

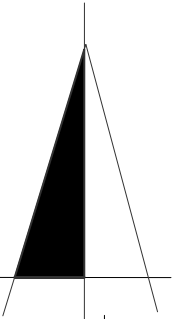
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Feasibility Study

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Introduction

For the purposes of this project, I will assume that the cultural resort is a success, and the need for a museum within the parameters of the current resort, has been established. Due to the religious and social nature of the proposed museum, funds can only be made available from community donations. In addition to this, a group of private investors wish to donate a museum for social purposes, such as defining particular mannerisms and culture, and as a landmark to the faith. The board of investors for the resort also wishes to donate a suitable piece of land for this purpose, since the museum will further enhance the cultural environment intended for the resort.

Thus, cost estimation is needed to determine the feasibility of the museum, the impact of the museum upon the resort, and the extent of its ability to cover its on-going maintenance and operating expenses, and perhaps in the long-run, its capital investment layout. Since this is a community museum for a minority group, it cannot be expected to procure the large amounts of profit another service could offer, but it will certainly add value to the resort, being the only museum of its kind in the entire African peninsula. The study will also reflect, in contrast to the proposal of a Museum, what the yield of an alternative solution could create, and the difference between the two will then be highlighted to the investors, in order for them to acknowledge what other financial possibilities are being surpassed at the expense of building a cultural museum.

I have thus defined the parameters within which I propose to proceed, in order to achieve the objectives of the given brief.

Private investors' objectives:

- Create an awareness of the faith and of God, locally and globally
- Create an environment wherein the faith can be 'purely' practiced
- Non-profit organization
- Celebration of the faith, and the Life of the Final Messenger
- Attaining everlasting rewards from God for contributing to the faith
- **The ability of the Museum to cover its own on-going operating and maintenance expenses, once the construction phase is complete**
- Repayment of donation within a period of 50 years

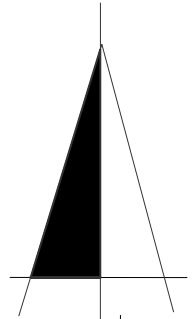
Funding for the proposed Museum:

- Private investors
- Local community donations
- Donations from overseas, (for example, Saudi Arabia's donation of R60 000, 0000, 00 for a Mosque in Houghton, in Johannesburg).
- Donations from the investors of the resort

Functionality criteria of proposed museum:

- Since the museum will be placed at the center of the resort, it would draw maximum attention within the resort, and would complement the theme of the resort
- The museum also would create a sense of uniqueness to the resort, and will have the potential to attract more interest in the resort
- Will allow other cultures to interact and better understand the faith and the object of the resort

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FINANCIAL FEASIBILITY STUDY

Land costs

Current market value of the land as established by the board of the resort is R250/m².

The land required, has been allocated between the prayer centers and the amphi-theater, being 10 000m². Thus the value of the land being donated towards the museum
10000m² x R250/m² = **R2 500 000**

I have included parking as land costs, since it was decided by the board that a portion of the resorts' existing parking area will be donated, together with the land, as part of the total land cost.

Parking requirements by the museum

The museum will have parking facilities made available by sharing a communal parking area with the resort. The museum will have to contribute towards the buying of parking area from the resort at a profit of 25 %, as per agreement with the board.

30 parking bays are required:

2.5m x 5m x 15 bays x 2 rows = 376m² (parking required)
376m² @ R400/m² = R150 400 (rate application)

Circulation contribution:

- **Between parking bays** = 8m x 15m @ R400/m²
= R48 000
- **General percentage usage contribution:**
164 people per day x 365 days = 59860 people per annum
Museum = (22 people per day x 365 days) = 8030 people per annum

Contribution expressed as a percentage of use:
= 8030 / 59860 x 100%

= 13.41 % of total parking cost to the point of museum terminal

= 8m x 15m @ R400/m² x 13.41%

= R6400

Total = (R150 400 + R48 000 + R6 400) = R205 200

Mark-up as per agreement with resort board:

R205 200 + 25% x R205 200 = **R256 500**

Land surveyor costs:

To accurately demarcate the co-ordinates of the site, and re-affirm with surveyor general plans

= **R20 000**

EIA and geotechnical costs:

The land being offered towards the museum has already undergone an EIA, thus this is not required.

