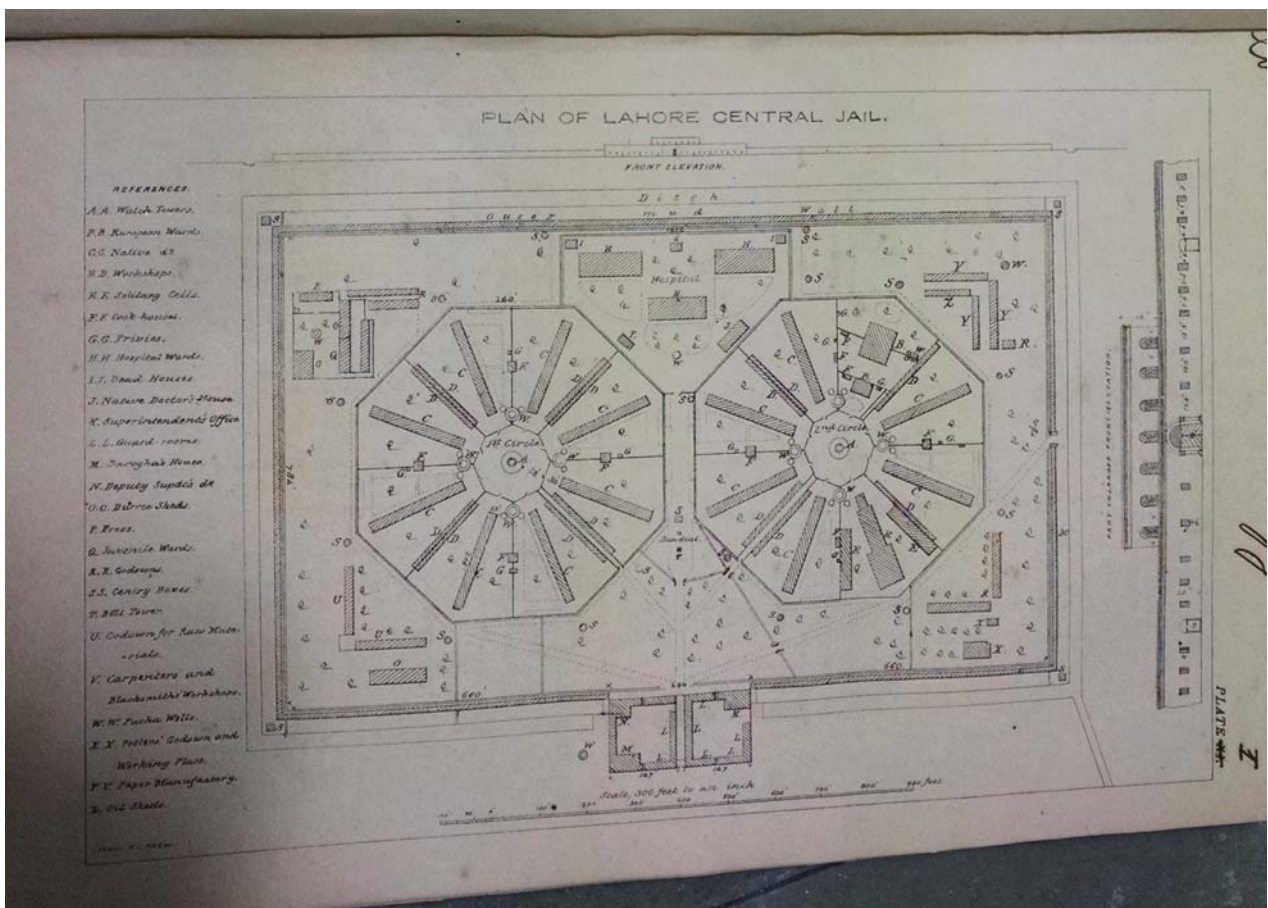


Fig. 151, Lahore Jail, Ref: Professional papers, Roorkee

385 Helen Tangires, Public Markets, (New York, W.W. Norton & company, 2008), 21.

386 D' Ayala Diana, Enrico Fodde Edith., Structural Analysis of Historic Construction Preserving safety and Significance Vol I, (New York, CRC Press Taylor & Francis Group, 2008), 1002. Book mentions various materials and their origins. The roof tile shown on the page is exactly same in form and name engraved in Reay market.

of Bombay. Messrs. Garlic & co. engineers & tile manufacturers Bombay presented Minton tiles in market. Various patterns are used in several rooms of office in central octagonal tower. Pent roof truss in wood supporting remarkably high sloping roof cap of octagonal tower is just the same one used in Charles Mant's Surat Highschool at double storey foyer. (Fig. 147,148,149,150)

