



Projects library of the specialized group for construction

SCHOOLS

Project	Postconflict School rehabilitation	
Project name	Drieberg College Chavakachcheri, Thenmaradchi, Jaffna District, Sri Lanka	
Country	Sri Lanka	
Town/Region	Chavakachcheri DS Div. Thenmaradchi District Jaffna	
Project type	Reconstruction	
Typology	30 classrooms (5 in SDC building) Primary (SDC building) and Secondary school, pre-university level, from Grade 1-13	
Approach	Private sector contracted construction	
Beneficiaries	Affected people in response to the conflict (IDP's, Refugees, Returnees)	
Climate	Tropical monsoonal with seasonal rhythm of rainfall	
Special constraint	Political situation (Checkpoints, permits); Material and tools availability; Climate (monsoon)	
Start / End of project	Sept. 2003 – Feb 2004	
Country GNP	1'296 USD per capita (Dec 2010)	
Pictures	SDC Jaffna, Maps UN OCHA	

Partners	
Organization (Donor)	SDC-HA
IO/NGO partners	-
Government partners	MoU Ministry of Education Northeast Province Provincial Education Director Zonal Education Director School Works Branch, Jaffna

Reference data (only regarding primary school building donated by SDC)			
GIS data (WGS 84)	N 9.66° E 80.151°	Altitude	1 msl
Land plot (whole area)	12'140.56 m ² / 3 acres	Number of blocks (only SDC buildings)	2
Classes/rooms per blocks (only SDC buildings)	5 in one block	Number of units (only SDC buildings)	3 (Classroom unit, Auditorium unit, Activity Room unit)
Beneficiary /classroom	52.4	Total beneficiaries (only SDC buildings)	262 (only Primary School;SDC building); 962 students in whole school
Sanitary facilities (only SDC buildings)	9 toilets (7 girls, 2 boys) 6 urinals	Other infrastructure (only SDC buildings)	1 Principals's room, office, auditorium with stage, activity rooms, open air playground, sanitary block.
Ground floor (covered area) (only SDC buildings)	418.14 m ²	Floor levels	1 / 2
Total surface (only SDC buildings)	743.28 m ²	Surface / beneficiary (only SDC buildings)	2.8 m ² / beneficiary
Volume (outside dim.) (only SDC buildings)	2'734.77 m ³	Volume / beneficiary (only SDC buildings)	10.4 m ³ / beneficiary



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Heated surface	No heating	Electrification	yes
Cost per m ²	79.26 USD	cost/beneficiary	224.85 USD/beneficiary
Total cost (21.02.2012)	58'912.45 USD	Self help (beneficiaries) No self help	0 USD/beneficiary

Approach to results

Initial Situation	<p>The Drieberg College in Chavakachcheri was originally founded in 1875 by J.S.Drieberg, a district judge during british ruling period. The College was constructed by the American Ceylon Mission. After not having been too successful in their proselytising but all the more in helping the people to come up in life and shine in the field of education, the missionaries introduced and promoted free education. Drieberg became rapidly one of the free boarding schools. With the intention to educate in English it was named Drieberg English School. After the independence in 1962, the new government nationalized all schools including Drieberg College.</p> <p>Today the College, situated in the heart of Chavakachcheri, caters for students from primary to pre-university level. Presently there are 962 pupils enrolled with 45 teachers employed.</p> <p>Most of the villagers of Chavakachcheri were displaced in 2000 but resettled in 2002. Today most of the people have returned to their homelands.</p>
Project concept	<p>Reconstruction</p> <p>With exception of the administrative building, there were no structures on the site which were not damaged, with many of them lying in complete rubbles. The school site can be roughly divided into 4 concise lots with lots 1 and 2 being secondary and junior college level, lot 3 the administration complex and finally lot 4 which comprises of the primary school complex. For lots 1 and 2, GIZ (Gesellschaft für internationale Zusammenarbeit) and Necord (North East Community Restoration and Development Project) respectively have pledged their support, while SDC could cover the rehabilitation of the primary school complex including playground, activity rooms and auxiliary structures.</p> <p>The primary school complex comprises of a new 2-storey structure, including 5 class rooms on ground floor & multi purpose hall with stage on the 1st floor, a single storey structure to accommodate activity rooms, an open air playground and finally an open air stage to serve the entire college. A sanitation unit was also constructed at one side of the 2-storey building</p> <p>Materialisation of single and double storey structure:</p> <ul style="list-style-type: none"> -Foundation and Floors: Reinforced concrete strip footings, ground and first floor slabs -Walls: Reinforced piers with concrete block infill, rendered finish -Gable roof: Prefabricated steel roof trusses covered with roof tiles <p>Under ground water recharged during seasonal rain falls is being pumped from 30.000 lt well to the over head 500lit tank for drinking & other purposes.</p>
Project procedure	<p>Following a rather bureaucratic identification, selection and approval procedure that involved the local Government, the required technical date was surveyed and the final design and tender documents were prepared. Based on exact bills of quantities and through public bidding procedures, the lump sum contracts were given to the private sector construction contractors. Through a set of specific criteria in terms of price, quality and performance, capable contractors were identified and the contracts awarded. Contract documents were derived and adapted from international FIDIC standards.</p> <p>The reconstruction of the two stored building under SDC responsibility with it's 5 classrooms & multi purpose hall was completed within almost 6 months depending on the contractor's performance, site access and weather conditions. Site supervision was carried out directly by our project site engineers. The finishing standards are of good quality.</p> <p>Legal handing over certificates, as built drawings and maintenance plans were provided upon project completion.</p>
Structural concept and finishing design	<p>After demolition and chipping works of the existing buildings on the plot, the works on the two storey classroom building and of the single storey structure was begun in October 2003.</p> <p>The buildings are done by a concrete skeleton construction while the walls are non-bearing and built with cast concrete block stones. The gable roof consists of prefabricated wood trusses as basis for wooden purlins and roof tiles</p> <p>All rooms have electrification, lighting, ventilators.</p> <p>New furniture, including tables, chairs, curtains, black boards and cabinets for 262 students and 7 teachers have been donated by SDC.</p>



