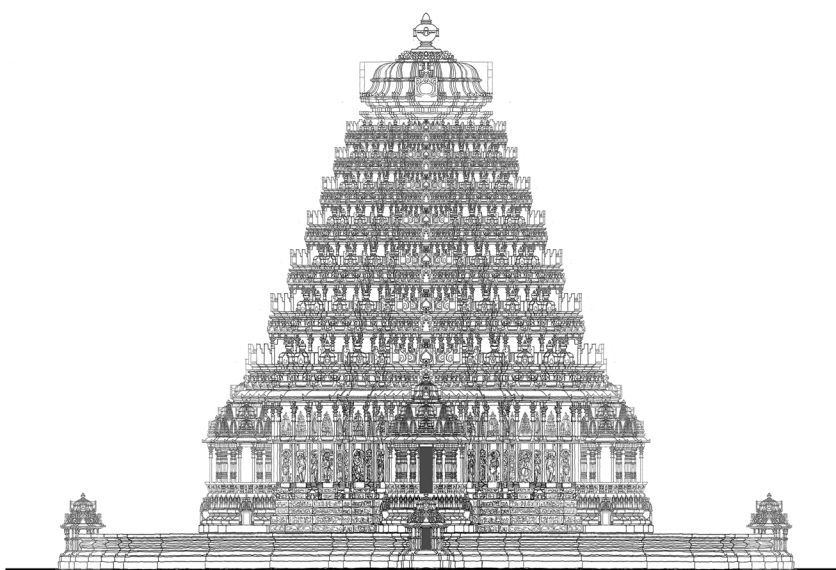
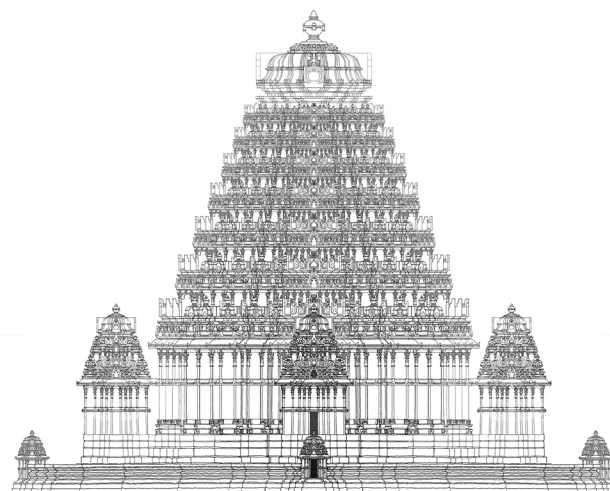
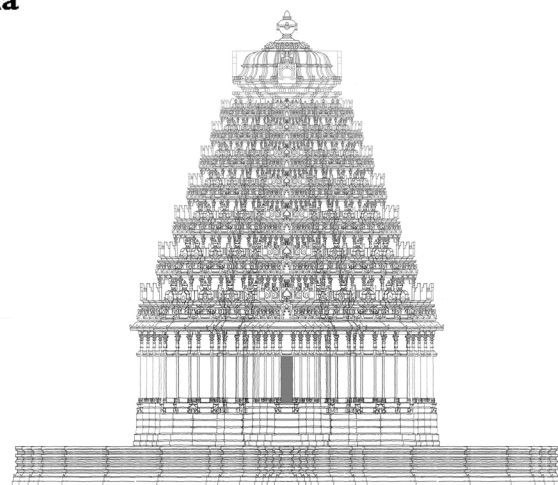


A new Hoysala temple in Karnataka



Contents

Summary

Drawings

Analysis

Appendix: "Designing a New Hoysala Temple in Karnataka", paper presented at the 2009 conference of the European Association of South Asian Archaeology and Art at the University of Vienna, and to be published in the proceedings.

a. **Year of output:** 2009-12 (overall design complete, production information stage awaiting further commission)

b. **Type of output:** Building design

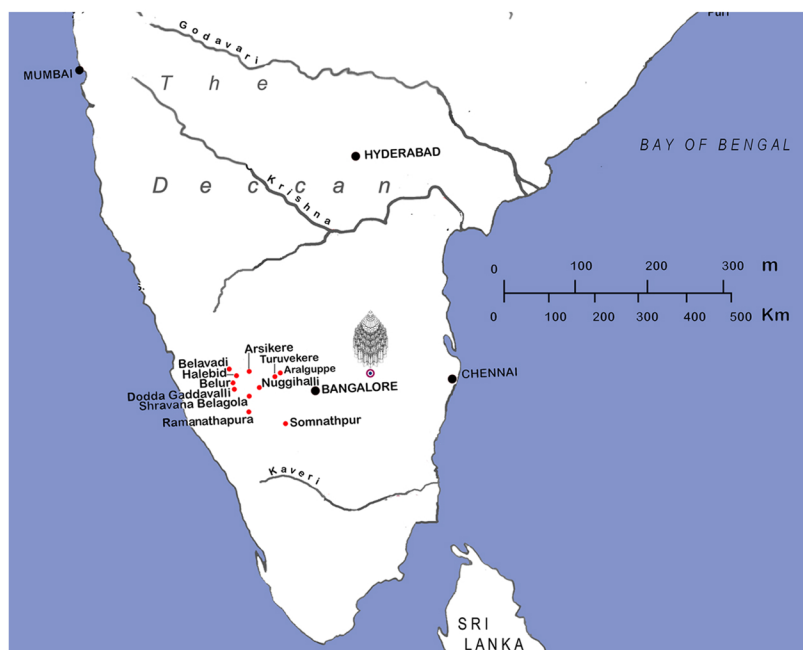
c. **Title of output:** Design for Shree Kalyana Venkateshwara Temple, Venkatapura, Karnataka, India.

Client: Shree Kalyana Venkateshwara Hoysala Art Foundation, 144 Karthik Nagar, L.R.D.E Layout, Doddanekundi (post), Marathally, Bangalore 560036, India.

<http://www.skvstt.org/trust.html>

Research group: PRASADA (Practice, Research and Advancement in South Asian Design and Architecture), The Welsh School of Architecture, Cardiff University

http://www.prasada.org.uk/prasada_design_projects_Hoysala_temple.html



Map of south India showing location of the proposed temple and selected Hoysala temple sites.

Summary

Aim

To satisfy the client's brief for a large new temple, using traditional stone construction, hand carved, 'authentically' following the style of the Hoysala dynasty in the twelfth century, and not a copy of any existing temple; and, in order to achieve this, to exemplify, imaginatively and practically, the architectural vocabulary, design principles and mode of development, of the Karnata Dravida tradition of temple architecture.

Context

Traditionally built temples have undergone a resurgence in India, and among Hindu and Jain diasporas. While lineages of practitioners from Tamil Nadu and Gujarat continue to build traditional temples in their respective styles worldwide, no Hoysala temple has been built since the 14th century, hence the need for Hardy's expertise. The research context for the project largely comprises Hardy's own work on temple forms and design principles, proportion and geometry, construction methods and textual canons.

Methodology

Knowledge of the tradition in question, acquired through years of familiarity and systematic study, is being tested, and its lacunae filled, through the task of designing a complete and realisable building. The approach being followed is *svayambhu* or 'self manifesting'. In other words, the design is 'chanelled' rather than imposed, and entails (a) following the formal logic underlying the increasing complexity observable over the course of the tradition in question, and (b) taking into account the ritual and iconographical requirements given by the client and their religious advisors.

Dissemination

The design process has been disseminated through four academic conferences, and the project has been reported in the press and broadcasting media in the UK and India.

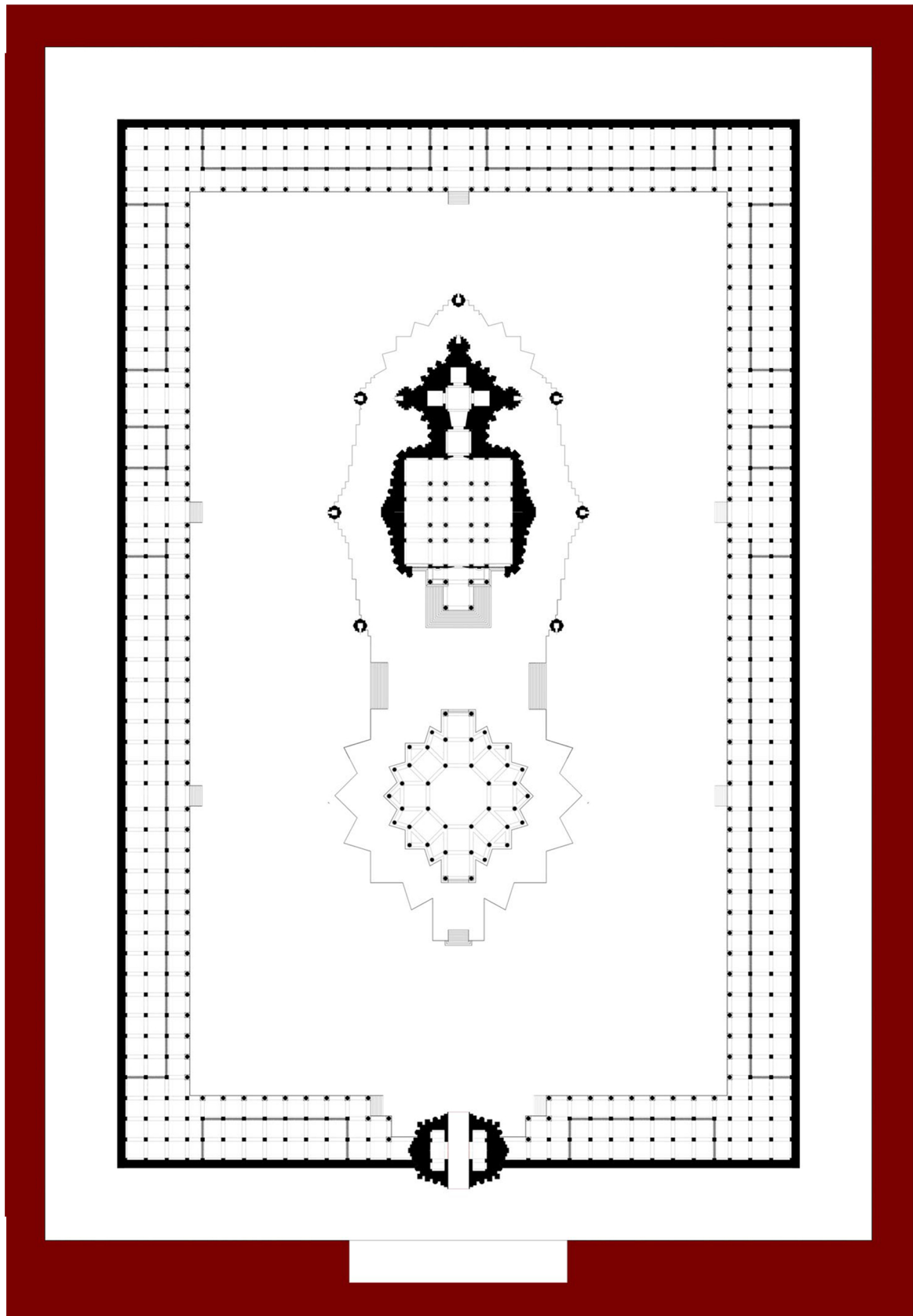
Authorship

Adam Hardy, Professor of Asian Architecture, The Welsh School of Architecture.

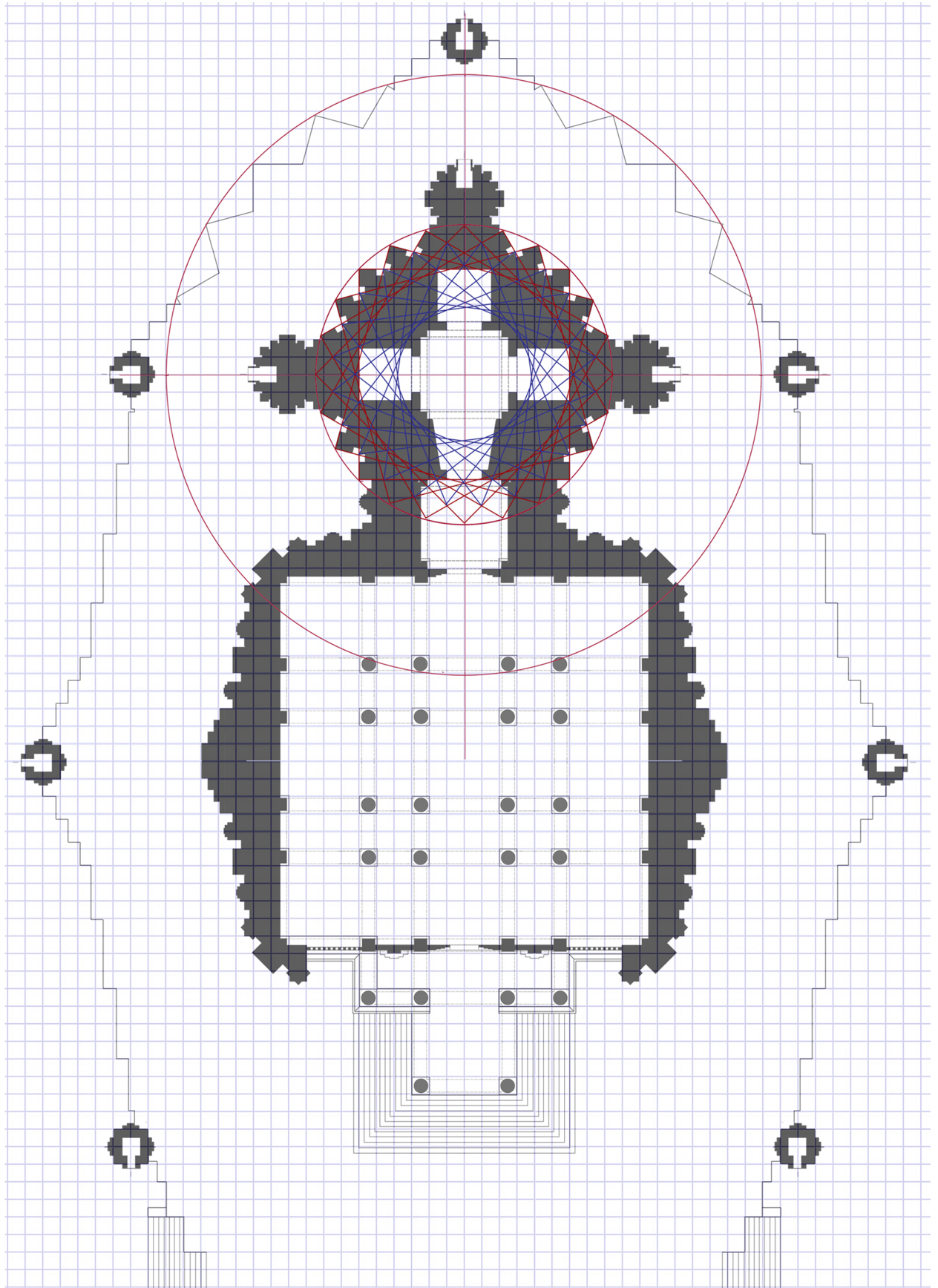


Hoysaleswara temple, Halebid, early-12th century.

Drawings

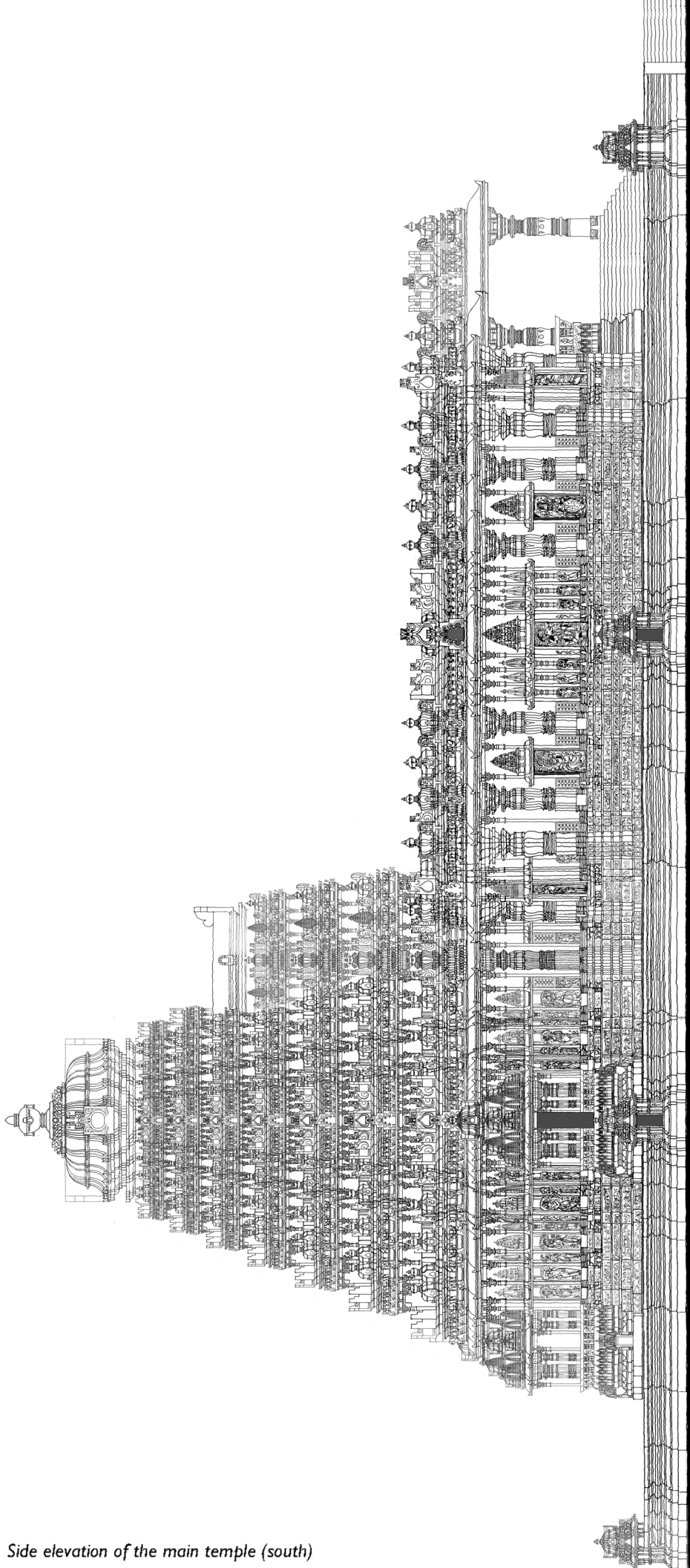


Plan of the complex. The main shrine will be set in a 6,000 m² walled compound.