Vasudev Kanitkar stayed in Karachi for larger period of time probably must have worked on several construction sites and must have gained experience in the field of construction activity as mentioned earlier.³⁸⁷ Lambert Market completed in 1864 had interesting location and layout, which is one of the probabilities, in the adaptation of the similar model for Reay market. Since there is hardly any information available on Lambert market so this possibility is a little vague. Vasudev Kanitkar was appointed for the project after approval of basic layout of the area with surrounding drains. No doubt this exclusive market building followed a very peculiar model not very commonly used for markets in India. As per earlier discussions open Bazaar area organically developed on main axis of historic towns and if they were located on nodes or crossing of roads form of open Bazaar was square, rectangular or star and circular shape. Out of these circular plan was defined for the location of market by Walter Ducat as discussed in earlier discourse. And after researching several models followed in case of various public buildings it could be clearly

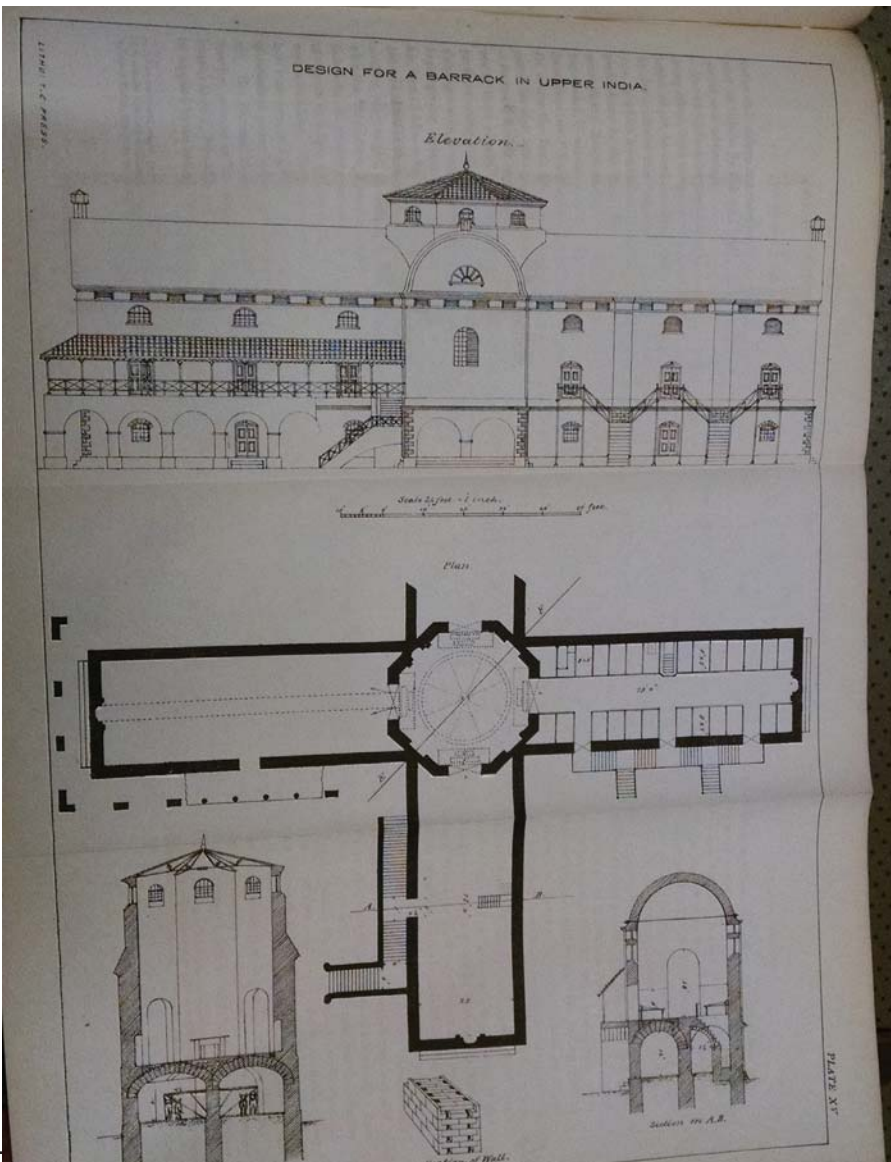


Fig. 152 Design for Barrack in Upper India, Professional Papers

387 Kanitkar Shankar Ramchandra, *Kanitkar Kul Vrittant*,/ Tidings of Kanitkar family (Pune, 915/1 Shivajinagar Vitthal Hari Barve, Aaryabhushan Mudranalay, 1948), 146.

observed that Barrack and Jail plans were considered as most appropriate model for construction of Reay Market. City Jail built for rebellions close to old core of Poona had similar spatial planning of central tower with flanges around. This jail was extended with Female wards in 1880 but due to increased population around this jail was demolished and shifted in 1890 to new Jail in Yerawada area outskirts of town. There are several other examples of jail could be observed with the similar arrangement. Plan of Central Jail Lahore (1868) designed by Kanhaya Lal reflect the similar pattern of colonial Jails with central tower and flanges emerging out of it. The main concern was weather and open, semi open and closed spaces required for the market activity. Central octagonal tower surmounted at the centre of structure is a very common feature generally used for all public buildings in 19th century. Towers in civic structures specifically built under British rule for their subjects played functionally, aesthetically and symbolically important role. These towers designed to be a dominant feature of structure covering staircase, entrance foyer, and place for a water tank or a watchtower. Watch was a symbol of industrialization, modernization with western notion. A watch was placed on Market wall on one of the gable ends of flanges coming out of this tower not on the central tower. (Fig. 151,152)