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Issues/Constraints	Complex bureaucratic approval procedure to obtain all documents to start construction. Weather conditions - hot and wet monsoon season - shortens the construction.
Lessons learned	Using the national capacity and know-how in the design and carry out direct supervision by project staff and not the consultant was useful. Consistent improvements on the structure and the finishing works of the buildings must be based on the experiences made. High quality of work and timely completion resulted in a good reputation and image of SDC-HA. Regarding the maintenance of the buildings and environments of the school complex, it is extremely important to involve the parents of the pupils and the children themselves actively in the whole school maintenance procedures and tasks.

Legal framework

Political attachment	Through the bilateral agreement between SDC and the Government of Sri Lanka followed by an MoU between SDC-HA .
Type of ownership	District Education Department on behalf of Ministry of Education Northeast Province

Relevant building construction costs (excl. planning, design and supervision)

Construction	
Demolition Work	31'350.00
Excavation and Earth Work	99'750.00
Concrete Work	2'855'937.50
Masonry Work	339'150.00
Concrete Block Work	591'137.50
Roof Work	925'300.00
Tinker and Metal Work	787'360.00
Carpenter and Joiner Work	179'930.00
Plaster Work	507'110.00
Painting and Decoration Work	51'632.50
Miscellaneous Work	663'765.00
Total (21.02.2012)	LKR 7'032'422.50 USD 58'912.45

Urban planning

Distance to:	Next village (Meesalai)	1.5 km
	Public transport	public transport available
	A9 Main road	10 m

For further information

Involved SDC-HA construction group consultants	R.Ivan Hauri
Other involved SDC-HA consultants	Srikantha Rajaratnam
Author / Contact:	Srikantha Rajaratnam srikantha.rajaratnam@sdc.net
Recommended Institutions:	N / A



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Recommended partners:	N / A
Recommended books/reports:	Further information (drawings, contracts...) on construction group website or email above available
Relevant other projects (links):	Project Document of the Cash for School Program, Sri Lanka, containing the reconstruction of Schools. Website: www.cfhsrilanka.com

Relevant illustration



1L	2 storey Primary school building with classrooms and Hall with stage
2R	Activity Room Building

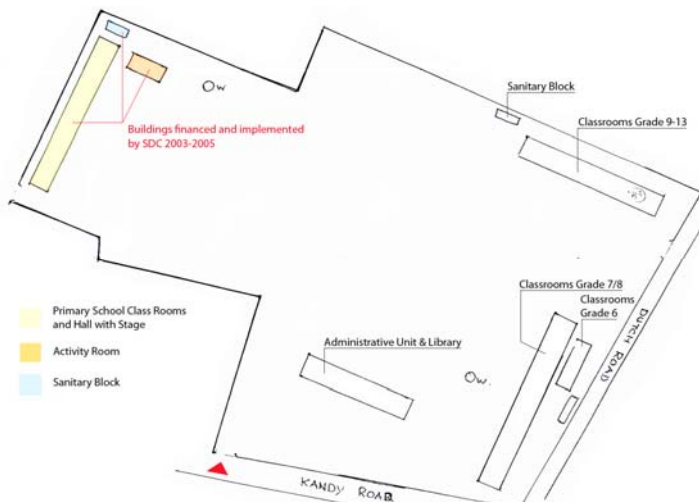


3L	Play garden
4R	Veranda in front of classrooms



5L	Hall with stage on upper floor
6R	Sanitary block

Relevant Drawings



7L	General Plan
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