Plan of the main temple, showing grid and vimana geometry. The garbhagriha (inner sanctum) is about 5.3m square, and the outer circle of the vimana about 17m. Each grid square is approximately 1.07 m, following the Ayadi calculations. No scales are given on the drawings because the final Ayadi calculation is yet to be confirmed.

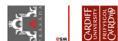
Side elevation of the main temple (south)

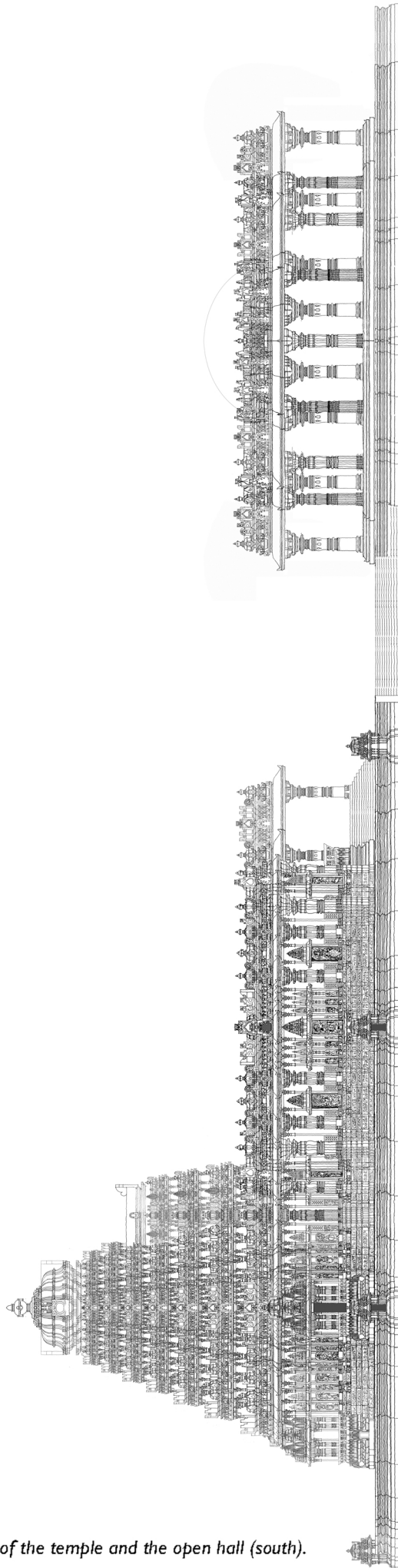


Shree Kalyan Venkateshwara Temple
Nangali, Dist. Kolar, Karnataka, India
For Shree Kalyan Venkateshwara Hoysala Art Foundation

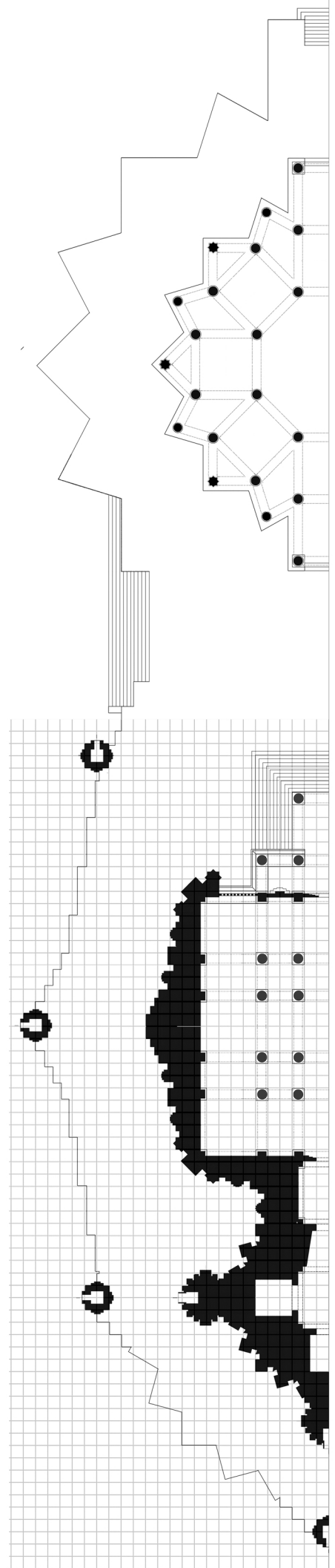
SIDE ELEVATION OF MAIN TEMPLE

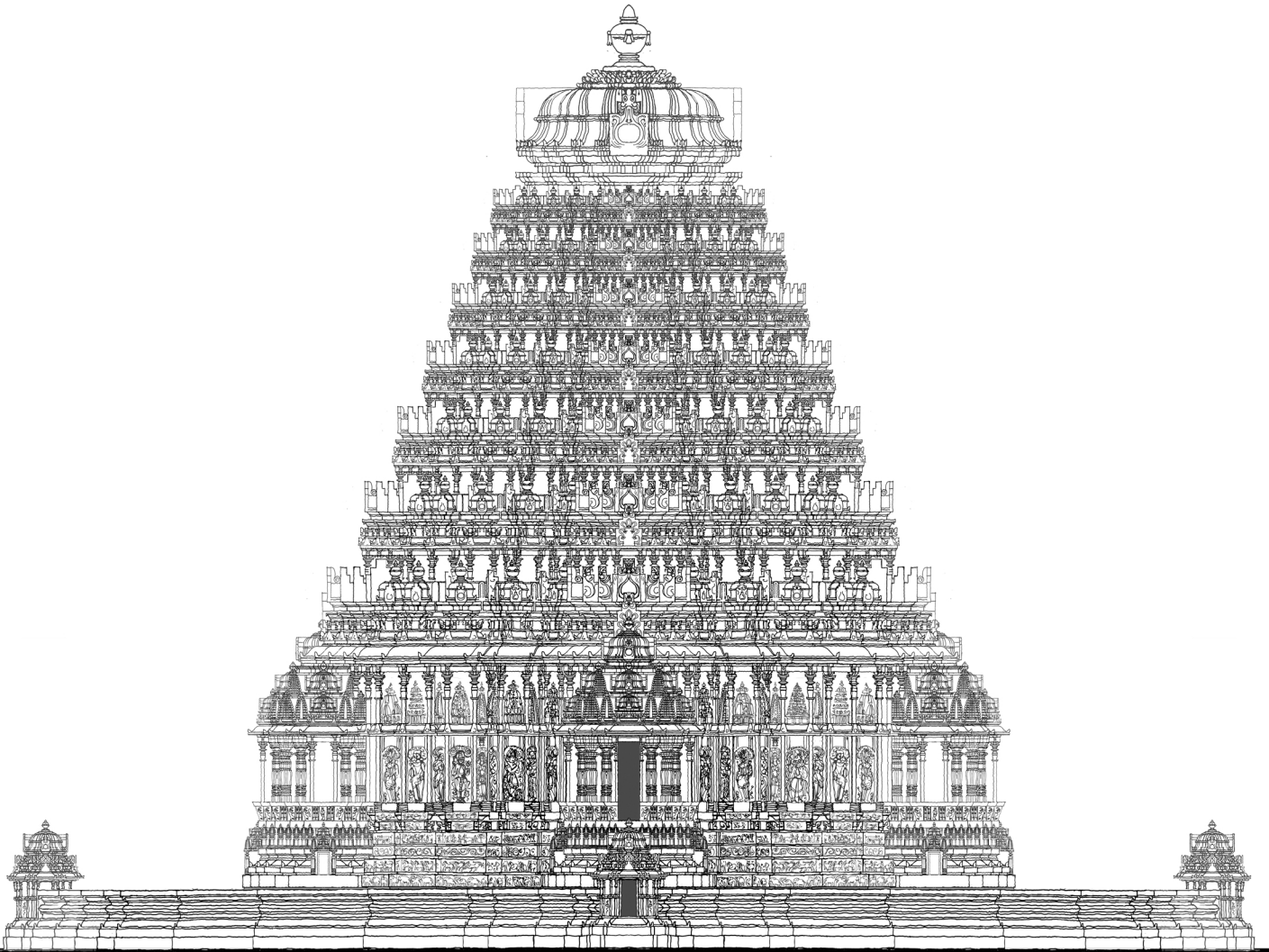
PRASADA School of Architecture, Cardiff University
Bute Building, King Edward VII Avenue, Cardiff CF10 3NR, UK
www.prasada.org.uk



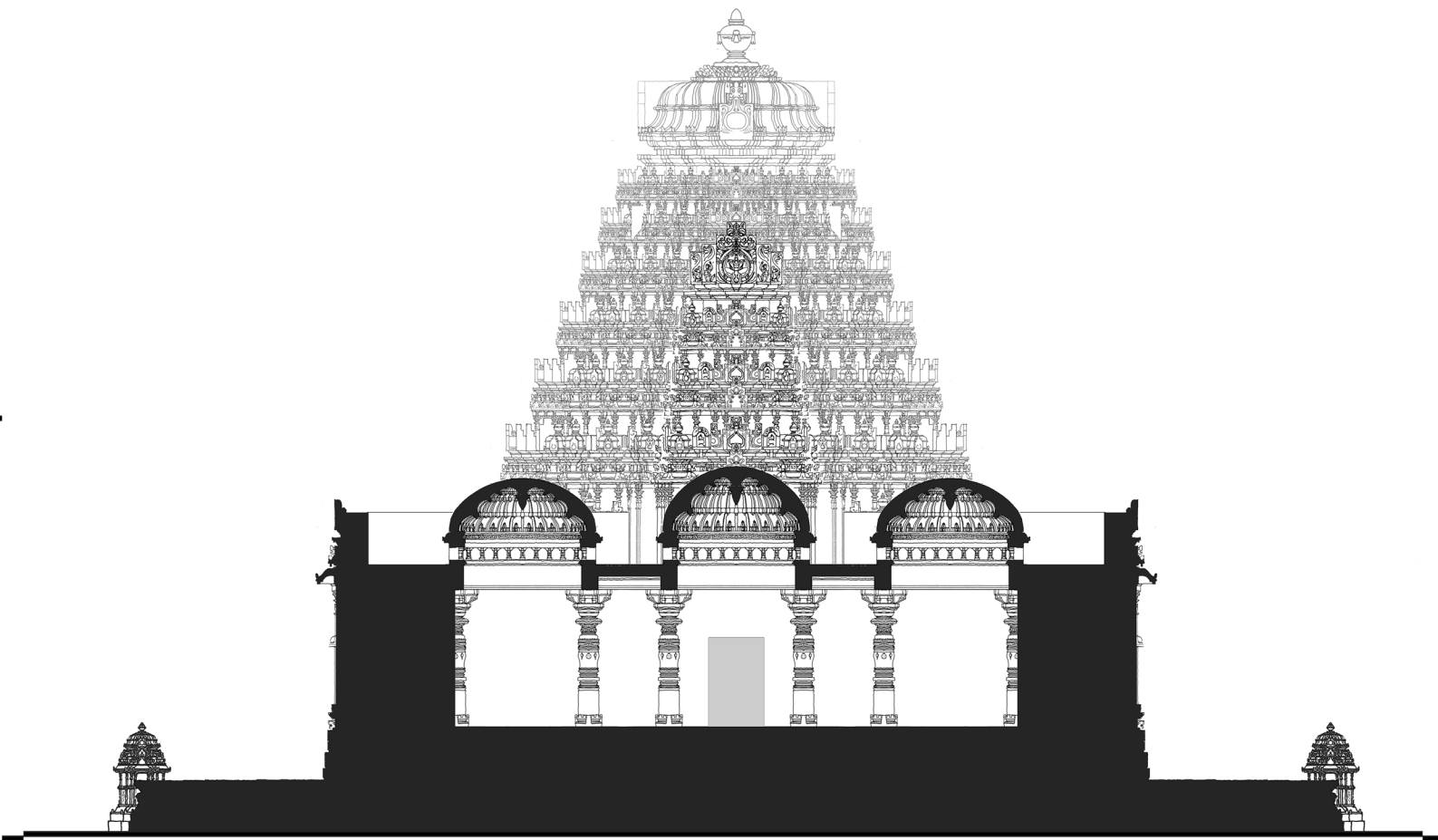


Side elevation of the temple and the open hall (south).