Considering the model, architectural vocabulary, materials, iconography, workmanship, execution and construction techniques used in Reay market it's credit must be given to Walter Ducat and Vasudev Kanitkar who brought the dream of Poona municipality in reality. Experience of Vasudev Kanitkar working under royal engineers such as Charles Mant, Fuller, and Clair Wilkins was enormous which actually could be seen in Reay market, that is the finest work in Poona. Overall spatial arrangement and its volume mark its dominating character in the area due to its different form and architectural vocabulary. Central tower with steep sloping roof resembles watchtower at Crawford market Bombay. This octagonal volume projecting out of central tower incorporates viewing galleries, which has 360-degree view around old town. This was the highest tower in old core of Poona in late 19th century. Eight flanges emerging from central prominent tower at ground level are separated to form open to sky spaces in between. Sloping roof at the gable end adorned with ornamental cornice work, Rose window and floriated finials. Pointed arches highlighting openings, Rose window at top and window tracery work reminds sense of Gothic revival style. Façade Pediment on each flange with open gable end and supporting lean to roof resembles to outline of buttress supporting main walls. This combination with rose window and pointed arch windows gives the façade eclectic charm. Frieze detail, sandstone finials, Lime cornice work give emphasis on façade with clear lines and balanced ornamentation. Wooden latticework covers passage on top avoiding direct harsh light to enter in. Sloping roof at all levels are covered with decorative wooden bargeboard. Decorative elements such as column capital with lion headed floral pattern, sandstone finials express oriental forms generally followed in traditional Indian architectural instances such as temples.

Where as from inside Use of Iron columns and ornamental brackets supporting interior spans replicate Victorian market style work followed in various markets in England during late nineteenth century. Tower at ground floor gets very less light where as, double height with dormer windows gives ample light on top floor that was occupied with industrial museum earlier. Wrought Iron rails, wooden navel posts added colonial touch inside which could be generally observed in

several public structures built in late 19th century. Minton tiles pattern as used in secretariat, high court buildings in Bombay are used in various rooms at central tower that was accommodating municipality office till the new structure was built.

Use of polychromatic stones in pointed arches, peculiar decorated column capitals, flooring and roof tiles, use of decorative Iron brackets and glass so finely is the result of his knowledge he gained over the period of time. Right from proposal of Reay market it had faced lot of opposition from local leaders and communities. But the name of market later changed to reformist and freedom fighter Mahatma Phule, Whereas statue of another leader Gangadhar Tilak raised in front of it on the main axis. Both these reformists strongly opposed this market being part of Municipal committee. But naming and putting statue in front of the structure is very contradictory to their intentions. Open space next to Market was an important political center in Poona during freedom fighting movement.

While talking about administration system adopted for Reay market Gadgil explains, “There is a special market committee, appointed by the municipality; but the committee has no executive powers and most important, in respect of the market, is the Reay Market Inspector, who had under him a staff of *mokadams*³⁸⁸, watchmen and sweepers.”³⁸⁹ He further mentions entire income is through rent of shops in Market. Major transactions were happening in vegetables and fruits but large numbers of miscellaneous commodities were also dealt with.³⁹⁰ Main intention of revenue generation for municipality was fulfilled to some extent after a long struggle amongst local vendors and municipal committee. From locals point of view open market system inculcated in Indian traditional market towns had more associational values Whereas market as an imposing covered structure was quite alienated form to what they couldn’t relate with. All the structures around were either ground plus one or two maximum were built quite to human scale as compare to Market. Central tower itself was of 80 feet high that was a highest in the vicinity could be seen from larger distance. Secondly it also represented the power of space particularly designed for Public along with that it also demarcates the existence of ruler in the core town.

The unveiled tablet of building inscribed with texts as “His Royal highness unveiled the memorial tablet at the rear of the dais, which bore the following inscription, The Reay Market, opened by his Royal Highness the Duke of Connaught and Strathearn, K.G., on the 5th of October 1886, named after his excellency the right Hon. Lord Reay, LL.D, C.I.E., Governor of Bombay. Projected by the Municipality of Poona in 1882, J.G. Moore, Esq., and president. Completed in 1886. Khan Bahadur Dorabjee Pudumjee³⁹¹, president. Designed by Colonel W. M. Ducat, R.E.,

388 Mokadam literally means headman.

389 Gadgil D.R., A Survey of the Marketing of fruit in Poon...cit., 121.

390 Honap V. N., “*Pune Mandaichi Shatabdi*”, “*Mahatma Phule Mandai Shatabdi Visheshank*” ...cit., 18-22; *State Gazetteer of Bombay District series volume XX for Poona district*, 1954. Local vendors who were use to with open market opposite to Shaniwar wada from many decades didn’t want to shift to Reay market. There were several reasons raised by people such as they couldn’t afford rent for the space given secondly the covered space given is insufficient for both customers and vendors.