Geotechnical test of specified region being 10000m² @ R5/m² = **R50 000**

Town planning, rezoning and transfer cost fees, etc:

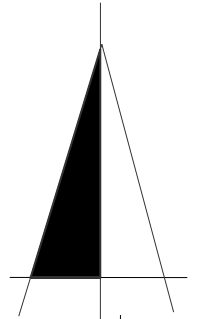
The resort as a whole has already been given a zoning specific to its circumstances, as dictated above. Thus, the museum, which falls within the boundaries of the resort, will assume the same zoning.

Transfer cost fees and duties = not applicable.

Approval of plans, municipal processing, administrative fees; assume 2% contribution of purchase price

= **R55 300**

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Development contribution:

Since council has no part in contributing any services, the resort has become an independent body, fully operating with its own services. The museum thus has only to connect to the main services line running adjacent to it. The resort will sell land as a sectional title, and will be responsible to provide services to the building line of the proposed museum, which is fixed in their sale of the land @ R250/m²

Thus the museum will not have to contribute towards any service installations up to the point of its building line, as declared legally.

Interim municipal tax : Not applicable: peri-urban district

Thus:

Land costs to be donated by the resorts' board:

Actual land	R2 500 000
Parking	R256 500

Total donated	R2 756 500

Land costs to be donated by private body:

Land surveyor	R20 000
Geotechnical investigation	R50 000
Town planning, transfer costs, etc.	R55 300

Total donated	R125 300

Total for all land costs to be donated = **R2 881 800**

I have indicated above that land worth the value of R2 756 500 will be donated by the resort. This land could have been sold and utilized for alternative investments. Thus, their decision for donating this amount has to be taken into account, and will be reflected in the conclusion of the document.

Estimate of total building expenditure

Area of proposed museum site:

Calculation of design parameters:

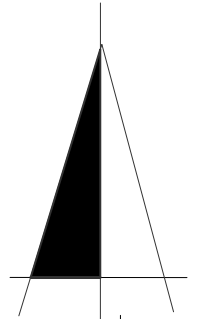
Dimensions of site	20m (N-S)	x	50m (E-W)	=	10 000m ²
Allowable FSR (bulk)	10 000m ² x	.54		=	5 400m ²
Construction area allowed	10 000m ²	/	1.85	=	5 400m ²
Coverage allowed	42%	of	10 000m ²	=	4 200m ²

The museum divided into three components:

Component 1	=	The Creator	=	1200m ² x2	(2 levels)
Component 2	=	The Messengers	=	1800m ² x1	(1 level)
Component 3	=	The Final Messenger	=	1200m ² x1	(1 level)

		1st level	2nd level
Total area for exhibition space	=	4 200m²	1 200m²

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Thus:

Total construction area = 4 200m² + 1200m² = 5400m²
 Landscaping area = 10 000m² - 4200m² = 5800m²

(Parking has been included under land costs, since it will be donated by the resort management board as part of the land purchased)

Estimate of total capital expenditure:

Estimated current building cost @ R3500 / m² for 5 400m² = R18 900 000
 Estimated landscaping cost @ R200 / m² for 5 800m² = R1 160 000

 Total current building cost = R20 060 000

Escalation:

Pre-contract escalation factor: 4months @ 0.80% p.m. comp = 1.0490 (esc. factor)
 Pre-contract period escalation R20 060 000 x 0.0490 = R 982 940
 Building cost at start of construction = R21 042 940
 Construction period esc.factor: 8 months @ 1% p.m. compound = 1.196 (esc. factor)
 Haylett and draw down factor 0.85 x 0.6 x 1.196 = 0.100
 Escalation during construction period 0.1 x R21 042 940 = R2 104 294

Estimated total escalated building cost = R23 147 234

Professional fees established by the consortium of investors @ 15%; (see professional fees section, Appendix A, for professional fess adjustment).

Therefore, **professional fees** = 15% x R23 147 234 = **R3 472 393**

No developer's fees – (see notes on developer's fees: Appendix B)

Sundries – minimal - (see notes on sundry accounts: Appendix C) = **R100 000**

Total cost excluding land cost, cost of capital = R26 719 170

Land cost (see above) R2 881 800 / 1.1 = R2 619 818
 Pre contract period 15% of R2 619 818 4 months = R 130 990
 Construction period 15% of R26 649 170 8 months x 0.6 = R 265 314

Total project cost = R29 735 292

Estimated Net Annual Income:

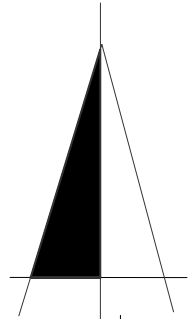
Gross income of museum: (See gross income section: Appendix D) = R919 800
 Less: Non recoverable expenses (assume less 5%) = R45 990
 Total gross income before further allowances (assume less 5%) = R873 810
 Total gross income after allowances = R830 120

Total Gross Income / Total Project Layout
 = R830 120 / R29 735 292 = 3%

The above indicates a 3% return on capital investment.