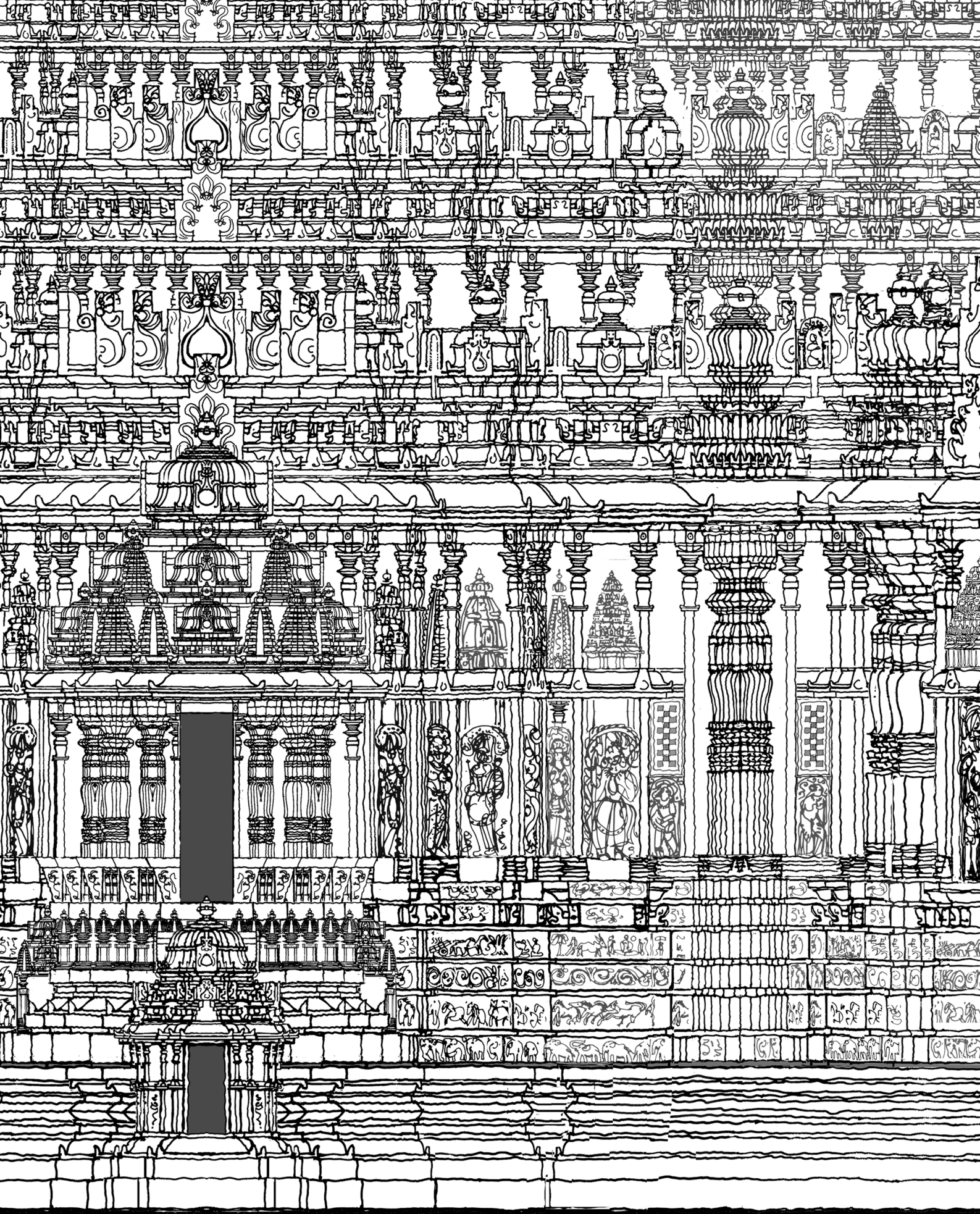




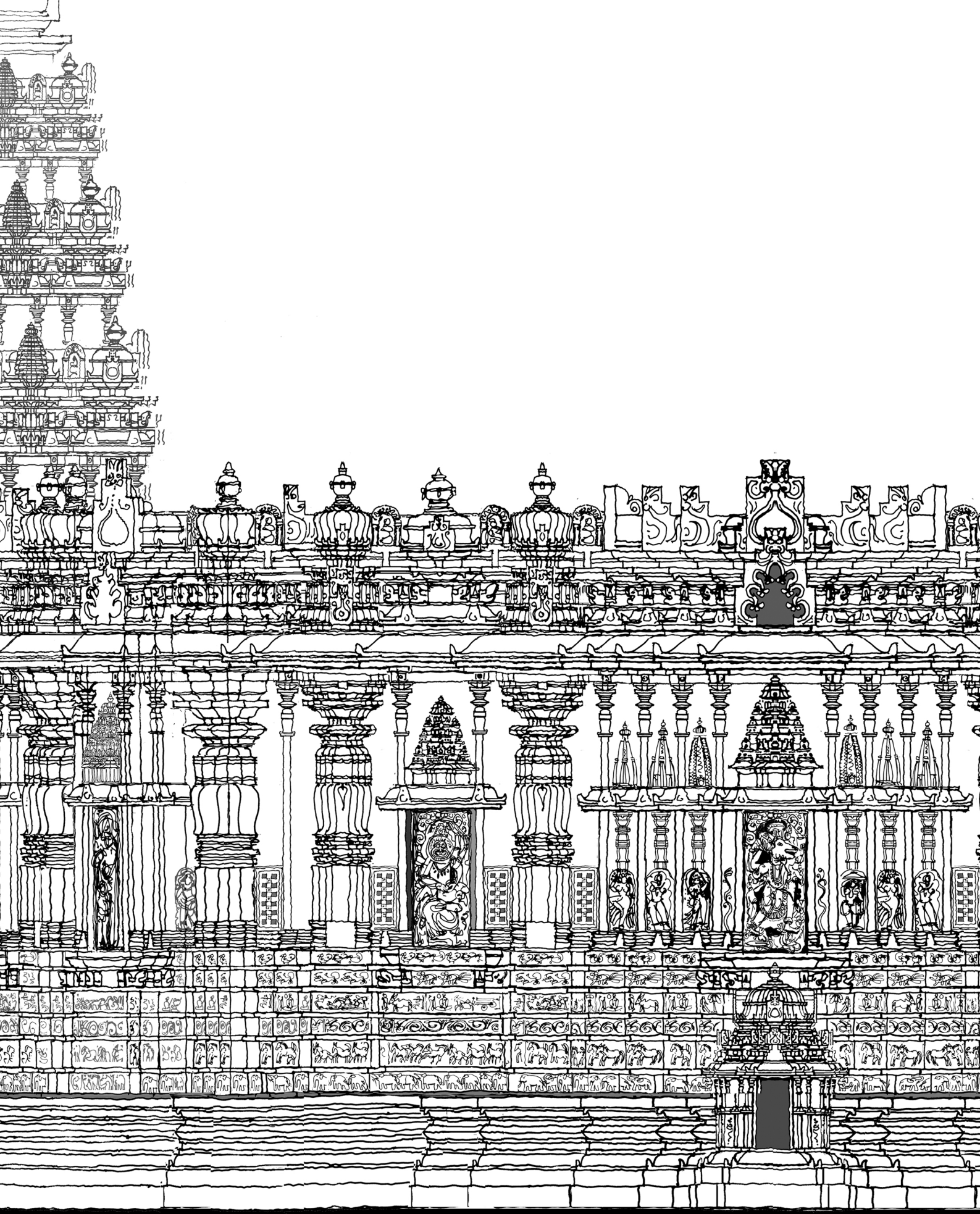
Vimana elevation (west).



Cross section through enclosed hall.



Elevation, detail (1)



Elevation, detail (2)

Analysis

I. Introduction

This is a commission to design a traditionally constructed Hindu temple to be built on a hill at Venkatapura near Nangali in Kolar District, Karnataka, India, in the complex 12th-century style of the Hoysala dynasty. The stone is to be the blue-grey soapstone (chloritic schist) beloved of the Hoysalas. The temple is to be dedicated to Vishnu in the form of Shree Venkateshwara (or Balaji).

While lineages of practitioners from Tamil Nadu and Gujarat continue build traditional temples in their respective traditional styles worldwide, no 'Hoysala' temple has been built since the 14th century, hence the need for Hardy's expertise. The brief is not for a copy of a Hoysala temple, but for a new creation arising from the design principles manifest in the tradition. As well as religious motivation, the client aims to revitalise regional cultural traditions: the temple is to provide a setting for dance performances, with schools of dance and sculpture envisaged at the site. A group of master craftsmen proficient in the Hoysala style of sculpture has been identified to work on the project and to train apprentices.

The client, the Shree Kalyana Venkateshwara Hoysala Art Foundation, signed a contract with Cardiff University in 2009 for Adam Hardy to produce the overall design of the temple and surrounding complex. The design was developed during 2010, with refinements thereafter. The *bhumipuja* (initiation of the project, orientation of the temple, worship of the goddess earth) took place on 21 March 2010, and the *shilanyasa* (foundation stone ceremony) in April 2012. Large granite blocks are (2013) being transported to the site and lain to create a level platform for the whole complex. The next stage of the project, production information, is awaited, while the granite platform and site infrastructure are put in place and further funds raised. While the objectives of the project can be fully realised only when the building is complete, the first phase presented here has constituted a coherent piece of research through design, its relevance enhanced by having a real client and real practical, financial and political constraints.



The site.



Bhumipuja.

Granite blocks for the temple platform.

Shilanyasa.

3. Context

The project needs to be understood in the context of a resurgence over the last three decades of traditional temple building (Hindu, also Jain), in India and worldwide among diasporas. A factor behind this has been a need to assert cultural identity, in the context of migration or in response to the homogenising forces of globalisation. Hindu nationalism/Hindutva has played a part, but to dismiss the phenomenon because of this problematic aspect is to blind oneself to a creative and indigenous alternative to globalised modes of production. This is not merely nostalgic revival, but entails continuities with traditional worldviews and concomitant ritual processes of making buildings.¹

Two communities of hereditary architectural practitioners now predominate among designers of temples, the Vishvakarma *sthapatis* in Tamil Nadu, who practice southern or Dravida temple architecture, and the Sompuras in Gujarat and Rajasthan, whose architecture is of the northern, Nagara school. Mainstream architects in India have very rarely ventured into designing temples, and generally view the traditional practitioners with bewilderment. The legitimacy of traditional practitioners for temple clients rests largely on the authority of the canonical treatises on architecture, the *Vastushastras*. It is generally important that a sacred building should be seen to be 'true to *shastra*'; and it is too often assumed, uncritically, that this means that the designer can follow an ancient text like a recipe book.

The Nagara and Dravida 'languages' of temple architecture were formed in the 6th and 7th centuries, flourished until the 13th, and thereafter have been periodically revived, or continued – the boundaries here between revival, survival, and re-invention being inherently fluid, and still insufficiently understood by architectural historians. The renewals of traditional temple building in the 19th and 20th centuries were not isolated from the expanding fields of archaeology and art/architectural history, which transformed general awareness of ancient Indian styles, unearthing and canonising forgotten monuments.

The Hoysala dynasty ruled in southern Karnataka between the 11th and 14th centuries. The complex and ornate style associated with the Hoysalas is one of those brought to light through 19th-century scholarship. Many Hoysala temples were documented by the Archaeological Survey of Mysore in the early-20th century, and comprehensive studies appeared in the 1990s.² By this time the style was firmly established as a symbol of regional identity. However, new temples in Karnataka are designed predominantly by Tamil *sthapatis*. There are no *sthapatis* practising in the Hoysala style, and no *Vastushastra* text survives from that tradition.

¹ Samuel K. Parker, "Ritual as a Mode of Production: Ethnoarchaeology and Creative Practice in Hindu Temple Arts." *South Asian Studies* 26.1, 2010, pp. 31-57.

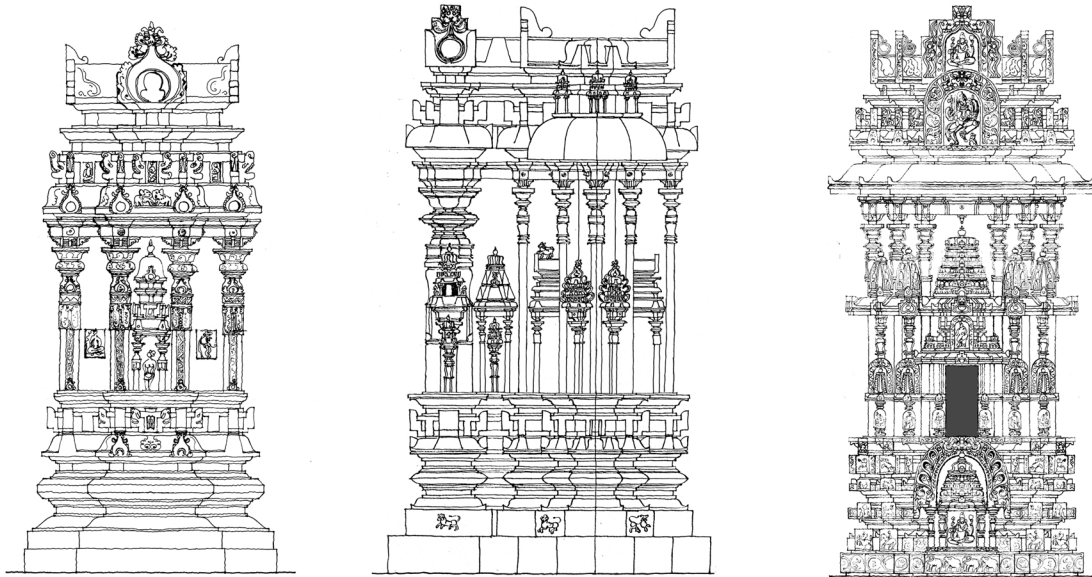
² M. A. Dhaky (ed.), *Encyclopaedia of Indian Temple Architecture, South India: Upper Dravidadesa, Later Phase, AD 973-1326*; 2 vols. (New Delhi: AIIS and IGNCA, 1996).

Gerard Foekema, *Hoysala Architecture* (New Delhi: Books & Books, 1994).

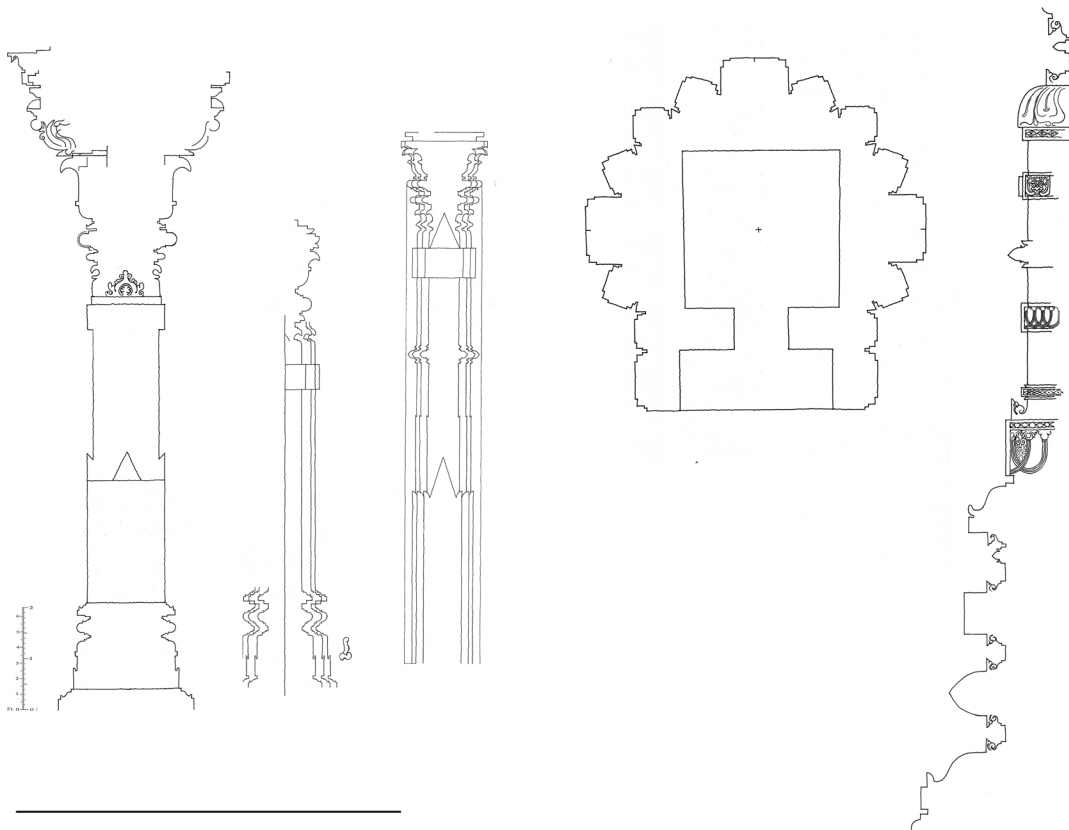
Adam Hardy, *Indian Temple Architecture, Form and Transformation: The Kamata Dravida Tradition, 7th-13th Centuries* (New Delhi: IGNCA, 1995).

The knowledge and approach underlying the design of the new temple are rooted in several aspects of Hardy's own research:

a. Doctoral research (1985-91), book,³ and related publications understanding Hoysala architecture as an integral development of the Karnata Dravida tradition (7th to 13th centuries), characterised by 'aedicular' composition and an 'emanatory' pattern of development. Transformations are analysed and drawn in detail.



b. Documentation and analysis of the unique 11th-century architectural drawings engraved, on the rocks at Bhojpur (Madhya Pradesh), many of them 1:1 details of the surviving (unfinished) temple there, providing insight into the role of drawing in the processes of design and construction.⁴



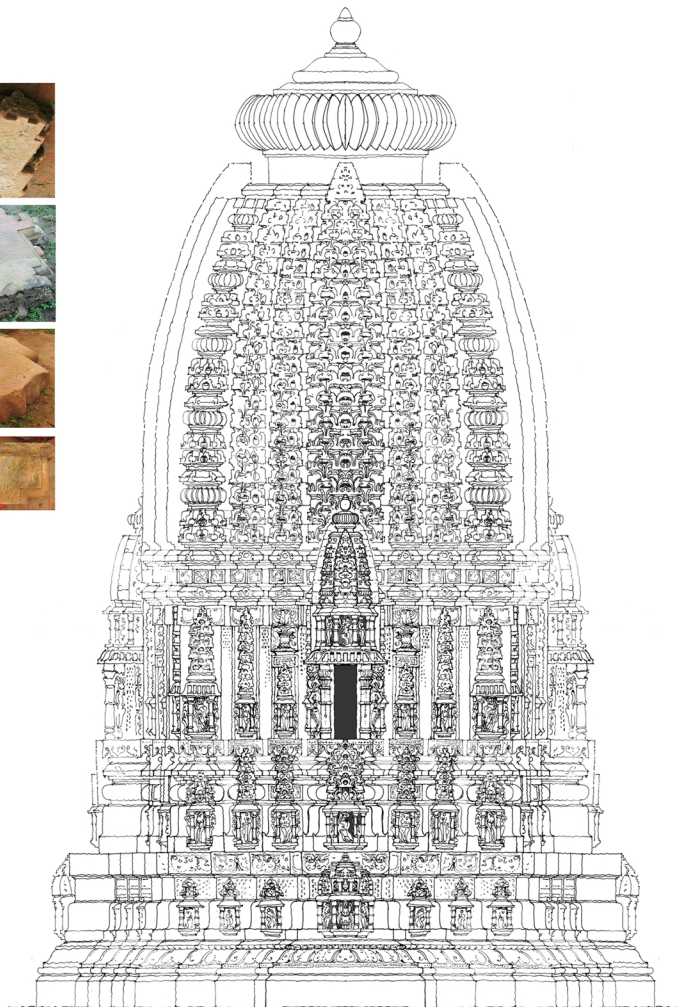
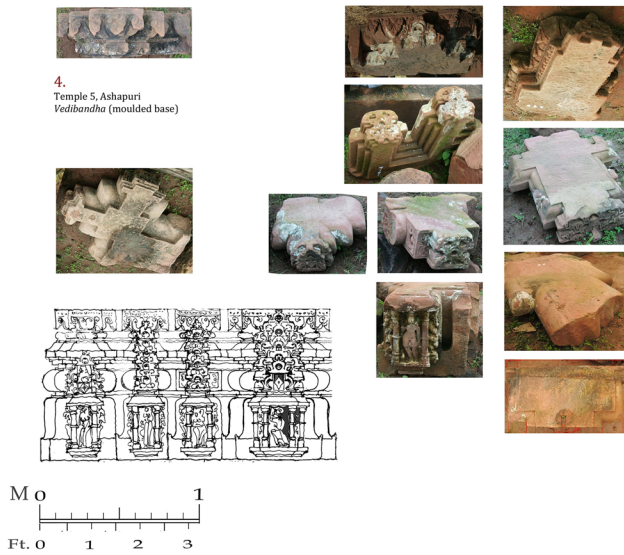
³ Hardy, *Indian Temple Architecture, Form and Transformation*.