391 Arthur Crawford in his book *our troubles in Poona and the Deccan* wrote about role of Parsi families in Deccan region during 19th century. Dorabji Padamji son of Khan Bahadur Padamji Pastomji the head of Parsee community in Poona marked his role as government agent and philanthropist good relation with British and locals. Dorabji was

and carried out by Rao Bahadur Wasudev Bapujee Kanitkar, C.E. Rao Saheb Nurso Ramchunder Godbole, Secretary, Poona Municipality.”³⁹²

The edifice and the tablet representing various elements actually built it are the finest evidences to demonstrate the involvement of ruler and locals in the process of production of space³⁹³ for people with multilayered symbolism it express.

the first Indian citizen elected as president (1886-1902) in Poona Municipality.

392 “The Opening of Reay Market at Poona”, The Times of India Archives Mumbai, Oct 7, 1886.

393 Henri Lefebvre, *The Production of Space*, Translated by Donald Nicholson-Smith, (USA, Australia, UK, Blackwell publishing, 1991), term refers to his discourse on public spaces.

4.3 *Shivaji Market/ Connaught market*

Poona city is the only example in India, which has unanimous instance of constructing two covered markets in the same year proposed by the same designer Walter Ducat and his team incorporating locals. Unfortunately very less archival resources are available for Connaught Market now renamed as Shivaji Market. Work was commenced in July 1885 and project was completed in July 1886. Site is located at one corner of junction of roads in Sadar Bazaar area, with several community structures around such as St. Xavier church, Masjid, Charitable Dispensary, and convent school. Market is divided in to two parts one is dedicated to vegetables, fruit and grocery, whereas other part is allotted for beef market. (Fig. 153)

Similar to other covered markets emerged in India square form is adopted for the market. Origin of the form could be traced from England; very prominent example a very first of its kind was Covent Garden Market (Fig. 154) followed rectangular model. Ambience of Connaught market is very familiar to a façade of railway station with series of pointed arches, buttresses, pinnacles, spires raised just at ground floor do not elevate much beyond that. Crawford market Bombay located at corner of road junction can be recognized from long distance because of its watchtower. Hogg Stuart Market Calcutta (1872), Moor Market Madras (1898-1900) followed similar rectangular models with common façade treatment as Connaught market. In today's context Moor Market is used as a railway station. So the form was adapted to other public transport activity. Both these markets are located in newly developed areas during colonial reign. Bolton Market Karachi (1883) followed neoclassical Grecian model of Quincy Hall Market Boston (Fig. 155). Whereas Empress Market Karachi (1884-1889) the name honors the Empress of India, Queen Victoria follows square model. This market has a central watchtower at main entrance main façade, which is the most prominent feature in the complex. There are four smaller towers at on four corners. The central watchtower was built to compete with tower of Crawford market and built 12' higher than that. The height of tower is 140'.³⁹⁴ Empress Market is much like an institutional building rather than a covered market or a railway station. It has essence of Indo-Gothic vocabulary.

The tablet on one of the walls mentions the various personalities involved in the process of design and proposal of Connaught market. The market was proposed by Major General Sir John Ross K.C.B. Commanding Poona Division, originated and built on the design of Walter Ducat and Colonel C.D. La Touche, being cantonment magistrate during the period. Date of commencement of project was in July 1885 and completed July 1886. This market was named as Connaught Market later renamed as Shivaji Market. Unfortunately name of contractor was not mentioned on plaque. May be that was not so important from authorities point of view. Names of Dorabji Pudamji, Vasudev Kanitkar and Ramchandra Godbole was mentioned on plaque of Reay market was important in the context of old Maratha-Peshwa town.

The article in *Times of India* published in the year 1883 mentions the proposal raised by Sir John Ross commands Poona division. The words mentioned as "Sir John Ross. K.C.B.,

394 Morris Jan, Simon Winchester, *Stones of Empire: The buildings of the Raj...*cit., 142; "When Karachi was in black and white", *The Good Times*, <http://news.uniquepakistans.com.pk/karachi-black-white/>(January