This is a small return compared to the desirable 10% return on other alternative investments. However, we have to keep in mind that the objective of the proposed museum would be to at least pay off its operating expenses, which it does so comfortably, with

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a 3% profit per annum. The other objective of the museum would be to further enhance the environment of the cultural resort. The impact of this will be discussed below in the section titled "alternative investment".

ADDENDUM A

PROFESSIONAL FEES:

Architects

R139 370 + R23 147 234 x 6.25%	=	R1 586 072
Disbursements	=	R3500

Total fees	=	R1 589 572

Divided into 5 stages, as follows:

Stage 1	5%	=	R79 478
Stage 2	15%	=	R238 435
Stage 3	15%	=	R238 435
Stage 4	40%	=	R635 828
Stage 5	25%	=	R397 393

Total fees	=	R1 589 572	

Quantities Surveyor

Building cost – electrical installations – mechanical installations

R23 147 234 – R7 200 234	=	R18 947 000
R15 947 000 x 4.15% (as per table adj. between 8-16 million)	=	R661 800 Disbursements
	=	R 1 500

Total fee	=	R663 300

Structural Engineer

Assume 15% on structural cost

Structural costs approximately 18% of total cost

Therefore:	R23 147 234 x 18%	=	R4 166 502
	R4 166 502 x 15%	=	R624 975
Disbursements		=	R 1 500

Total fee	=	R626 475	

Landscaper

Assume 13% on specified landscaped region

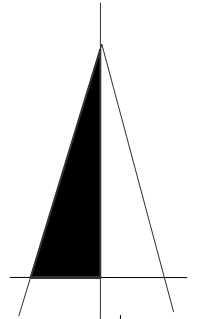
Therefore:	5 800m ² @ R200/m ²	=	R1 160 000
	R1 160 000 x 13%	=	R150 800
Disbursements		=	R1500

Total fee	=	R152 300	

Interior designer

Assume 15% on specified region

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Therefore:	5 200m ² @ R1500 / m ²	=	R7 800 000
	R7 800 000 x 15%	=	R1 170 000
Disbursements		=	R3000

Total fees		=	R1 173 000

Sound and acoustics specialist

Assume 13% on specified region

Therefore:	5 200m ² @ R1500 / m ²	=	R7 800 000
	R18 200 000 x 13%	=	R1 014 000
Disbursements		=	R3000

Total fees		=	R1 017 000

Quantities Surveyor	R 663 300	R222 206	R441 094
Structural Engineer	R626 475	R209 870	R416 605
Landscaper	R152 300	R51 021	R101 279
Interior Designer	R1 173 000	R392 955	R780 045
Acoustics Specialist	R1 017 000	R340 695	R676 305

Total	R5 221 647	R1 749 254	R3 472 393
	(100%)	(66.5%)	

The recommended fees cannot be paid by the investment board, which make it clear that beyond 15% of the total project cost is out of their budget. For this reason I have accordingly adjusted the fees structure by proportionately reducing all the fees by 33.5%, which is acceptable to all the professions. This also then fits into the 15% budget of the investors.

Final fees structure:	Recommended fee	(less 33.5%)	Project fee
Architect	R1 589 572	R532 507	R1 057 065

ADDENDUM B:

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There are no developers' fees, since the developers are a non-profit organization, with purely religious and cultural objectives. They are thus prepared to provide funds which ultimately should be paid back within a period of 50 years,

ADDENDUM C:

- **No rates and taxes:**

The resort falls under peri-urban area. This has certain development implications / restrictions which have been currently relaxed. At present, the council does not have the financial means to provide bulk services, and the newer developments have all been budgeted for along the north eastern end of the town. For council to rezone the resort, it would be liable to than provide bulk services. Since it cannot provide basic services, the resort has built its own water system from the existing boreholes on site. The resort also has access to an unlimited water supply from the Hartbeespoort Dam by merely paying the monthly fee of R500 per month, which is a basic fee for all farmers in the peri-urban district. This thus allows the resort to maintain its green areas cheaply. Furthermore, electricity is obtained directly from ESKOM, which is an independent company. Waste management is taken care by the resort, which collects its own wastes and discharges them to the nearest dump-site on a weekly basis, within the peri-urban district. For these and other reasons, the resort has been granted an agreement unique to its setting, since council could not provide it with its basic services. **Consequently, the resort manages its own affairs, and thus avoids rates and taxes.** If in the distant future, council is somehow able to provide bulk services, the museum and the resort at large will have most probably regained all its capital.