⁴ Adam Hardy, *Theory and Practice of Temple Architecture in Medieval India: Bhoja's Samaranganasutraanara and the Bhojpur Line Drawings* (New Delhi: IGNC, forthcoming).

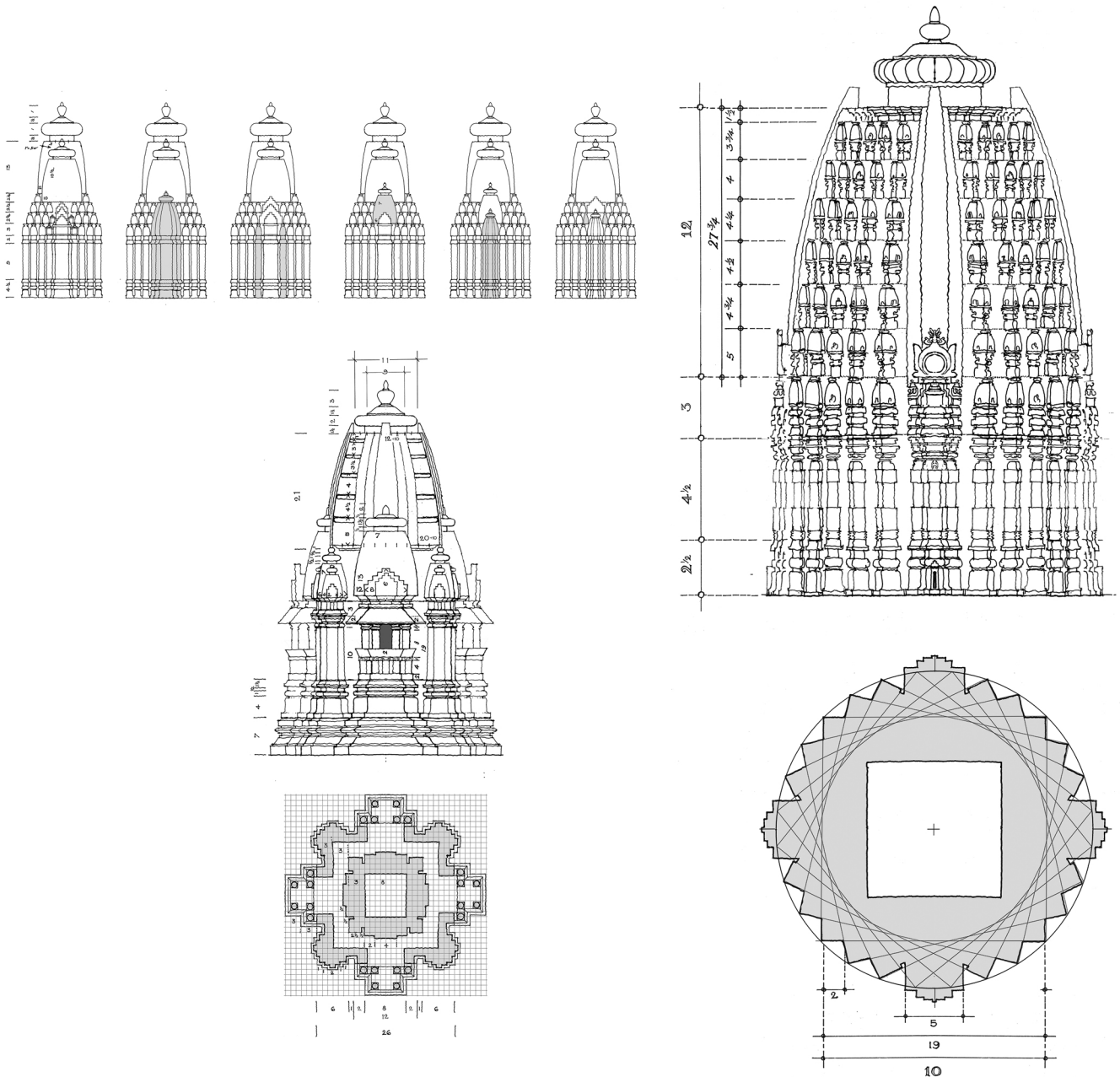
c. Measured, constructional studies of many temples in central and western India and Karnataka.



d. Graphical reconstruction of ruined temples: currently engaged in a conservation feasibility study at Ashapuri (M.P.), funded by the World Monuments Fund.



e. Work on medieval Vastushastra texts: analysis of the 11th-century Samaranganasutradhara,⁵ with drawings of the temple types as specified by the text. Texts from varied traditions are incorporated in this work. Karnata Dravida temples are not represented, but generally applicable approaches to modular proportion can be understood. The chapter on Bhumiija temples reveals the logic and principles guiding a typology of stellate plan forms also found among Hoysala temples. While such texts are not illustrated, the study shows that their instructions are conceived in terms of drawings, and can be of practical use through the intermediary of drawing. It is argued that it is impossible to 'follow' a Vastushastra text without interpretation and improvisation. Far from being a straightjacket and an impediment to growth, the text is revealed both as full of architectural invention, and as a framework and a stimulus to further creativity.



f. Research on contemporary traditional practice.⁶

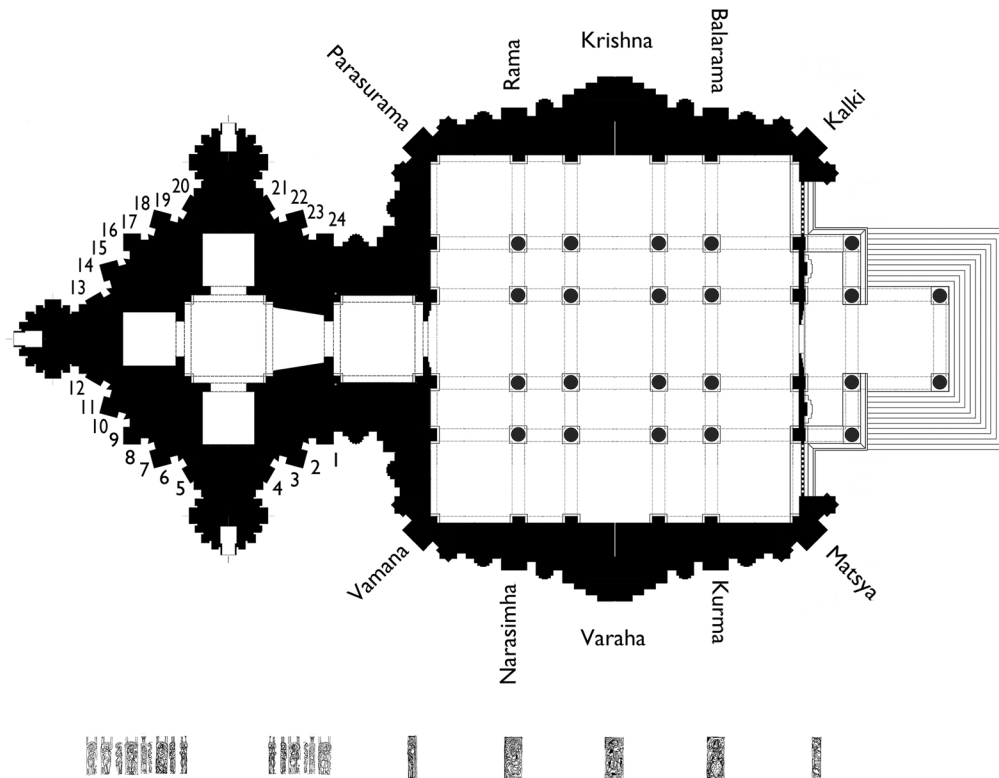
⁵ Hardy, *Theory and Practice of Temple Architecture*.

⁶ Including supervision of PhD research on the Sompuras by Megha Chand Inglis.

4. Methods

Knowledge of the tradition in question, acquired through years of familiarity and systematic study, is being tested, and its lacunae filled, through the task of designing a complete and realisable building. The approach being taken, following a conviction that it is culturally appropriate and productive, may be characterised as *svayambhu*, ‘self manifesting’ or ‘self emergent’ (see Appendix). In practical terms this involves two procedures:

- to follow the formal logic of sequentially emerging, increasingly complex forms observable over the course of this tradition, extrapolating the design from the Hoysala monuments
- to take into account the ritual and iconographical requirements given by the client, who must satisfy the prescriptions of religious advisors and placate influential opinions.



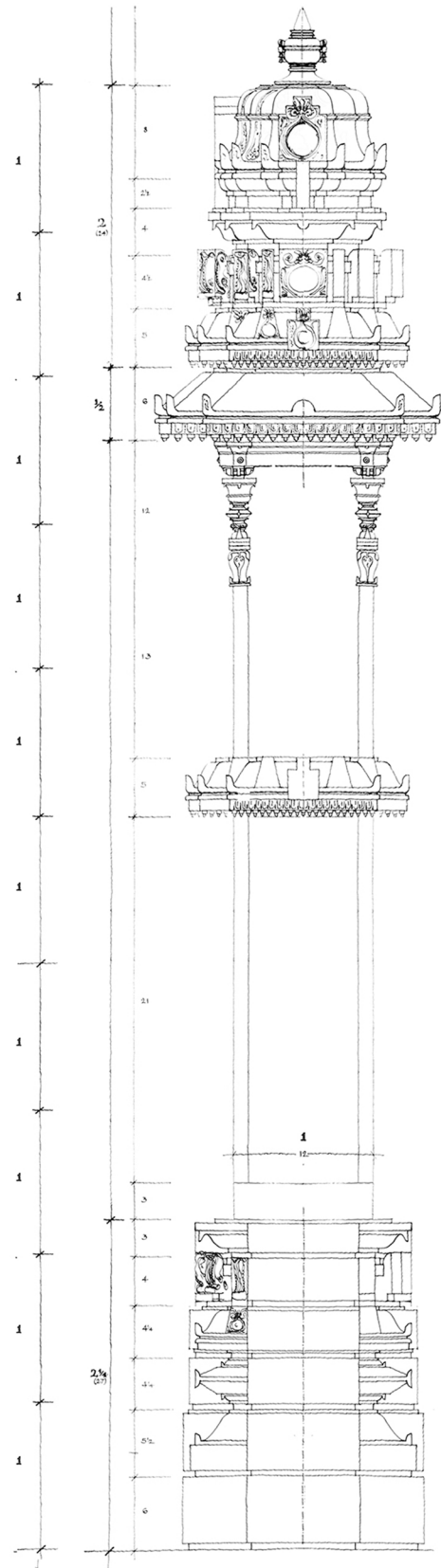
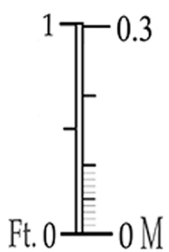
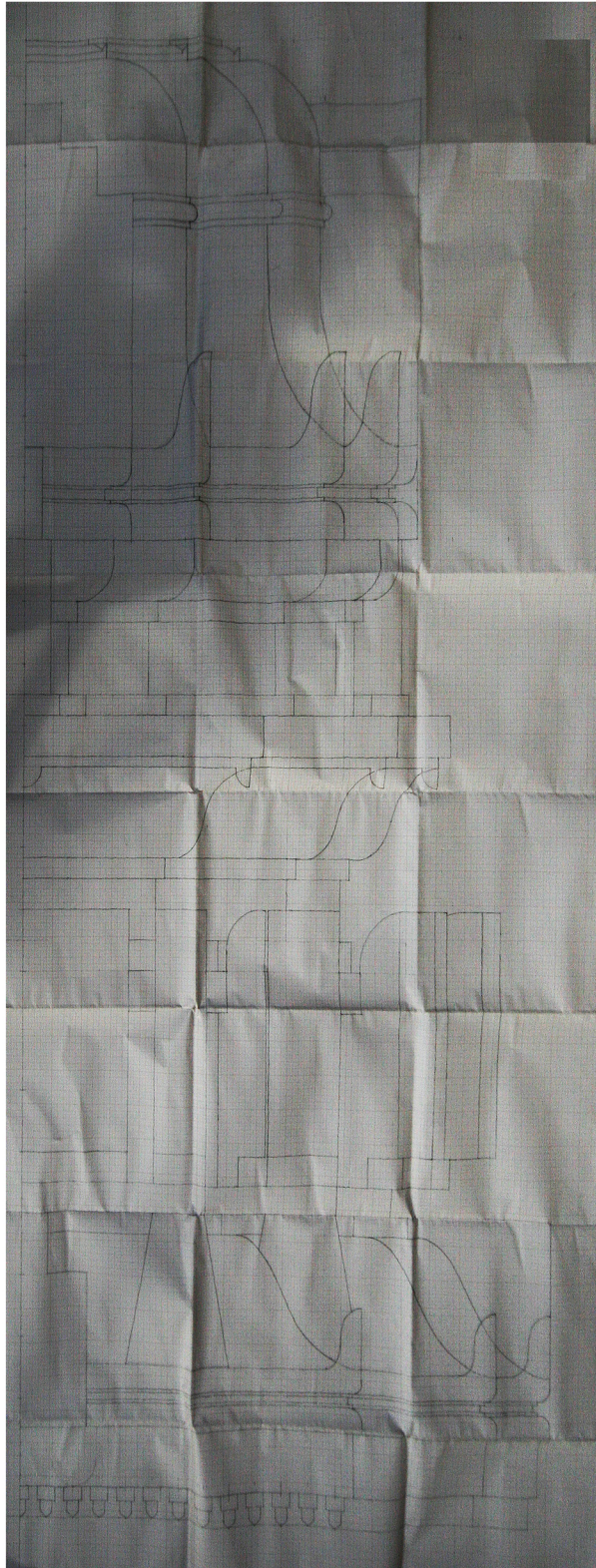
Placement of iconography in exterior walls.

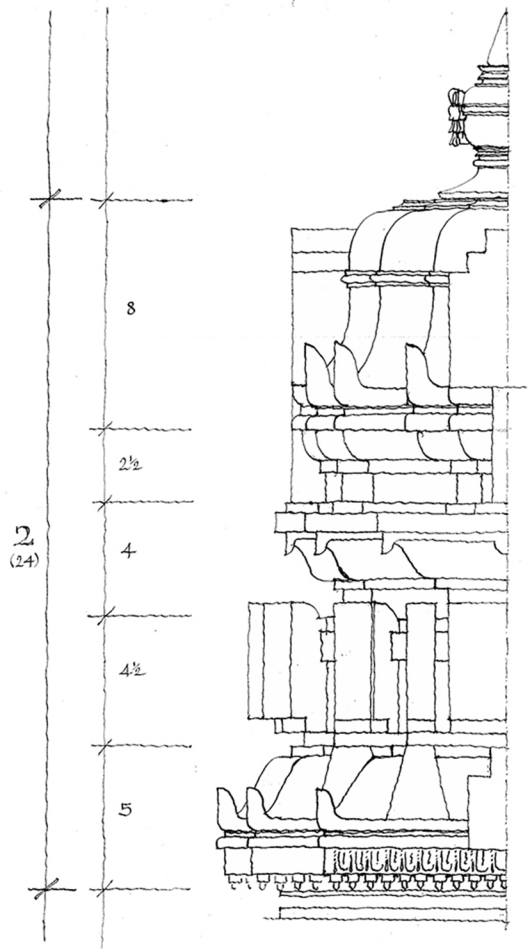
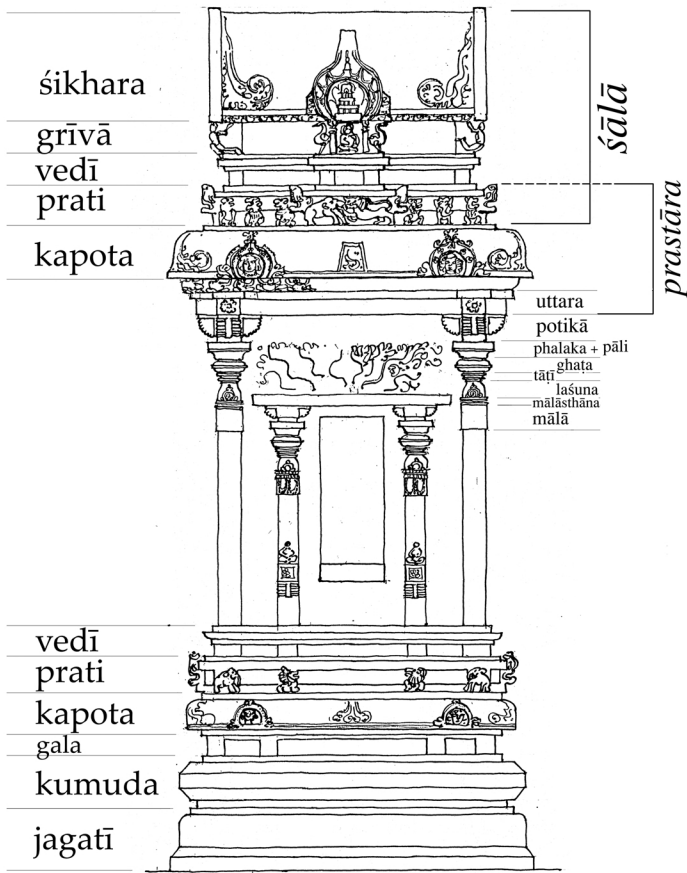
For example, the exterior walls of the enclosed *mandapa* (hall) are to display the *dasavataras*, the ten avatars of Vishnu. This necessitates ten principle projections, each with a main panel of the same size. Each of the projections must be thought of in relation to the aedicule that it brings forth from the wall to provide its deity with a suitable dwelling and embodiment. This required number of framed deities could not be achieved if the *mandapa* had the more usual, orthogonal kind of corner, while diagonal corners – suggested by one of the precedents (see Appendix) favoured by the client – easily allow ten, while facilitating circumambulatory viewing and worship.