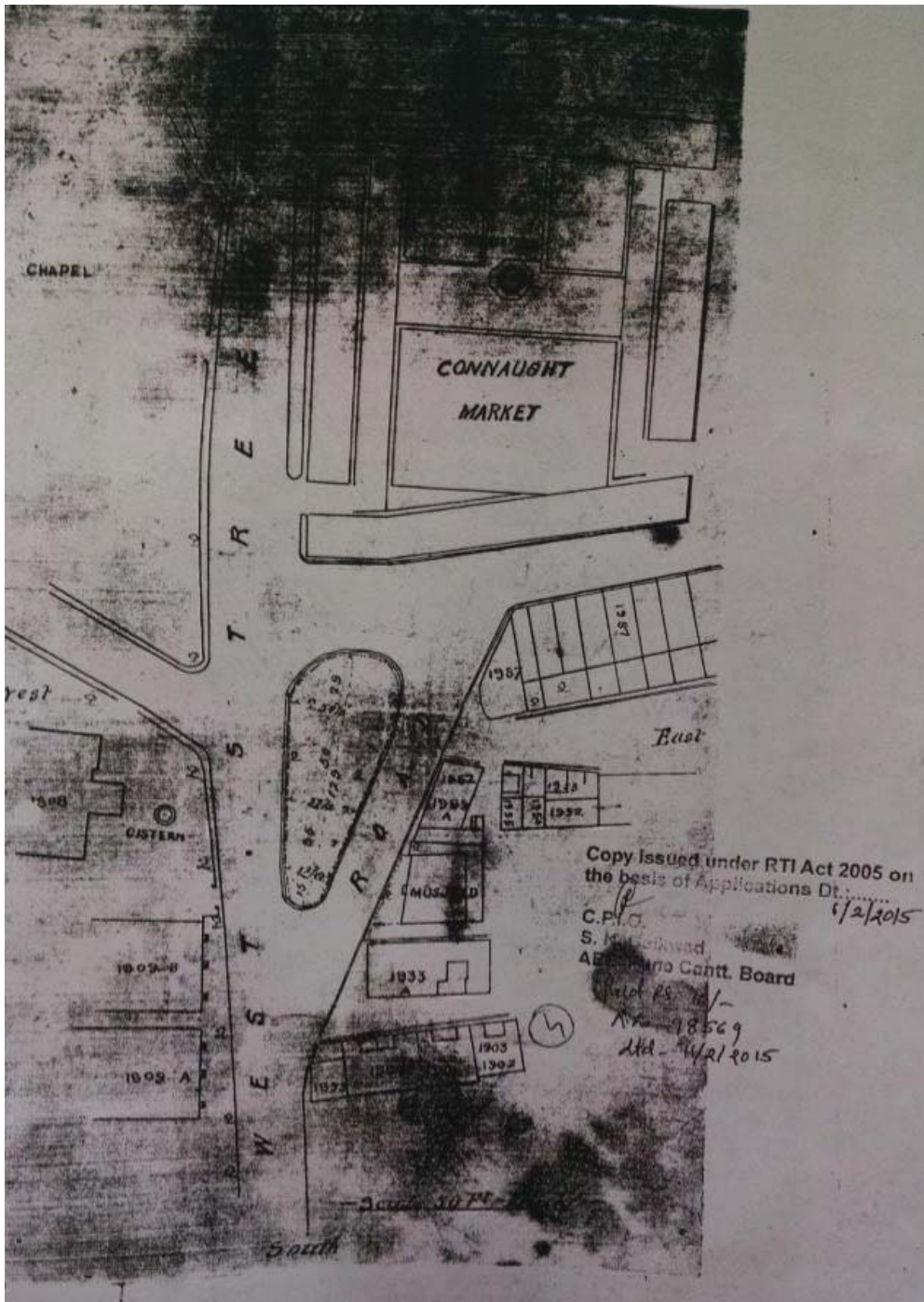


Fig. 153, Location of Connaught Market / Shivaji market as per map attached to letter in archival document available in Cantonment board (1893)

10, 2015); Khan, Muhammad, "Karachi." *An urban profile*, *Karachi Geographers Association* 5, (1970), 2; Chopra P.N. and Chopra Prabha, *Monuments of the Raj: British buildings in India, Pakistan and Myanmar...*cit., 110; Orme, Brown, Green & Longmans, *The Architectural Magazine*, and *Journal London*, of Improvement in Architecture, Building and Furnishing, and in Various arts and trades connected therewith, (High Holborn, F.L.S. H.S. & C, Longman, 1838), 665,674, 291, The article explains about the Description of market as The Market of Covent Garden, London built from the designs of Charles Fowler, Architect, F.I.B.A. by conductor. It covers area of approximately 2 acres. Commencement of project was done in the year 1828. It further compares Covent Garden market other contemporary markets especially built at city squares. As per description "As contemporaneous buildings of the same class as Covent Garden Market, we may notice some other very handsome erections in foreign countries, the work of the end of the last or the commencement of the present century. The first are the bazaars of Moscow and Petersburg, which are large quadrangular buildings, enclosing an open square used as a market, and surrounded exteriorly with open colonnades or arcades like those on the north and south sides of Covent Garden Market: and under these colonnades and shops with rooms are placed."