APPENDIX D

Gross operating income

Average occupancy level of 60%, as per statistics of established cultural resort.

1. (INTERNAL) INPUTS ESTABLISHED BY THE RESORT

At 100% occupancy level per week:

• Residential belt	:	10 x 8-sleepers	=	80 people
		50 x 4-sleepers	=	200 people
		30 x 6-sleepers	=	180 people
		10 x 2-sleepers	=	20 people

Total number of sleep-over occupants	=	380 people
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From the above:

100 % occupancy level	=	380 people per week
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Therefore: 60 % occupancy level = 228 people per week

Therefore: $228 / 7 = 32$ people per day on average, since the same people will be residing at their chalets for a period of one week, and will presumably only visit the museum once during their stay.

- **Day visitors, excluding residents and conference attendants, at 20% occupancy level, as per resort statistics**

100% occupancy level	=	1000 people
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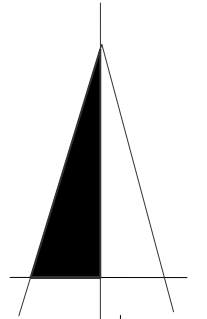
20% occupancy level	=	200 people
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Therefore: 200 people per day on average.

- **Conference center facilities:**

Estimating two conferences per month as minimum, with a capacity for 600 people, as per conference center statistics for resort:

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800 x 2 occasions = 1600 people per month
 Therefore: 1600 x 12 months = 19200 people per year
 Therefore: 19200 / 365 = 52 people per day on average

40 % of residents attending a conference stay over, as per established statistics of resort. This will have to be subtracted from the total amount of people expected to arrive, since it was calculated twice: once for the residential component, and once for the conference component

Zone	per day:	overlap of zones as a percentage
Residential	32	excludes day visitors; includes conference attendants
Day visitors	200	individually calculated, excluding residents and conference attendants
Conference center	(52 – 20) = 32	40 % attending conference are residents

 Total 264

Assume that out of 264 people per day on average, 95% will belong to the faith.

Therefore, 250 people will frequent the museum every day, being people curious to see what their faith has to offer in the form of a 'museum- exhibit' form.

From these people, assume that people on average come to the same resort 4 times a year. This would ultimately mean that a person would not visit the museum for the following 3 times to come. Therefore we could assume that the museum will at minimum be frequented by (250 / 4 =) 62 people on average per day.

2. (EXTERNAL) INPUTS BASED ON ASSUMPTION AND RISK

Other candidates to view the museum:

- Local schools for excursion purposes to experience a different culture
- Tourists, since the resort is along a tourist route, and is a registered member of SAHRA
- Local tourists, since the resort is close to the Hartbeespoort Dam

Local schools:

10 schools in the vicinity out of which 6 oblige
 3 grades per year of a class of 40 per grade
 Therefore 6 x 40 x 3 = 720 people per year from obliging schools
 Therefore 720 / 365 = 2 people per day on average

Schools within a 150 km radius:

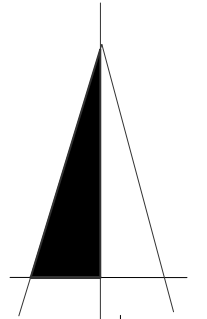
50 possible schools out of which 20 oblige (6 of these comprise of the faith)
 Therefore 20 x 20 x 3 = 1200 people per from obliging schools
 Therefore 1200 / 365 = 3 people per day on average

Tourist statistics:

The Hartbeespoort Dam at minimum sees 250 000 tourists per year, comprising of both locals and foreigners
 Assume 2.5 % are interested in this resort (1.5% of 250 000 which belong to the faith as per Tourism statistics for the Hartbeespoort Dam)
 Therefore 6250 tourists will presumably come to the resort for a day
 Therefore (6250 / 365) = 17 people per day on average throughout the year

Potential viewers	Average per day
Local schools	2

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Surrounding schools	3
Tourists	17

Total	22

Total people per day on average to view museum:

Internal input	=	62 people per day
External input	=	22 people per day

Total	=	84 people per day

Total income generated by museum:

$$84 \text{ people per day @ R50 per person for 365 days} = 84 \times R50 \times 365 = \mathbf{R\ 1\ 533\ 000}$$

Therefore, total Gross Income for one annual cycle = R 1533 000

(Most people of the faith will regard the entrance fee as a donation, and will probably donate more than the required fee. Nevertheless, a minimal fee has been calculated so as to assume the worst possible case).