The design of the *vimana* (shrine proper) has also grown naturally from iconographic requirements. In its walls the *vishnuchaturvimsati* (twenty-four names of Vishnu) are to be represented. Leaving room for the *bhadras* (cardinal projections), this calls for a stellate plan of twenty-four points, formed by a square rotated six times. In the angles between the main elements emerge re-entrant projections based on an equilateral triangle rotated eight times. Norms of proportion dictate that this plan should generate a *vimana* of seven *talas* (storeys). Happily for the emanatory development of the tradition, the resulting composition has a degree of proliferation exceeding any surviving Hoysala work.

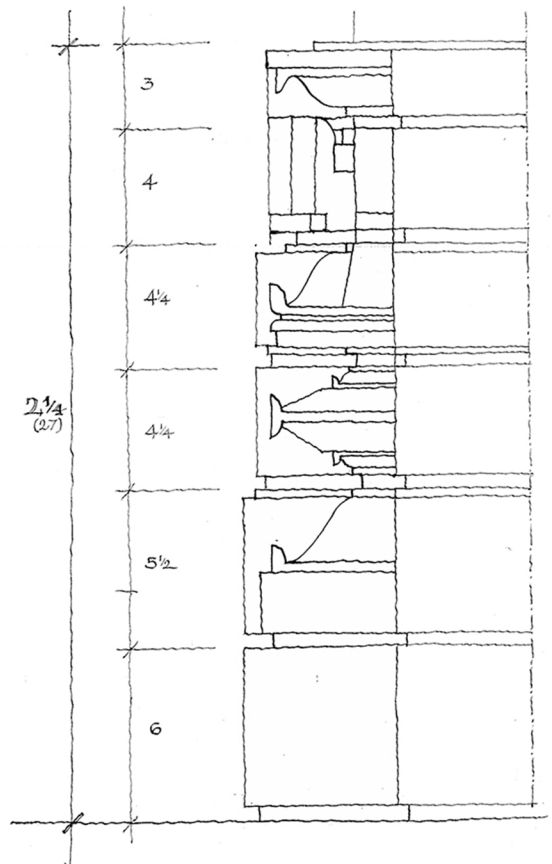
The probable contractor for the project is a prominent *sthapati* from the Dravida tradition of Tamil Nadu, and discussions with him are underway concerning construction techniques and the sizing of structural members. The stone is to be machine cut, finished, carved and ornamented by hand. In order to nurture the eventual quality of the building, collaboration is also underway with the artists who make the sculpture and carve the ornament.

The overall design has been developed through freehand drawing, to scale, manipulated with Photoshop. Detailed design is being developed through full size hand drawings. Comprehensive information for the stone profiles, course by course, will be conveyed in Autocad.





Dravida mouldings.





Bracket figure, Belur.



G. L. Bhatt with one of his sculptures.

5. Dissemination

The design process had been presented at four academic conferences: BASAS conference, University of Warwick, 2010; EASAA conference, Vienna, 2010; Afterlives of Monuments', Goldsmiths, London, 2011; College Art Association Symposium, Los Angeles, 2012.

The design process will be compared with two other kinds of temple re-creation in which Hardy is engaged – graphical reconstruction from temple ruins and from textual prescriptions – in the keynote address (“Digging up Designs”) to the first Annual Allchin Symposium in South Asian Archaeology, University of Cambridge on 6th December 2013:

<http://southasianarchaeology.wordpress.com/schedule/>

The drawing showing the initial development of the plan is reproduced in Rahul Merhotra, *Architecture in India Since 1990* (Mumbai: Pictor, 2011), p. 260.

Press articles and broadcasts in UK:

Interview with Roy Noble, The Roy Noble Programme, BBC Radio Wales, 23 April 2010

Interview with Claire English, Culture Café, BBC Radio Scotland, 4 May 2010

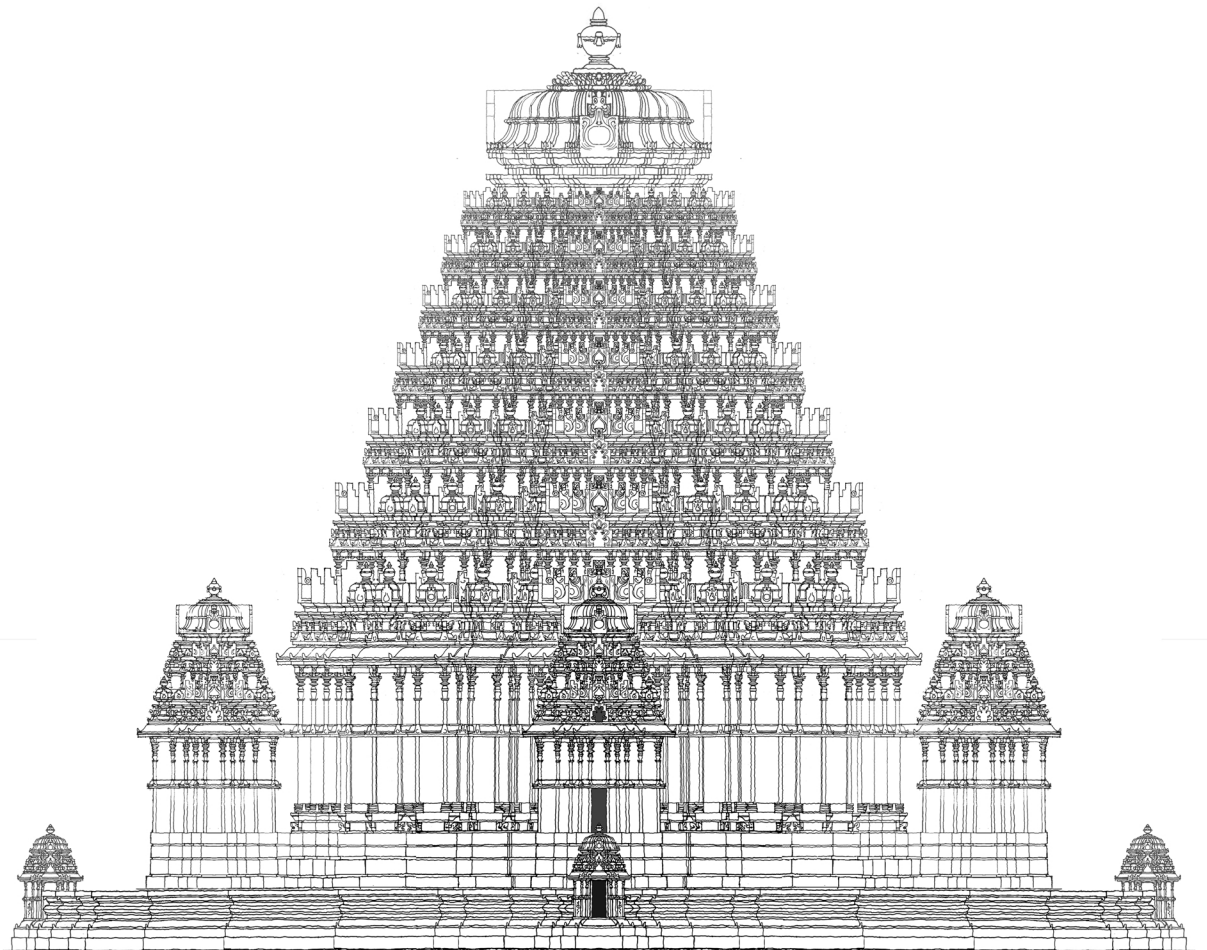
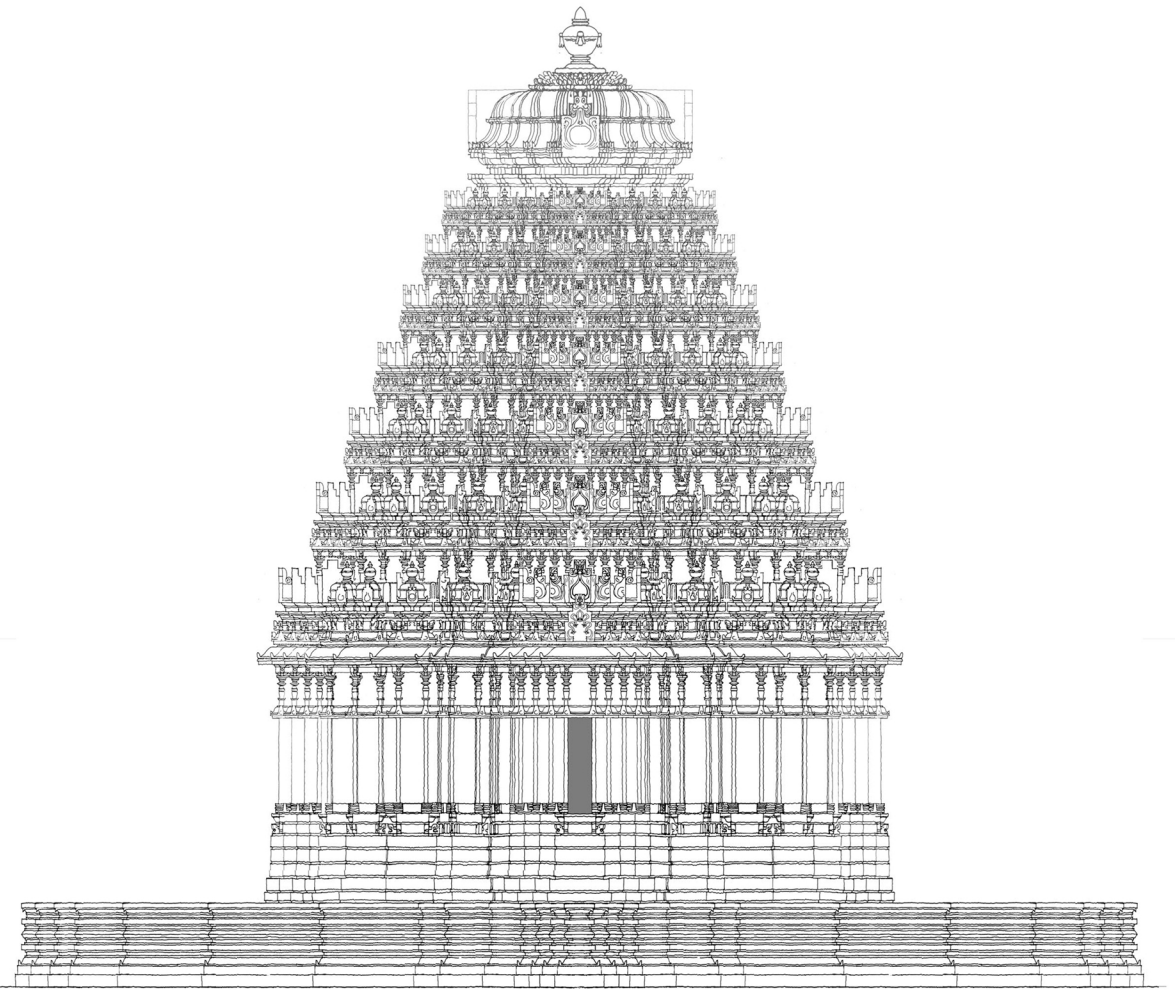
Article in *Building Design*, 23 April 2010, and BD online:

<http://www.bdonline.co.uk/story.asp?sectioncode=781&storycode=3162287&channel=783&c=1>

Article in *South Wales Echo*, 15 April 2010; pdf at [http://www.cardiff.ac.uk/archi/news-](http://www.cardiff.ac.uk/archi/news-Adam_H_Indian_Temp.php)

[Adam_H_Indian_Temp.php](http://www.walesonline.co.uk/news/wales-news/2010/04/15/cardiff-architect-picked-to-design-hindu-temple-in-india-91466-26246377/) Online article at <http://www.walesonline.co.uk/news/wales-news/2010/04/15/cardiff-architect-picked-to-design-hindu-temple-in-india-91466-26246377/>

Events associated with the temple have received press and TV coverage in India, sometimes showing the design. Newspapers covering these (mainly from Bangalore, in Kannada, English, Telugu) have included Andhra Jyoti, DNA, Deccan Chronicle, Dinakaran, Ee Sanje, Hosa Diganta, Kannada Prabha, Mathru Bhumi, New Indian Express, Patrika, Praja Vani, Samyukta Karnataka, Sanje Vani, Sashki, Tanti, Udaya Vani.



Appendix

Designing a New Hoysala Temple in Karnataka

A paper presented at the 2009 conference of the European Association of South Asian Archaeology and Art at the University of Vienna, and to be published in the proceedings.

Designing a New Hoysala Temple in Karnataka

Adam Hardy

The Project

The Shree Kalyana Venkateshwara Hoysala Art Foundation was set up in 2009 to promote a renewal of the arts and culture that flourished in southern Karnataka under the Hoysala dynasty. They plan to build a large new temple in the Hoysala style, entirely of stone and using the traditional structural techniques. The temple is to be dedicated to Shree Venkateshwara (Śrī Venkateśvara, Shri Venkateswara etc.) or Balaji, the form of Viṣṇu whose principal shrine is the Tirumala Venkateswara temple at Tirupati in Andhra Pradesh. Apart from its religious purpose, the temple is intended to stimulate a revival of crafts and to provide a setting for cultural activities such as dance performances. Schools of sculpture and dance are also envisaged. The site is a gently rising outcrop of granite outside the village of Venkatapura, near Nangali in Kolar District, Karnataka. It is close to National Highway no. 4, some hundred and fifty km east of Bengaluru (Bangalore), not far from the Andhra Pradesh border on the way to Chennai (Madras) and to Tirupati. This area was once at the limit of the Hoysala kingdom, way to the east of Hoysalanāḍu proper, which corresponds roughly to present day Hassan, Shimoga, Tumkur and Mysore districts. It is there that dozens of Hoysala temples survive from the 12th and 13th centuries, ornately carved in fine-grained, grey-blue chloritic schist or 'soapstone'.

In August 2009 two founder members of what would become the Shree Kalyana Venkateshwara Hoysala Art Foundation made a special trip to meet me in Gurgaon, Haryana, where I happened to be. They were Aravind Reddy, the driving force, whose father V. Ramalinga Reddy is chairman of the Foundation, and Dr Srivatsa Vati, from Belur, where Viṣṇuvarḍhana Hoysala built the Cennakeśava temple in 1117. Aravind is of the Reddy business community in Bangalore, who are well known for temple patronage. His own training, however, was in traditional Mysore painting. Reddys originate from Andhra Pradesh or its borderlands, and are Telugu speakers. Venkatapura is the home village of Aravind's family, whose members are divided between there and Bangalore. Their community are a majority among the Foundation's trustees.