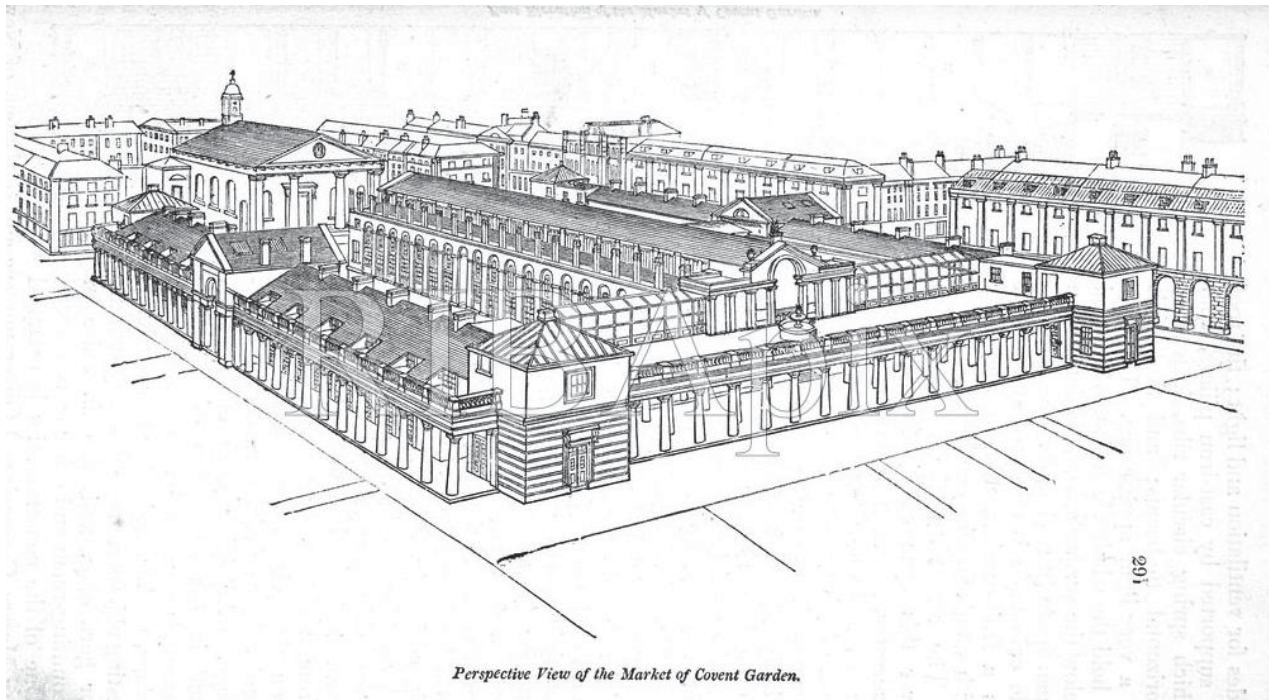


Fig. 154, View of Covent Garden Market London, Ref: Brown, Green & Longmans, *The Architectural Magazine, and Journal London, Of Improvement in Architecture, Building and Furnishing, and in Various arts and trades connected therewith*, (High Holborn, F.L.S. H.S. & C, Longman, 1838)

who commands the Poona Division, introduced or has tried his best to introduce into Poona, the scheme for having a market worthy of this great cantonment deserves honorable mention.”³⁹⁵ Further the article discusses about his initiative being the president of Cantonment committee asked government for a loan Rs. One lakh and thirty eight thousand. It was in effort to provide facility of getting various commodities right from vegetables, fruits, Meat and beef below one roof. This was to reduce hurdles in shopping at several places for ladies. Especially model of Crawford market is mentioned as best model in Bombay presidency.

Another article published in *Times of India* after three years of completion of market refers to problematic drainage system of Connaught market. It says the market was planned by Walter Ducat and the plan was sanctioned by his father in-law Dr. Hewlett creates major problem in main drainage system because of the location of market. Article further discuss various issues generated due to wrong location of market over two main drains creating very unhygienic conditions in the area.³⁹⁶ The problem of drainage system is carried on till today.

Architectural model as specified earlier followed square form with neo-gothic façade. Iron, colored glass, north light truss and two fountains are important characters of Market. Ashlar stonework followed similar character used in other constructions around. St. Xavier’s catholic church built in neo-gothic style in 1865, is located just opposite to Connaught Market. It was marked on the schematic plan drawn in the year 1889 attached to one of the correspondence.³⁹⁷

³⁹⁵ “The Poona Season”, *The Times Of India* July 18, 1883, page 5

³⁹⁶ “The Connaught Market” from a Poona correspondent, *The Times of India* Sep. 12 1889, 4

³⁹⁷ Letter from Executive engineer to the secretary of cantonment committee Poona, 17th Oct. 1893



Fig. 155, Quincy Hall Market Boston, Ref: RIBA Library Drawing section V & A Museum London



Fig. 156, Plaque on Connaught Market at cantonment of Poona Photo by Lavand Vaidehi

It shows character of a typical English Parish church. Several ornamental features such as ornamental column capitals in local basalt stone, acroterions and bargeboards in wood are some of the exclusive examples of workmanship and craftsmanship. One of the important features used at the junction of arch and pier is face sculpted in basalt rock very similar to the face seen at the entrance of Deccan College main building designed by Clair Wilkins. It seems after discussion with historians that this is probably symbolic representation of Queen Victoria as this was built under her reign. It is important to note this sculpted face of queen is not seen anywhere in Reay Market

as it was built in core city of Poona.