Less: Operating expenses

Assume to be 33% of gross income = R51 100 a month - to maintain a structure which is not a multi-purpose structure, but is an exhibition space, and has few operating expenses, mainly being staff and maintenance.

Therefore: Gross income – Total operating expense
= R1 533 000 – (R51 100 x 12)
Net Income = R919 800

Value of Current Proposal as opposed to “Alternative Investment”

If an alternative investment were to be considered, with a 10% return, it would generate a profit of R2 973 529. Within a matter of 10 years it would have paid itself off.

With the museum, we only have a 3% return of R919 800. It would thus take the museum approximately 33 years to pay itself off.

However, we have to consider the implications of the museum on the resort.

Assume a 10% increase in occupancy level of the resort, due to museum impact:

Day visitors	20 per day x R60 x 30 x12	=	R432 000
Residents (10% increases)	66 per week x 52 x R550	=	R1 887 600

Total impact		=	R2 319 600

Thus, the total impact, direct and indirect, would be:

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$$R919\ 800 + R2\ 319\ 600 = R3\ 239\ 400$$

$$R3\ 239\ 400 / R29\ 735\ 292 = 10.9\%$$

If we now observe the total impact of the museum, we observe a 10.9% return, out of which 3% is directly associated to the museum, and 7.9% could be attributed to the impact it would have upon the resort. From this perspective, it now seems a viable solution to the board of the resort.

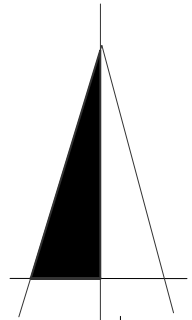
Please do note that in reality, the entire museum would be donated, and its proceeds and impact would ultimately benefit the investors of the resort and the respective community of faith at large.

CONCLUSION

The proposed Museum will manage to run its on-going operating and maintenance costs effectively, with a 3% profit. Its estimated impact upon the resort would be a positive outcome of a 7.9% increase in the proceeds. Besides the land costs of R2 756 500, which the panel of the resort would have to bear, the balance of R26 978 792, will be donated by outside parties. From this perspective, it would definitely be in the interests of the resort to donate the land, in order to gain an asset such as the museum.

From the perspective of the outside investors, the total cost is R26 978 792, and land worth the value of R2 756 500 will be donated. The 3% return would ultimately pay the museum off within a period of 33 years. Their objective was that it should be pay itself off within a period of 50 years; therefore, the project is suitable. The museum would also create the desired cultural objective, and would be an asset to the faith.

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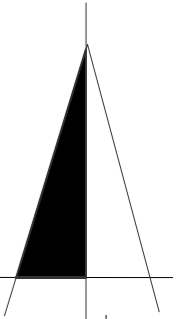


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**Appendix B:
The ninety-nine attributes of Allah**

- | | | | |
|--------------------------|--------------------------------|--|--------------------------|
| The Most Merciful | The Restrainer | The Illustrious | The Unique |
| The Most Compassionate | He who expands | The Perfect | The Omnipotent |
| The King | The Abaser / Humbler | The Capable | The Advancer |
| The Holy One | The Raiser | The Fulfiller | The First |
| The Peace | The Degradar / Subduer | The Last | The Apparent |
| The Trusted | The All Hearing | The Latent | The Ruler |
| The Vigilant | The All Seeing / Discerner | The Beneficent | The Relenting |
| The Almighty | The Arbitrator / Judge | The Avenger | The Effacer |
| The All Compelling | The Justice | The Ever Indulgent | The Equitable |
| The Majestic | The Most Gentle | The Collector | The Sufficer |
| The Creator | The Sagacious | The Prohibitor | The Afflicter |
| The Artificer | The Most Patient / The Clement | The Light | The Guide |
| The Designer / Organizer | The Mighty | The Wonderful | The Everlasting |
| The Forgiving | The Pardonor | The Heir | The Conscious |
| The Dominant | The Grateful | The Most Patient | The King of the Universe |
| The Bestower | The Most Exalted | The Lord of Splendid Glory and Majesty | |
| The Provider | The Great | | |
| The Revealer | The Guardian / Preserver | | |
| The Omniscient | The Maintainer / The Nourisher | | |
| The Noble / The Reckoner | The Honorable | | |
| The Most Generous | The Watchful | | |
| The Respondent | The Enricher | | |
| The Most Wise | The Affectionate | | |
| The Glorious | The Resurrector | | |
| The Witness | The Just | | |
| The Trustee | The Powerful | | |
| The Strong / Firm | The Defender | | |
| The Praiseworthy | The Accountant | | |
| The Beginner | The Restorer | | |
| The Giver of Life | The Bringer of Death | | |
| The Ever Living | The Eternal / Self sustaining | | |
| The All Perceiving | The One | | |