We met in a hotel room. I doodled some Hoysala designs, flowers were presented and photos taken. A warm relationship was struck up, and since then I have been made to feel part of the unfolding story. For several years they had been searching in vain for someone who could design a Hoysala temple. Then Dr Vati came across my MPhil student Yashaswini Sharma helping with a research project of mine by taking some measurements of the Cennakeśava temple. She is now collaborating on the project through her architectural office in Bangalore. Asked whether she knew how to design a Hoysala temple, she had said she didn't, but knew a man who could. The client was happy when I relayed that I would be pleased to design a Hoysala temple that would not be a copy of any particular one, but a new design in the style and following the principles. There followed a contract with Cardiff University for Phase 1 of the architectural work, the overall design of the temple and surrounding precinct.¹

As an architect as well as a student of Indian temple architecture I have been involved with several Hindu temple designs over the last two decades, especially in Britain, mostly not realised as I had envisaged. Of these the largest happens to have been another Balaji temple, the now up and running Shri Venkateswara Temple of the United Kingdom at Oldbury near Birmingham.² The temple trustees and community come largely from south India and Sri Lanka, and include a high percentage of doctors. What they wanted was an 'authentic traditional' temple rooted in the Drāviḍa tradition of Tamil Nadu, and the style they clearly had in mind was the one familiar from the great majority of recent south Indian temples. This style has become an international Drāviḍa through the commissioning from four continents of prominent *sthapatis*. *Sthapatis* are traditional architectural practitioners, many of whom trace their lineage back to the architect god Viśvakarma, and who are the custodians of *vastuśāstra*, traditional building wisdom. Some way into the project the client brought in Dakshinamoorthy Sthapati to design, and to produce through his workshop in India, the temple shrines, the main *gopura* and various ornamented features, as well as to ensure that the whole enterprise would be 'true to *śāstra*'. We respected one another's knowledge and have remained cordially in touch. As realised, the Oldbury Balaji temple is a mixture of Dakshinamoorthy's international Drāviḍa, miscellaneous crafted features from other Indian sources, and certain aspects and ancillary buildings sketched by me and transformed by the architectural firms who successively took over the realisation of the project. My aim, in view of client's aspiration, was to be true to the tradition by making something new from it on the basis of an understanding of its principles. A carved stone temple was never an option: contemporary materials and building practices were a given, to be humanised and enriched by hand-made art and craftsmanship. In retrospect, the parts that I had sketched look rather postmodern. A multi-purpose hall, for example, was intended to play on the representational origins of Drāviḍa mouldings, making a *kapota* into a metal roof, a *vedīka* into an oversized sills acting as a gutter, a *grīva* into a strip of window.

For the temple in Kolar District, stone built and 'authentically Hoysala', there is no question of any such tricks, no room for 'originality' in the sense typically understood in contemporary architecture. Even if the client could be persuaded, endless self-appointed experts would spring up to point out the errors. Regardless of whatever architectural approaches I personally might like to explore, the present task is at it is. The design should grow from the tradition, and should perhaps be thought of as what the Hoysalas would have done next if they had built another great royal temple after Belur and Halebid. At the outset I expressed my liking for small temples, of which there are numerous Hoysala examples, but it soon became clear that the temple is to rival the largest Hoysala

¹ See http://www.prasada.org.uk/prasada_design_projects_Hoysala_temple.html

² http://www.prasada.org.uk/prasada_design_projects_shri_venkat.html and <http://www.venkateswara.org.uk/>

works in scale and magnificence. Before my involvement, groundwork had been started to ensure the feasibility of the undertaking. Master sculptors had been identified, notably G. L. Bhatt, who, incidentally, regularly visits England to teach sculpture in a summer school at a farm in Somerset. The sculptors will need to train teams of apprentices for the dozens of images and yards of carved ornament. Quarries for soapstone have been located in Heggadadevanakote (Mysore District): several such quarries, as each individually is small. We visited one on my first visit, and it became clear that if the scale of Belur is to be a benchmark, finding stone for enough beams of sufficient length will be difficult, so the beams may need to be of granite with a soapstone facing.

As for the construction, this will be in the hands of Shankar Sthapati, a prominent member of a lineage of Tamil *sthapatis*. He runs a large workshop with many employees at Hoskote, between Bangalore and the temple site, and is extremely busy with projects ranging from temples to government buildings. They work in the Tamil Drāviḍa style their staple material is granite: components are cut by large machines, then finished by hand in open shelters. They also use modern materials, and use CAD for design. In the case of the Hoysaḷa temple, the *sthapati*'s team will cut and shape the soapstone to my drawings, while sculptural and ornamental detail will be carved subsequently by the sculptors. It became clear that Shankar Sthapati would also take charge of the construction project management, and responsibility for the engineering aspects of the structural design. Given the ritual authority of a *sthapati* I confess to unnecessary apprehension when a group of us visited Shankar Sthapati with my drawings. He had an air of easy confidence, and readily dispensed practical advice on both structural and ritual issues. It was explained what kinds of detailed drawings would be needed from our side – every layer fully dimensioned. The drawings that we had brought were admired, and a wave of pleasure and relief went round when the *sthapati* pronounced that the design was true to *śāstra*.



Fig. 01 *Bhūmīpūjā* at the temple sit

Political spadework is also underway for the project, with support secured from politicians, from different parties. I took part in one audience with the then Chief Minister of Karnataka, Dr B. S. Yeddyurappa. Fundraising is a basic requirement, of course, the approach being to start from the grassroots: “To publicize the construction of this temple and the financial system and with the divine intention of building this temple by the devotees and for the devotees, local committees consisting of 12 local leaders have been set up at various Taluks of the state and thereby initiate this huge divine work.”³ That the Tirumala Tirupati Devasthanams, the management trust of the Tirupati temple, has given its blessing to the project is clearly a boost to its viability. Priests from Tirupati are officiating at a whole sequence of ritual events, and will perform the eventual consecration. An initial *bhūmīpūja* or worship of the site in which I participated at Ugadi (21st March) 2010 was, however, largely a village and family affair, at which Dr Vati officiated (Fig. 01). A concrete slab formed a temporary *garbhagṛha*, and offerings were made to Bhudevi (site goddess) and to Ganesa. An old lady had walked all the way from the village to be the first to do *pūja* there. A *sāṅku*, a wooden stump or gnomon, was placed at the centre of the future *maṇḍapa* (which I was asked to locate, approximately), and the temple was orientated by means of long string, stretched from the centre of the sanctum towards the equinoxial sunrise glowing across the plains and distant, temple-like hills.

The Architectural Tradition

Hoysaḷa temples belong to a tradition of south Indian temple architecture that may be called the Karṇāṭa Drāviḍa. This saw its formative stages in the 7th and 8th centuries under the early Calukyas of Vātāpī (Badami), continuing to develop under the Rāṣṭrakūṭas (8th-10th

centuries) and the later Cālukyas of Kalyāṇa (late-10th to 12th centuries). Originally tribal chieftains who forged a kingdom in southern Karnataka, the Hoysaḷa rulers began build temples outdoing those of the Cālukyas in terms of scale and ambition early in the 12th century, while still nominally feudatories of the latter. Hoysaḷa temple architecture, along with that of the Kākatīyas in Telāgāṇa (north-west Andhra Pradesh), is a late outgrowth of the Karṇāṭa Drāviḍa tradition. As I have argued at length elsewhere (Hardy 1995, 2001), the later creations of this tradition are the product of continuous architectural transformation. The process, comparable to the development of certain north Indian or Nāgara traditions, is one of proliferation through successive emanation of one form from another – a pattern that is strikingly homologous with recurrent Indian concepts of divine and cosmic manifestation (Hardy 2007, especially Chapter 4).

In the 19th century, when modern scholarship began to create its history of Indian architecture and to assign typological as well as dynastic labels, James Fergusson called the later Karṇāṭa Drāviḍa forms ‘Chalukyan’ to distinguish them from ‘Indo Aryan’ (Nāgara) and ‘Dravidian’ (Drāviḍa). More recent scholars often call them ‘Vesara’, a term implying a mule or hybrid. Though medieval texts use the term in various different ways, this designation is plausible, given the northerly inflections of essentially southern forms; but for me the term ‘late Karṇāṭa Drāviḍa’ is more appropriate as it better reflects the traceable continuity of the tradition, and the gradual metamorphosis of Drāviḍa forms that took place within it. While the creation of imaginative hybrid temple forms was indeed a preoccupation of this tradition, the prominent late Karṇāṭa Drāviḍa types labelled ‘Vesara’ owe their Nāgara-like characteristics (staggered plan, radial chains of components, vertical spine) to a way of developing shared with Nāgara temples, rather than to deliberate mixing.

³ <http://www.skvstt.org/trust.html>

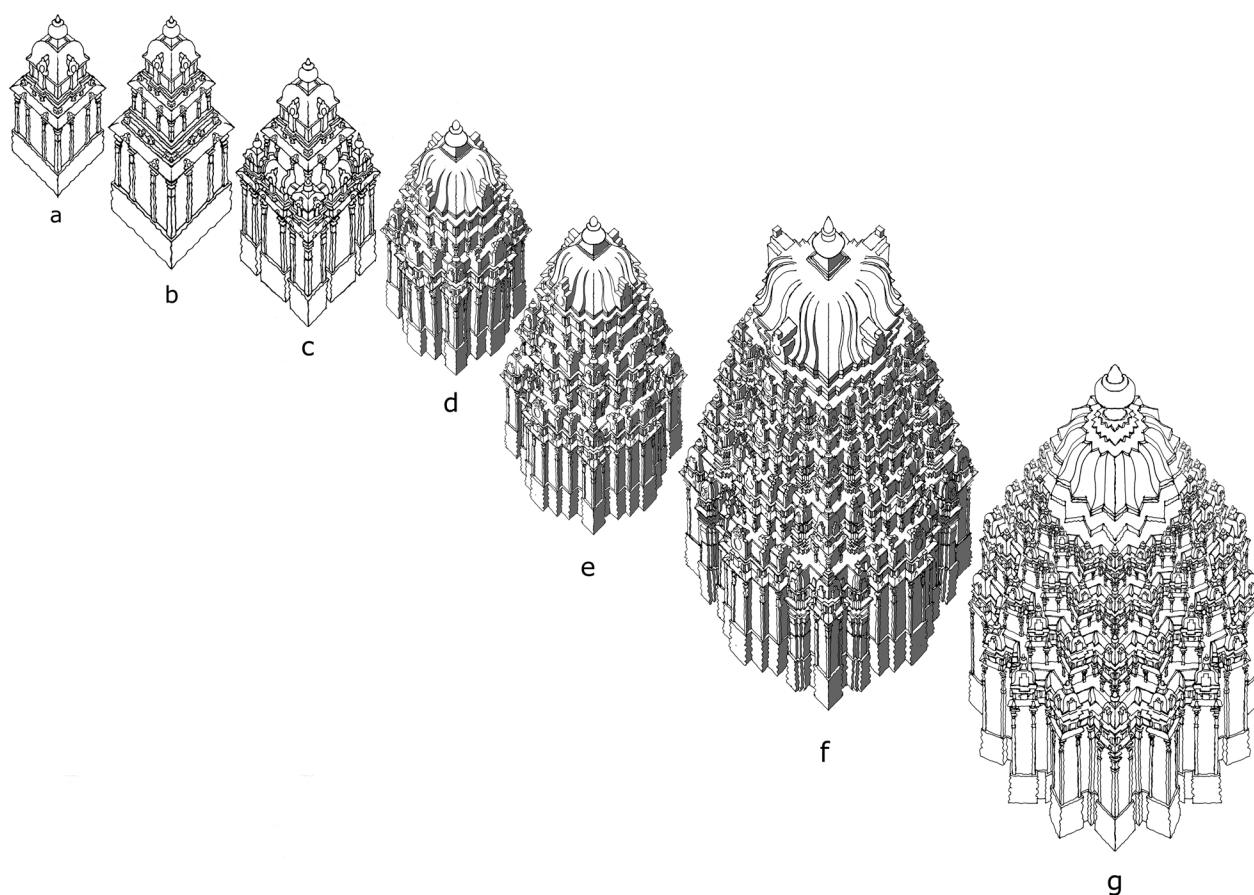


Fig. 02 Development of *vimāna* types in the Karṇāṭa Drāviḍa tradition, 7th to 13th centuries CE.

The course of the tradition can be described here in barest outline, as summarised in Fig. 02. The shrines illustrated are not particular temples but types which emerge successively and which, while appearing alongside an inventive variety of other combinations and permutations, are often repeated, each in its turn becoming representative of its respective stage. Early shrine forms made of wood, with thatched roofs, are monumentalised in masonry: a type crowned by a domed pavilion (*kūṭa*) (Fig. 02a), another by a barrel-roofed pavilion (*śālā*). The *kūṭa*-topped form becomes the superstructure of a more developed form (Fig. 02b). *Kūṭas* and *śālās* are garlanded around the tiered superstructure, *kūṭas* at the corners *śālās* in the middle. By placing these pavilions over wall projections bounded by pilasters, images of the simple *kūṭa*- and *śālā*-topped shrine types are created, which become the primary compositional elements of temple design: *kūṭa*-aedicules, *śālā*-aedicules (Fig. 03a, 03b). *Śālā*-aedicules end-on are *pañjara*-aedicules (Fig. 03c): later, *kūṭas* and *pañjaras* are placed on pillar forms to make *kūṭastambhas* and *pañjarastambhas* (Fig. 03d, 03f), and a great variety of new aedicular forms is created by embedding the existing range one in another. As shrine forms step progressively farther out along their cardinal axes, their central projections come staggered in a way that transforms them into clusters of interpenetrating *śālā*-aedicules that seem to be bursting apart one from another (Fig. 03e, 03i). The formerly sideways-

sliding *śālā* gables, spewed from the jaws of monster-finials, are made to emerge diagonally, with monster faces folded down the nose (Fig. 03j, Fig. 04). Under the growing thrust of diagonal forces the whole plan explodes into stellate formation (Fig. 02g). Meanwhile the horizontal mouldings, originally depicting heavenly palaces conceived in wood, have been continuously transformed. In this whole process of growth, the temple architects draw out the possibilities inherent in the architectural language. They pull forth new forms from old ones, leaving the old form within the new one, so that the unfolding stages of the tradition assert their sequential presence in the emanatory dynamism of a single temple.

The monumental temple architecture of Tamil Nadu, more universally recognised as Drāviḍa, shares the same roots as that of Karnataka. This south Indian tradition, beginning under the Pallava dynasty (7th-9th centuries) has flourished in successive waves beyond the medieval period, and continues today. The Tamil tradition extended the earlier range of temple types, and always entailed invention and variations on this range. The Coḷa, Vijayanāgara and Nāyaka periods (9th- 18th centuries) gave rise to dramatic developments in the scale and planning of temple complexes, with their concentric enclosure walls (*prākārās*) and gateways (*gopuras*). Yet this tradition has never radically transformed the appearance of the *vimāna* (the shrine proper, with its sanctum and superstructure) in the way that the Karṇāṭa Drāviḍa masons did. From the 18th century, new forms of patronage, especially from the merchant classes, rekindled Tamil Drāviḍa architecture in south India. Today, both in India and among south Indian diasporas worldwide, the tradition continues, adapting to the needs of new, more community-based kinds of patronage and Hindu worship (Waghorne 2004). The bearers of the tradition are the *sthapatis*. Of traditional architectural lineages in India only the Sompuras of Gujarat are comparable in number and in the renewed, worldwide demand for their services.

While the Tamil Drāviḍa tradition continues, the Karṇāṭa Drāviḍa tradition died out early in the 14th century. When the Vijayanagara empire established itself in the 15th, though centred in Karnataka its temple architecture was essentially of Tamil provenance. Later hints of Karṇāṭa inspiration seem to result not from continuing craft practice but from the example of surviving monuments (Kanekar 2010), valued perhaps because the memory of the Kalyani Cālukyas was held in esteem (Wagoner 2007). Nobody subsequently would have retained a concept of a Cālukya or a Hoysaḷa style before the disciplines of archaeology and architectural history in the 19th century began to formulate their understanding of Indian architecture. Yet today there is no tourism brochure or website on Karnataka which does not give prominence to Halebid and Belur (Figs. 05, 08, 15). Hoysaḷa art is evoked in airport displays and gift shops. There are Hoysaḷa hotels and a Hoysaḷa bus company. The popularity of Hoysaḷa art is not artificially imposed: the enjoyment and emotion that it evokes in local visitors can be readily witnessed at temple sites. In southern Karnataka Hoysaḷa art and architecture have become a symbol of regional pride and identity. Halebid and Belur loom large in the official murals recently painted on Bangalore walls to discourage lurid film posters. More lastingly, skills in making Hoysaḷa style sculpture have markedly revived in recent decades, boosted by government craft awards as well as demand for temple icons and adornments for hotel lobbies. The quality ranges from crude to superb, as indeed did the original Hoysaḷa sculpture that inspires it.

Yet, since the 14th century there has been no new Hoysaḷa style temple. There are no Karṇāṭa Drāviḍa *sthapatis*, and no written *śāstra* survives from this tradition. But the tradition can be learnt, not as a changeless system, but in its dynamic development. Archaeology and art history have catalogued its surviving monuments and worked out their chronological framework. The temples themselves can be visited, drawn, analysed, and the way of thinking about architecture, the principles of design, that their makers worked by can be understood and absorbed.