There are several differences in the process of execution and vocabulary of two projects such as land selected for the Connaught market was owned by government³⁹⁸ Whereas Mr.

398 As mentioned in the document from cantonment board 0.88 acres of land given for the purpose of covered market was owned by cantonment committee was a separate body governing newly developed town near old

Khasgiwale one of the landlords and important personality under Peshwas was the owner of land proposed later occupied for Reay Market. There were minimum hurdles faced by officers in execution committee in the process of designing and actual constructing the structure. Duke of Connaught inaugurated Reay market. Whereas not much evidence is available about any big event of opening ceremony at the Connaught Market though it was named as Connaught market. There is just a reference of visiting a place for a while and the local traders in the vicinity organizing welcome arrangements on streets and roads.³⁹⁹ Very different models adapted for two different contexts which underline how tangible form in public space, symbolize administration system and cultural differences. Reay market has adorned with more decorative work as compare to Connaught Market. Reay market specially designed to deal with vegetables and fruits and several other commodities. Connaught Market designed with two separate sections one with all vegetables, fruits, and other commodities and second with Meat and Beef.

Poona.

399 “The Opening of Reay Market at Poona”, The Times of India Archives Mumbai, Oct 7, 1886.

5 Conclusions

Covered markets developed under local municipalities turned out to be symbolic representation of the control of authority over public space. As per Paul Dobraszczyk they were conceived as catalysts for urban renewal and promoted as symbol of political, moral and social progress enhancing the urban image. But certainly this was not so easy and straight in case of Poona considering its cultural, traditional background and strong social hierarchy especially in terms of caste.

As per Preeti Chopra “class if interpreters between” the Raj and “the millions’ they ruled over. Collaborative works named as joint enterprise by her to represent works of local engineers with Europeans for some period of time to implement ideas in reality as a symbol of progress and enlightenment.⁴⁰⁰

European models, especially, spatial arrangement and grandeur of church form were initially followed in all public structures to some extent. Perhaps, the structures designed by royal engineers were more monumental those followed mainly Western and Mughal models. Interestingly, when the local engineers actually designed and executed public structures at various places in India they were more to human scale and majorly influenced by spatial arrangements followed in earlier indigenous forms such as Aanandashram at Poona designed by Vasudev Kanitkar or several other designs by Teekaram, Kunhya Lal, Shamboo Da and Murzbaan and so on.

Meyer Schapiro define ‘style’ as “the constant form and sometimes the constant elements, qualities, and expression in the art of an individual or group.” While Preeti Chopra in her discourse mentions “The search for an appropriate architectural style by those construction official architecture was intimately connected to issues of maintaining distance between the rulers and ruled. There were those who believed that it was impossible to produce architecture of quality that melded British and Indic forms unless it was a product of the intermixture of these two societies. On the other hand, others saw this as an intellectual exercise where an understanding of universal principles would allow for a distinguished architectural marriage of European and Indic forms without compromising the distance to be maintained between rulers and the ruled.”⁴⁰¹ From the locals point of view surely the form of covered market coming at the civic center was an alienated form, which had many hurdles in accepting this new structure and spatial organization. Along with that accepting control of colonial administration was difficult for locals.

So phenomena of two covered markets coming in two towns of Poona was a result of cultural background of two areas developed under Peshwa and Colonial reign. Form of Bazaars as discussed in research on market morphology by T.D. Gajar, morphology and centrality of market centers such as rectangular/ square form, circular or oval pattern, and star pattern at the nodal junction of several roads converge at a site are relevant forms tried to followed by designers for Reay and Connaught Market. Monumentality, overall treatment and detailing were elements of purely colonial language in all sense.

400 Preeti Chopra, *A Joint Enterprise: Indian Elites and the Making of British Bombay...cit.,78.*

401 Ibid 37.

Along with that after going through several archival documents, treatise and professional papers it is observed that plan of Reay market followed model of a jail with a central watchtower as a prominent feature typically used in almost all public structures in colonial context. Whereas Connaught market followed square model largely seen in most of the civic centers developed in 19th century Europe. Similar Square or rectangular market forms adapted in other places in important trading towns of India.

Architecturally the original form of covered markets emerged in western and Eastern context were fairly similar in 19th century. Right from selection of public squares those were traditionally used for open *Bazaar* and commercial activities, were enclosed with walls in the model of either square, rectangular or quadrangular form. The form followed in Reay market though at first glance appeared to be circular; it is opened up from all outer sides. There is hierarchy of open semi open, closed space which is maintained in spatial organization. Perhaps openness and absorbent quality of new system implemented in orthodox context of Poona which is represented in various forms with the help of materials and construction techniques. Lightness and transparency is achieved from use of various materials, modern techniques and tasteful minimum ornamentation. But very contradictory to this is the centrally located prominent 80' tower demarcates existence of authority controlling the communities around. This very unique form is a symbolism of control over old administrative and economic systems at the same time. Distance between ruler and the subject was though maintained by the scale and architectural vocabulary but at the same time creation of such public civic culture was very symbolic to notify commencement of democratic space breaking earlier feudal setup of Poona. Simultaneously this also represents modern economic system implemented through government agents and local philanthropists in Indian towns.