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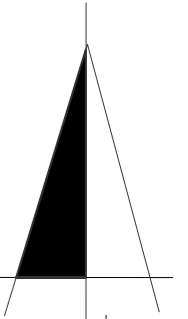
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Appendix D Reference list

Architectural:

- P. Jodidio (1996). **Tadao Ando**; Taschen GmbH, Hohenzollernring 53, D-50672, Koln
- K.R. Longeteig (1985). **Architects in the Third World**; Concept Media Pty Ltd, 1 Grange Road, Orchard Building, United Kingdom
- A. Tayob (1999). **Islam, A short Introduction: Signs, Symbols and Values**; One World Publications, 185 Banbury Road, Oxford, England
- Y. Lari (1990). **Places of Public Gatherings in Islam**; The Aga Khan Award for Architecture
- M. Hattstein (2000). **Islam, Art and Architecture**; First Edition Translations Ltd, Cambridge, UK.
- K. Critchlow, (1976). **Islamic Patterns: An analytical and cosmological approach**; BAS Printers Limited, Wallop, Hampshire, UK
- H. Porthorn, (1971). **Styles of Architecture**; Jarrold and Sons, Ltd. Norwich, 4 Fitzhardinge Street, London, UK.
- F. Debbenheim, (1990). **The Readers Digest World Atlas**; The Reader's Digest Associated Ltd, Cambridge, UK.
- www.jakob.ch:
- www.andre.de:

Religious:

- M.A. Ali (1999). **Signs of Qiyamah**; Jetline Printers, 141 Anderson Street, Johannesburg, 2001, RSA
- M. Gemeiah (2001). **Stories of the Prophets**; Islamic Book Service, Nodia Printing Press, 2241 Kucha Chelan, New Delhi, India
- E. Muhammad (2002). **The Lives of the Messengers**; Altaf and Sons, P.O. Box 5882, Karachi, 74 000, Pakistan
- M. Bucaille (1995). **The Qur'aan and Modern Science**; Islamic Information Center, Dubai, U.A.E.
- A. Deedat (1989). **What the Bible says about Muhammad**, Islamic Propagation Center, 45 Madressa Arcade, Durban, 4001, RSA
- A. Deedat (1987). **What the Bible says about Muhammad**, Islamic Propagation Center, 45 Madressa Arcade, Durban, 4001, RSA
- A. Deedat (1994). **Muhammad, The Greatest**, Islamic Propagation Center, 45 Madressa Arcade, Durban, 4001, RSA
- A. Deedat (1982). **Way to the Qur'an**, Islamic Propagation Center, 45 Madressa Arcade, Durban, 4001, RSA
- A. Deedat (1983). **Muhammad, The Natural Successor to Christ**, Islamic Propagation Center, 45 Madressa Arcade, Durban, 4001, RSA
- A. Deedat (1995). **Christ in Islam**, Islamic Propagation Center, 45 Madressa Arcade, Durban, 4001, RSA
- M. Ashraf (1983). **An Easy History of the Prophet of Islam**; Ashraf Printing Press, 7 Aibak Road, Lahore, 74 000, Pakistan
- A. Elkadi (1993). **Muhammad, The Family Man**; Islamic Medical Association of South Africa, P.O. Box 48786, Qualbert, 4078
- K.S. Ramakrishna (1995). **Muhammad, The Prophet of Islam**; Islamic Propagation Center, 45 Madressa Arcade, Durban, 4001, RSA
- A. Elias (1994). **Why Accept Islam?** Madressa Noor, P.O. Box 137, Pietermaritzburg, 3200, RSA

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a quest of the spirit