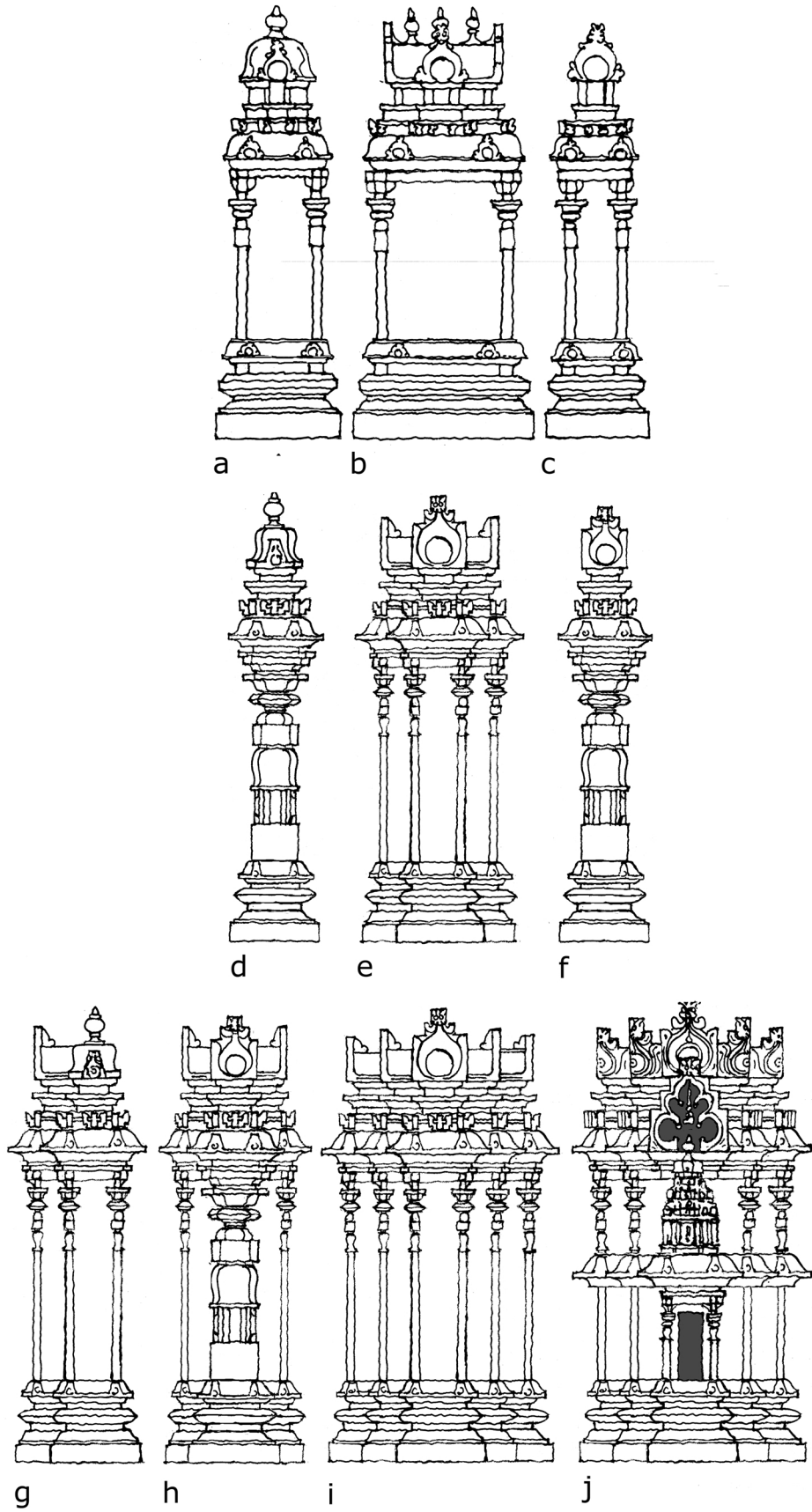


Fig. 03 Aedicular components of temple design in the Karnāta Drāviḍa tradition.



Fig. 04 Vīranārāyaṇa temple, Belavadi, north-east *vimāna*, c. early 12th century.

Models of Creativity

When James Fergusson wrote *A History of Indian and Far Eastern Architecture*, the first overview of the subject by western scholarship, he singled out a Hoysala temple as the epitome of otherness. Comparing the Hoysalesvara temple at Halebid (Fig. 05) with the Parthenon, he declared: “they form the two opposite poles – the alpha and omega of architectural design; but they are the best examples of their class, and between these two extremes lie the whole range of the art. The Parthenon is the best example we know of pure refined intellectual power applied to the production of architectural design... The Halebid temple is the opposite of all this. It is regular, but with a studied variety of outline in plan, and even greater variety in detail. All the pillars of the Parthenon are identical, while no two facets of the Indian temple are the same; every convolution of every scroll is different. No two canopies in the whole building are alike, and every part exhibits a joyous exuberance of fancy scorning every mechanical restraint. All that is wild in human faith or warm in human feeling is found portrayed on these walls; but of pure intellect there is little – less than there is of human feeling in the Parthenon” (Fergusson 1876, 448-9).

Fergusson’s view, despite his ‘scientific’ aims, now looks decidedly Orientalist, characterising the Other as emotional and irrational; yet his Romantic vision of Halebid as the fruit of abundant spontaneity, its variety recalling the ‘chagefulness’ that Ruskin saw in Gothic architecture, is a more sympathetic one than the later tendency to see Indian temple architecture, at least in all its later stages, as rule-bound and stagnant.



Fig. 05 Hoysalesvara temple, Halebid, early 12th century.

Models of creativity that give positive value to the existence of rules abound in the west under the heading of Classicism. A new temple in an old style might therefore at first sight seem comparable to the work of New Classicists in the west, and contemporary proponents of Classical architecture might readily furnish rationales for such a temple, ranging from timeless wisdom to popular appeal. The contexts are very different, however. Indian 'Classicism' has not bequeathed centuries of reinterpretation: there is no equivalent to Vitruvius or Palladio, whatever illusions may abound about the possibility of faithfully following ancient treatises. However, one school of thought that adheres broadly speaking to a Classicist viewpoint, and which deserves serious consideration in an Indian context, is that of the 'Perennial Philosophy'. This has been influential in the historiography of Indian art and architecture through the writings of A. K. Coomaraswamy, for whom tradition conveys transcendent truths through art with "fixed ends and ascertained means of operation" (Coomaraswamy 1942: 36, citing St Thomas Aquinas). Contemporary architects embracing this perspective in practice are rare, and Kamil Khan Mumtaz is all the more notable for doing so explicitly given his earlier training at London's Architectural Association. He has become convinced that rigorous copying is the only way to hold true to the sacred character of a traditional exemplar. Citing an experience occasioned by his practice when designing a new mosque in Gujrat, Pakistan, Mumtaz warns of the dangers of departing from tradition's prescriptions: "we had thought we had found the underlying design principles and could now freely improvise. But we had been stopped in the nick of time from producing a grotesque parody of the original. Suitably humbled, we gave up further attempts at wilful invention and returned to faithful copying. We had learnt a valuable lesson in keeping the ego in check. The project was indeed designing itself" (Mumtaz 2012).

To mainstream contemporary architects, in India no less than the west, copying is anathema. In the dominant mythology artists are individual geniuses, valued to the degree that they innovate. For this worldview the 'Perennialist' framework does not even enter the consciousness, while the work of the *sthapatis* and *Sompuras* is often as Other as Halebid was to Fergusson. The architect and educationalist A. G. K. Menon takes the work of these indigenous practitioners seriously, but views them as belonging to "revivalist and conservative trends" comparable with to current preoccupation with '*vastu*' and "of value only to the extent that it provides solace to troubled souls, not that it produces great architecture" (Menon 1997, 27). Menon's recognition of a need for cultural appropriateness, coupled with reticence towards 'literal' interpretations of historical or vernacular architecture, that pay no heed to the tenets of architectural modernism, is close to the current of thinking labelled 'Critical Regionalism'. Menon places my (then unbuilt) temple work in the 'revivalist' category, better than kitsch temples but inferior to the (as yet unrealized) category of modern temples resulting from critical engagement with the past: "Hardy's designs are purposefully eclectic because they derive from formal academic analysis of the principles of temple design, and he uses modern construction materials in his projects. His works are perhaps the most innovative within the formal context of contemporary temple building, though, it is another matter that the final outcome cannot be distinguished from the pastiche he so assiduously tries to avoid. His works, along with the works of the *Sompuras* and Ganapathy Sthapati are serious attempts to establish links with the past, and constitute a major trend in religious architecture" (Menon 1997, 27).

In his new book *Architecture in India Since 1990*, Rahul Merhotra, influential Indian architect and Harvard professor, places *Sompuras*, *sthapatis* and me, along with new age evocations of mandalas and the like, under the category of 'Counter-Modernism: Resurfacing of the Ancient'. While the book creates a useful framework for the incredible plurality of architectural trends in

contemporary India, it seems still to hold Modernism as the norm against which ‘tradition’ can only be something archaic or artificially revived. The Oldbury temple, the one that I now think seems Postmodern, is illustrated alongside some Sompura work (ascribed to me!) with the commentary: “Reconnecting with the past, these temples use an eclectic architecture that staunchly adheres to ancient treatises of temple building but sometimes combines the components in new ways” (Merhotra 2011, 260).

Now, this widespread misconception that the *vastuśāstras*, of which no early examples survive with illustrations, are kind of recipe books that can be followed at will is a strange one considering the opacity of those that have been published in modern times, and the fact that barely a handful of convincing drawings have been derived from them by recent scholarship. My own recent work on the eleventh-century *Samarāṅgaṇasūtradhāra* demonstrates that some passages on temples are concerned more with the ingenuity of their internal logic than showing how to do viable designs, while those sections that do yield coherent temple designs presuppose that the designer knows the architectural tradition and is able to interpret the instructions, make choices, and fill in what is missing (Hardy 2009 and forthcoming). Samuel Parker argues cogently on the basis of ethnographic study in south India that the practice of the *sthapatis* is inherently fluid and adaptable to different contexts: “While the explicit rhetoric of *śāstra* may sometimes seem to insist on a timeless, changeless, fixed order, local practices of *śāstra* are typically marked by improvisation, diversity and change” (Parker 2003, 8). Western scholarship may have encouraged the fetishization of *śāstras* as books, but “In everyday speech *śāstra* is typically used by Tamil architects and sculptors, not in reference to books, but to *bodies of knowledge*... The pragmatic observation to be emphasized in this regard is that many architects and sculptors are honored in their profession as masters of *śāstra* without their ever having read a single written version of any *śāstra* (author’s emphasis)” (Parker 2003, 9). It was surely to a body of knowledge, and certainly not to a book, that Shankar Sthapati was referring when he said that the new temple design was true to *śāstra*.

Regardless of the nature of *śāstra*, however, there will be architect peers who cannot be comfortable with design that has nothing ‘new’ and is not ‘true to its age’, and who think that it is the easier option to design in an extinct style – even one that can only be learnt from its creations – than to make a modern abstraction that ‘captures the essence’. On the other hand, there is a client fervently and joyfully driven to build a real Hoysala temple, who needs to be confident that the design is true to *śāstra*, and who must placate all self-appointed Hoysala art experts ready to pounce on whatever does not look ‘authentic’. How, then, should someone capable of designing such a temple explain their approach to the world? More importantly, what narrative should guide the process of design? Must the choice be between some spontaneous outpouring imagined by Romanticism, timeless wisdom, and mute submission to the cutting edge?

A more authentic model for the creative process in this context lies, I believe, in the quasi-organic, emanatory nature of the particular architectural tradition that I have already described. Samuel Parker lends great power to this view from an ethnographic perspective. He argues that the myth of creative personhood, of the individual artist performing unique and discrete acts of innovation, is “becoming universalized and naturalized through the forces of globalisation” (Parker 2010, 31). This ‘possessive individualism’, closely tied to the market and intellectual property rights, does affect contemporary practices of temple building, but these are organized fundamentally by a ritual mode of production, a process of ‘creative sacrifice’ of which the remnants are invested with divine power (Parker 2010, 33, 35). Parker characterizes this model of creativity as *svayambhū* or self-creating, as with a *svayambhū linga*, a naturally occurring or self-manifesting sign of Siva. In the shared understanding and actions of *sthapatis*, priests and patrons, a temple or a temple icon

emerges of its own accord. For Parker, to demonstrate homologies between the formal properties of temple designs/their evolution and recurrent ideas about cosmic emanation (leaving it to the reader to see that this is a mechanism of meaning) is too cautious: the connection is one of concrete continuity by virtue of actual practices of production, not merely of ideas. In the terminology of the Philosopher C S Pease, the signification is *indexical*, pointing to the traces of the actions that brought the object – in this case the temple – into being. Contemporary temple building practice may not be the same as ancient practice, but there are profound continuities, and ethnographic study of the former provides insight into the latter. Parker cites my analysis of the continuous transformation within the Karṇāṭa Drāviḍa tradition, such that it is impossible to define a moment at which ‘Drāviḍa’ became ‘Vesara’, as according well with the ethnographic evidence, whereas to view ‘Vesara’ as resulting from discrete acts by creative individuals breaking with the tradition to make something new, as Ajay Sinha has portrayed it (Sinha 2000), is to impose an alien worldview. Well-intentioned attempts to restore agency to individual artists in ancient India to counter colonialist exaggerations of their anonymity, Parker points out, simply colonize the past by twisting it to fit the modern market myth of creative personhood.

It is therefore a *svayambhū* approach that I am determined to follow in this project. The temple must be enabled or ‘chanelled’ (Parker 2010, 38), to be self-emerging. Kamil Khan Mumtaz has been quoted above as aiming to let a mosque design itself through the process of carefully copying a venerable model. Indeed, to claim that buildings themselves or other forces (or these days ‘parameters’) are determining a building design is a common ruse among all kinds of architects, as when Louis Khan “asked the brick what it wanted to be”. It therefore needs to be explained *how* a *svayambhū* approach can be followed: there are two ways that work in parallel. The first is to be mindful of the formal games that were played out in the tradition, of the emanatory logic of its development, and of its inherent possibilities. The second (to some extent what any architect does when complying with a brief) is simply to accommodate all the requirements and exigencies beyond one’s control: the client’s instructions for the functional programme, the decision that it should be in Hoysala style, the iconographic needs, whatever advice that the client passes on concerning ritually correct disposition or auspicious dimensions, and – not least – the quality of the craftsmanship.⁴

The Design Process So Far

Once I knew that the brief was for a Hoysala temple that was not a copy of any particular one, I set about exploring the variations and permutations of stellate plan geometry among the most ingenious ‘snowflake-like’ Hoysala plans, and inventing some new permutations. One of these, the beautiful little Īśvara temple at Arsikere (Fig. 06), was one that the client specifically pointed to as a precedent for the plan, in particular the open hall (*sabhāmaṇḍapa*) to the east (Fig. 07), which here uniquely is stellate like the *vimāna*, standing in front of the closed hall (*gūḍhamaṇḍapa*). It is here

⁴ Sam Parker wrote to me in an email (17 Feb. 2010): “If you can locate highly competent traditional craftsmen who understand the vision and who you can entrust to improvise & embellish as needed, then the realization of the temple can also continue to emerge in a more-or-less *svayambhu* manner. The difficulty in this is that temples are no longer built through the process-oriented economics of sacrifice so much as they’re built using the outcomes-oriented economics of budgets and efficiency. But because the momentum of ancient production systems continues to persist in modern variants, to some extent it is still possible to find communities of skilled traditional craftsmen who are sufficiently in tune with each other, and with the visual language you’re deploying here, that they should be able to function at a high level of self-directed responsibility.”



Fig. 06 Īsvara temple, Arsikere, c. 1220 CE.



Fig. 07 Īsvara temple, Arsikere, open hall (*sabhāmaṇḍapa*).

that dance performances will take place. The Cennakeśava temple, Belur (Fig. 08), was to be the benchmark for scale, particularly the width of the *garbhagr̥ha* (sanctum): 14 ft. 5 in. The sanctum width determines the typical beam span, and on the basis of surviving precedent Belur can be seen to take soapstone beams to their limit. I first proposed a large octagonal domed space at the centre of the *gūḍhamāṇḍapa*, quite common in western India though not found in Hoysaḷa examples (Fig. 09). The *navaraṅga* or nine-square plan was preferred. Sixteen freestanding pillars will support nine principal ceiling bays, with minor ceiling divisions set at a lower to allow light to enter and glow across the main domes Fig. 13). A large octagon remains in the open *maṇḍapa*, however, which at that scale could not simply be a blown up version of Arsikere. It remains the biggest structural challenge of the temple, with a span of some 32 ft, twice that of Arsikere and surrounded by eight smaller domes (Figs. 10, 11).

Beyond the *sabhāmaṇḍapa* a flight of steps will lead via an imposing porch to the grand doorway of the *gūḍhamāṇḍapa*. Some Hoysaḷa temples have halls that are closed in the rear half, open at the front with *kakṣāsana* seats and perforated *jāla* screens. Here the open treatment is confined to the front, recalling the Sri Venkateswara temple at Tirupati and allowing full expression of the iconographic programme around the perimeter. The *maṇḍapa* walls are to display the *daśāvatāras*, the ten avatars of Viṣṇu, necessitating ten principal projections, of which the main panels must be of equal size. These projections must be thought of in relation to the aedicules that they form.