Role of royal Engineers and local contractors is very important to note as the response to local climatic conditions, models adopted with various modifications in local context. Contribution of Walter Ducat as an important agent of British *Raj* worked in collaboration with Vasudev Kanitkar of these two civic structures and especially Reay market should be marked as a starting point of iconic landmark in historic town of Poona.

Archives, Libraries and Museums referred

Maharashtra State Archives, Elphinston College Bombay or Mumbai comprises archival resources in the form of writeups sketches and maps related to colonial western India. Mainly related to British expansion in Bombay presidency right from 17th till early 20th century.

These are the documents referred for the factual data

Political and secret Department Volumes

Judicial department Volumes

Education Department Volumes

General department Volumes

PWD General volumes records

Deccan College archives, Poona has several old manuscripts, maps and rare books related to Poona. As established by Britishers has numerous collection of books and documents on colonial India and survey drawings produced by British officers under survey of India head.

Bharat Itihas Samshodhak Mandal (History research group), Poona is hub of all historians in and outside Poona. It was started in 1910 as a institute to provide resources and training for historical researchers. It Consists several historical papers in Marathi, Modi, Persian languages. There are archival books, maps, documents related to Mughal, Maratha period in and around Deccan region.

General Libray/ Nagar Vachan Mandir/ Poona Native General Library Poona Peshwe Daftar/ Alienation office, Poona is a one of old libraries specially started with the intension of publishing and promoting works of local writers and scholars in late nineteenth century.

Servants of Indian Society Library (Gokhale Institute Library), Poona

formed by Gopal Krishna Gokhale reformist from Poona in the year 1905 contains archival books and papers. Mainly reference of municipal proceedings in late nineteenth century were very useful in the research I undergone.

Municipal corporation archives in Nana wada Poona consists papers and books related to Poona

Sinhgad College of architecture, Bhanubai Nnanavati college of Architecture, Bharati Vidyapeeth Architectrue college Libraries, Poona are resourceful for latest books published on colonial architecture in India

J.J. College of Architecture library, Bombay. This very firstly established architecture college is a source of rere books on architecture and manuals published in colonial period

Asiatic library, Bombay has lot of old books periodicals published in 19th century helpful in research which are available in architecture and engineering section. Many books now transferred in J.J. College of Architecture Library

Times of India Archives, Bombay founded in 1838 has digitised papers by Times of India during niteenth century documented several important events and celebrations during the British reign in India.

Palermo University Library- Department of architecture and engineering, Palermo number of 19th century well preserved manuals and books related to Covered market spaces refered the research

British Library, London

Mainly section of Asian and African studies (AAS) consists collection of manuscripts, printed books, periodicals and electronic sources from Asia, Middle East and Africa. Following are the documents mainly refered during the process of research.

India office records (IOR) Subcategorises under several heads following documents are refered

Record Department, History of Services Bombay GAZETTED officers in the civil Department serving the Bombay Presidency

Bombay public works proceedings Imperial and Local

Bombay general proceedings Medical and Municipal

Documents related to Purpose and Prospects of cotton Mills

Royal Engineers Field Instruction

London, British Library, Microfilm documented several pages related to cadets for the Military seminary

Military records room

ICE archives, London is a good resource for knowing history and records of Royal engineers worked in India in 19th century. Especially Roorkee Treatise, and professional papers published by Roorkee college press in India are preserved. Forrest James *Minutes of Proceedings of the Institution of Civil Engineers with others selected and abstracted papers* Vol XCIV/ 94 is a useful document for knowing role of Civil Engineers who worked in India during the period.

British Museum, London is a valuable source for their collection of paintings from India and manuscripts related to colonial India.

Victoria and Albert Museum, London has a RIBA drawing collection out of which original drawings made for *Covered markets in 19th century* England could be referred.

RIBA, archives has preserved photographs, periodicals, books, manuals produced by British officers, artists and engineers in England and its colonies. Drawing collection of RIBA is kept in Victoria and Albert Museum.

Royal Engineers Museum, Library and Archive, Gillingham has documents books and photographs related to royal engineers worked in several British colonies in 18th, 19th and early 20th century. They have well maintained exhibition of photos, paintings and live scale models of scenes from several parts of colonies where Engineers

worked for building Technocratic establishments.

Archives of IIT Roorkee has immense collection of manuals, treatises and books published for training engineers to work in India especially in PWD. Roorkee treatise and professional papers on Indian Engineering are kept in the archive for reference of researchers.

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