The *vimāna* design has also grown naturally from iconographic requirements (Figs. 12, 14). In the *vimāna* walls it is the *viṣṇucaturvīṃsati* – the twenty-four names of Viṣṇu – that need to be represented, necessitating twenty-four visible facets. Leaving room for the *bhadras* (cardinal projections), this calls for a stellate plan of twenty-four points, formed by a square rotated six times. In the angles between the main elements emerge re-entrant projections based on an equilateral triangle rotated eight times. Norms of proportion dictate that this plan should generate a *vimāna* of seven *talas* (storeys). Happily, the iconographic pattern is congruent with a degree of proliferation in the architectural composition that goes beyond any of the surviving Hoysaḷa works. In northern Karnataka a Cālukya work, the Doḍḍabasappa at Dambal (c. late 11th century) is based on a twenty-four point star with seven *talas*, and I have argued that this a *nec plus ultra* of the architectural game (Hardy 1995, 176-77). Every aedicule at Dambal is a *kūṭa*-aedicule, as it is in the common Hoysaḷa stellate *vimāna* type with sixteen-points and four *talas*. Halebid has the latter kind of *vimāna* plan with *bhadra* projections, which would undoubtedly have formed staggered, interpenetrating *śālā*-aedicules all the way up the spine of intended (five-*tala*?) superstructure, with the typically Hoysaḷa diagonal gable end imparting a radial thrust to the outward growth. To maintain a lateral component to the dynamics of these central elements the new temple will retain the earlier, orthogonal type of gable at the sides – a combination that I was pleased to find had already been thought of in Hoysaḷa days, in a miniature *vimāna* inside the Arsikere temple.

Not only the scale but also certain hallmark features of the grandest Hoysaḷa temples were expected: a great platform (*jagatī*) supporting the entire temple, a wall in two tiers with a canopy cutting across the aedicules of the first *tala*, half-emerged *vimānas* bursting forth from the *bhadras*. My first suggestion for the latter (Fig. 14, upper right) was for Kaṛṇāṭa Drāviḍa designs attached but fully articulated (taking the tradition a step further), but the client's request for something 'more like Belur', with Nāgara elements and 'spreading out', seems in the end more satisfactory (cf. Figs. 08 and 14). Around the *jagatī* there will be small shrines dedicated to the seven goddesses (*saptamatrikas*). Early on I imagined that the sequence of structures might step up the hill, but this



Fig. 08 Cennakeśava temple, Belur, 1117 CE, shrine on *bhadra* of the *vimāna*.

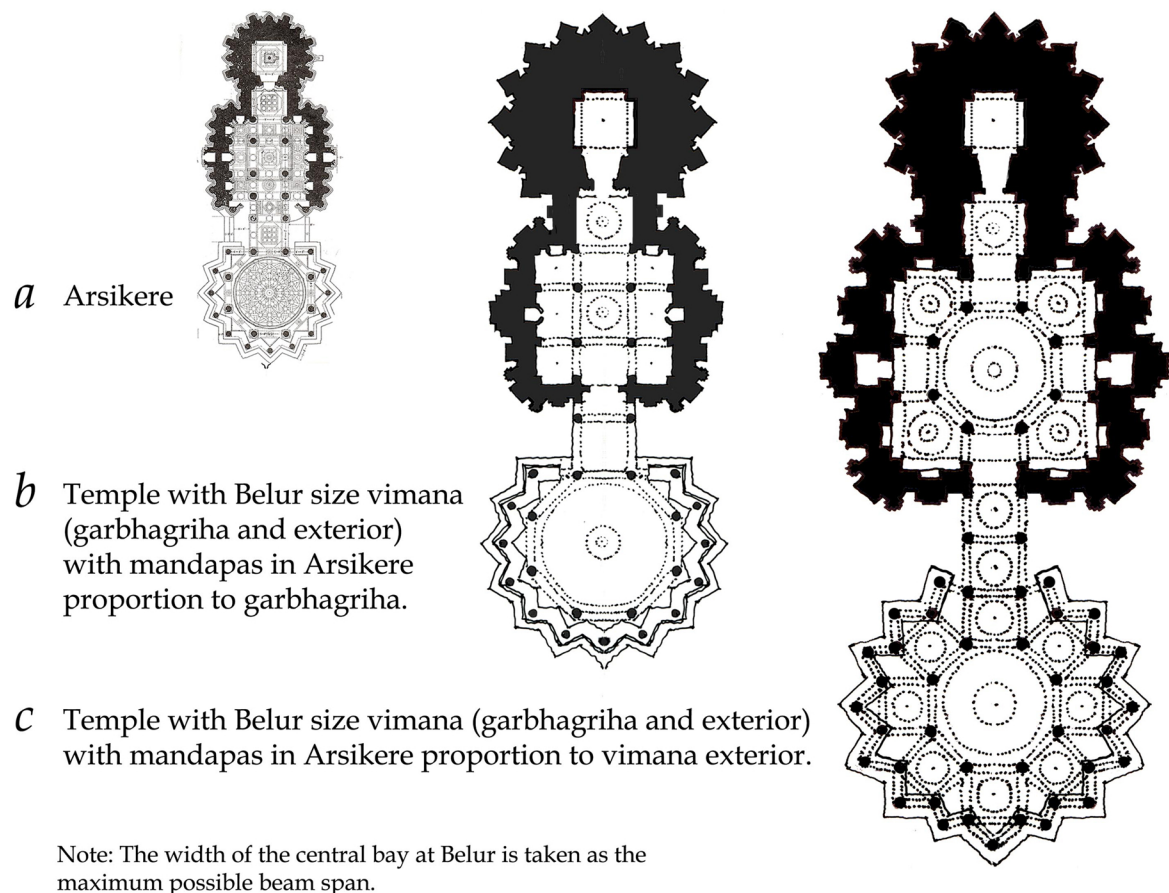


Fig. 09 Initial development of the plan for the proposed temple.

was seen as ‘more north Indian’ and I learned that the complex is to be raised on a 450 ft x 650 ft (137 x 198 m) platform, surrounded by a *prākara* wall with a chariot road around the exterior, lined interlally by ancillary rooms and a colonnade, all of granite. Entry to the enclosure will be from the east through a *rājagopura* of soapstone. It seems exciting and clear to me what a Hoysala *gopura* would be, though none survive.

The entire complex will be ordered by a geometry of circles and squares, and a corresponding grid, originating in the dimensions of the *garbhagr̥ha* (Fig. 12). It has been designed on this basis before the Āgama experts calculated the precise dimensions. The grid could be seen as nominally 3 ft or 90 cm, or adjusted to a module based on the Belur sanctum, giving a grid square of 34.6 ft, one-fifth of 14 ft 5 ins. Only recently has the ‘Āya’ or ‘Āyadi calculation’ been made by āgama experts from Tirupati. Taking into account the horoscope of the deity, that of the kartā (literally ‘actor’), Sri Ramalinga Reddy, and the place Venkatapura, they have arrived at a length of 1475 *āṅgulas* (about 22081/8 ins).

Divided by four this has determined the length of one side of the basic square of the *vimāna* walls – the one that rotates to form the star: 42 ft 31/16 ins. As this is twelve grid squares, the grid module is 3 ft 6¼ ins, and all the dimensions can be scaled accordingly. It will give a *vimāna* height of about 109 feet (33 m).

The next design task will be a full set of detailed drawings. Pillars (Fig. 15), ceilings, miniature temples thronging the upper tier of the wall, all should show abundant variety – a quality that is no mere figment of Fergusson’s Orientalist gaze. Can these be left to the craftsmen? The current thinking is that the architect will need to draw them. Will that be *svayambhū*? An architect can encourage but not determine the ultimate quality: whether or not the work has integrity and is alive with a sense of the numinous will in the end depend on the skill and sensibilities of the craftsmen, and the harmony with which they are able and enabled to work together.

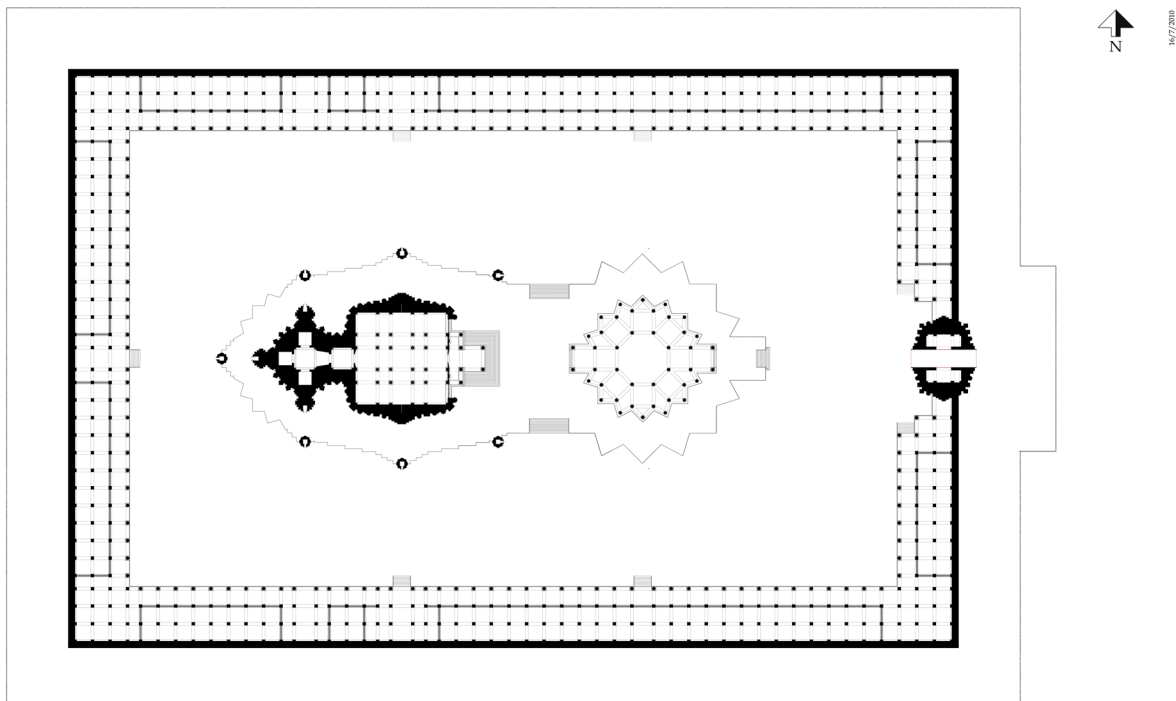


Fig. 10 The proposed Shree Kalyana Venkateshwara Temple at Venkatapura: plan of the complex.

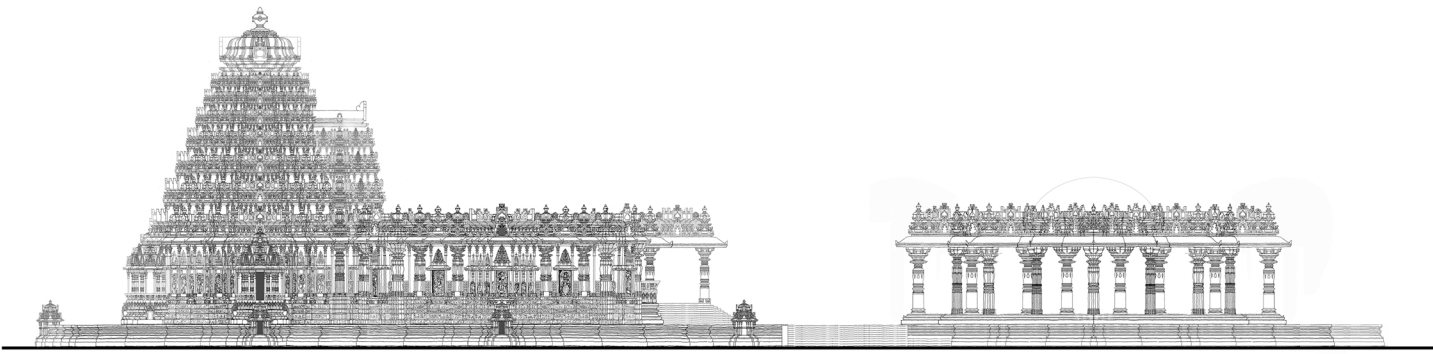


Fig. 11 South elevation of the main temple and open hall.

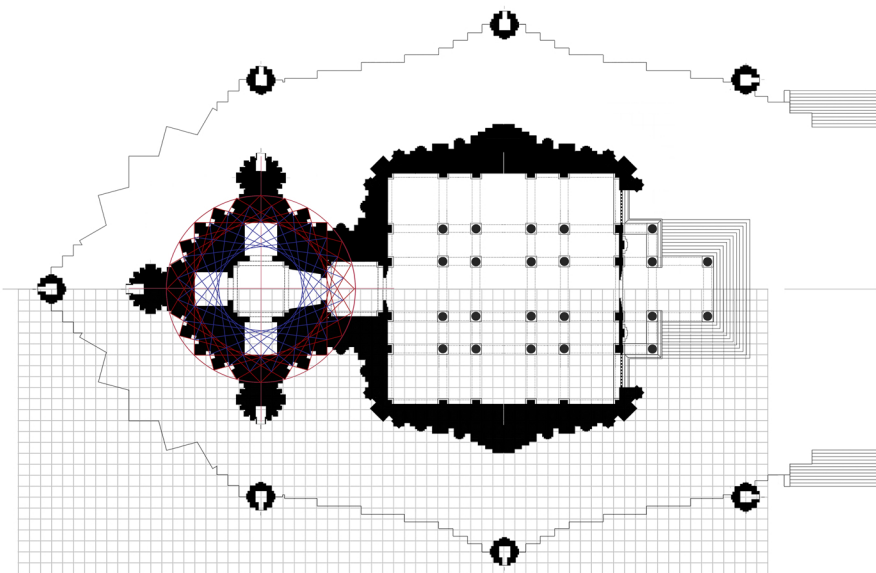


Fig. 12 Plan of the main temple.

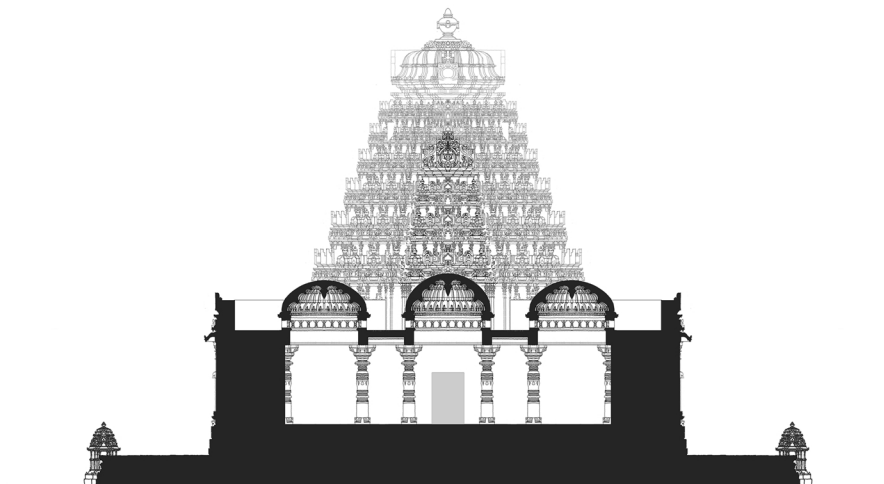


Fig. 13 Cross section through the closed hall.

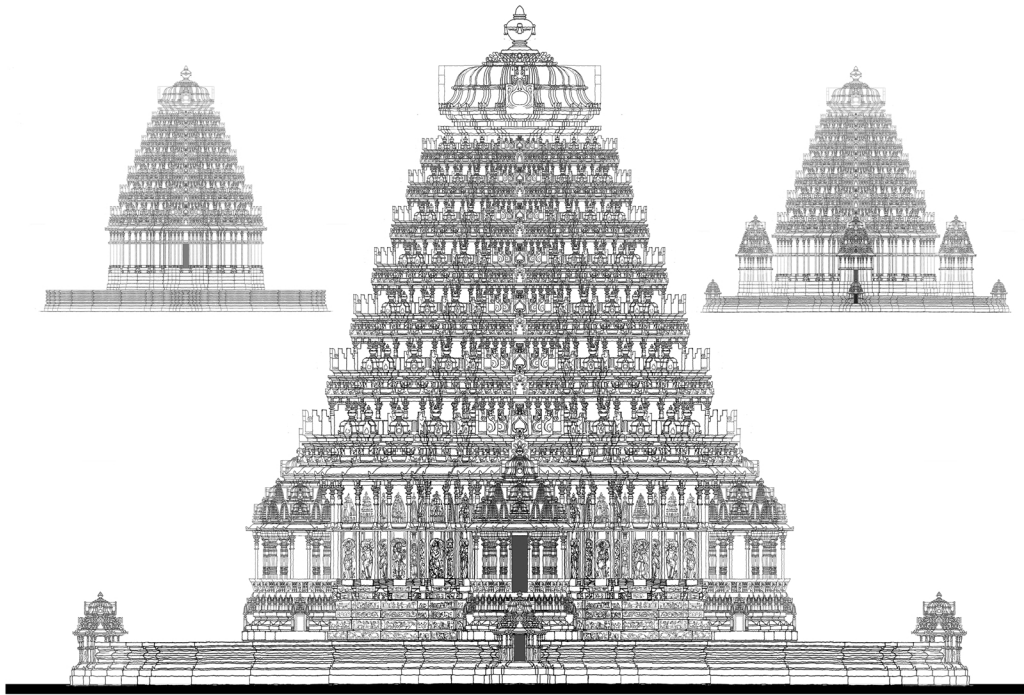


Fig. 14 West elevation of the *vimāna*: basic design (upper right), early development (upper left), final design (centre).



Fig. 15 Cennakeśava temple, Belur: *maṇḍapa* interior.

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