

## EcoSikh Amritsar visit: October 13- 14, 2010

### Executive Summary:



### The Golden Temple, Amritsar

In October 2010 Ravneetpal Singh, India coordinator for EcoSikh, spent two days in Amritsar studying the Drinking Water Distribution system in the Golden Temple complex in Amritsar. The reason for this was two-fold.

1. As an efficient system of giving clean drinking water to large numbers of pilgrims without using plastic bottles, it is something that EcoSikh would like to advertise within the Sikh Community.

2. In September 2010, through an agreement made by the Shiromani Gurudwara Prabandhak Committee (SGPC) and the DC of Amritsar Mr. K.S Punnu, Amritsar joined the Green Pilgrim City Network as one of the first members, together with Jerusalem, Assisi and a number of other pilgrim cities wanting to improve their environmental footprint, according to their faith. Many other pilgrim cities are struggling to find ways of providing clean water without using plastic, and Amritsar appears to be a good model.

Key findings were:

- The whole drinking water distribution system includes no water treatment or filtration and the water is directly distributed from underground water source.
- There are 100,000 visitors on normal weekdays to 400,000 on festivals.
- Washing up is done traditionally and ecologically with wood ash (see below)
- With total of 4 drinking water stalls within the complex, the approximation of water consumed ranges from 25000 litres on a normal day in winters to 300,000

- The distribution, and washing of bowls, is mostly done by women, many of whom are retired, for whom *seva*<sup>1</sup> (volunteer service) is an inseparable part of their daily routine. Many, as is shown from the interviews, come from higher socio-economic levels. Some are company directors or from professional classes.
- All the funding (for DWD system), which is not a substantial amount, comes from donation by the devotees.

Keys to replication are:

- Finding a clean and sufficient supply of drinking water and places to store it where there is no danger of stagnation
- Testing
- Volunteers, who are so numerous that the water points can be manned throughout the day and evening.
- Organization(s) to manage the human resources and other components
- Funding for installation, operation and maintenance
- The necessary social and cultural beliefs in the local area

## 1. Drinking Water Distribution (DWD)

There are four DWD points in the Golden Temple in Amritsar. Throughout the day there are people handing out water, in metal bowls, to hundreds of pilgrims an hour, and there are people cleaning those bowls behind or beside the collection point, the system is to fill bowls, and have pilgrims pick them up as they pass. There are rarely long queues for this. It does mean that even on the hottest day nobody needs to bring water with them. According to onsite volunteers and the Head Volunteer of the busiest DWD point<sup>2</sup>:

- 1) **Volunteers:** the average number of volunteers involved at the busiest DWD point is 21 per hour, which makes 504 volunteer hours a day for just one of the four points. This is more than is actually required, as a result of more people being willing to do *seva* rather than the actual requirement.
- 2) **Basic Components of the system:** Underground water pumps, pipeline, refrigeration system, bowls and portable cleaning units.
- 3) **Power Supply:** 24-hour power supply by any means to run the system.
- 4) **Adequate water supply:** the figure triples in the summers.

## 2. Itinerary:

The trip of two days was arranged through Dr. Rajwant Singh, Chairperson of Ecosikh and head of the Sikh Council on Religion and



<sup>1</sup> See appendix 1 for *seva* details.

<sup>2</sup> See the Golden Temple sketch, location #4, under appendix 2.

Education. SGPC Superintendent Bijay Singh helped with accommodation at the Golden Temple and all the other information. It was supposed that SGPC must be the main source of knowledge as it might be facilitating the pilgrims with drinking water. Therefore, first of all, a meeting with Bijay was arranged.

**Day 1: Wednesday, October 13:** Meeting with Bijay Singh from 11.30 am to 2:00 pm followed by a volunteer session of 30 minutes and then an informal meeting with a regular volunteer, Sunil Mehra, for around 25 minutes.

**Day 2: Thursday, October 14:** Start of the day with volunteering session of 45 minutes from 8:45 am till 9:30 am followed by an informal meeting with volunteer head of DWD organisation Gurpal Singh from 9:45 am till 10:30 am and again another formal meeting with him from 12:15 pm till 1:45 pm; volunteer session of 20 minutes 1:50 pm to 2:15 pm; thanks giving meeting with Bijay Singh from 4:00 pm to 4:15 pm.

### ***Day one: the Golden Temple, Amritsar***

#### **Meeting with Bijay Singh:**

I started the conversation by introducing myself as EcoSikh coordinator and spoke about the motive of this visit. Bijay Singh warmly welcomed me and agreed his full support.

#### **Q1: How many visitors attend the Golden Temple every day?**

Ans: it can be categorized in three parts<sup>3</sup>:

1. Weekdays: approximately 100,000 to 150,000 visitors.
2. Weekends: it varies between 150,000 and 300,000
3. Special Occasions: 200,000 to 400,000 visitors depending on the occasion.

#### **Q2: How much water is provided for drinking?**

Ans: In winters:

- Weekdays: 25,000-37,500 litres
- Weekends: 37,500-75,000 litres
- Special Occasions: 50,000-100,000 litres

In summers:

- Weekdays: 75,000-125,000 litres
- Weekends: 125,000-225,000 litres
- Special Occasions: 150,000-300,000 litres

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<sup>3</sup> These figures are based on the amount of donation received at the Golden Temple and amount of Lentils utilised at free kitchen, which Bijay Singh concluded as the most relevant sources of approximation since long time.

**Q3: How do you manage DWD points on busy days?**

Ans: The whole DWD system is managed by volunteers, though we have standby provisions to assist in case of need. Still till now, there has never occurred an occasion where such help was demanded.

**Q4: How do you deal with electricity shortages?**

Ans: Electricity is not a big problem as the Temple is a privileged place and 24hr electricity service is provided by the Punjab State Electricity Board. In case of power failure due to fault or any other major cause we have generators for back up.

**Q5: What is the source of drinking water?**

Ans: We have deep bore wells and submersible pumps are used to pump out drinking water.

**Q6: Is there any kind of treatment system for drinking water?**

Ans: We have a treatment plant installed for the sacred pond but the drinking water is not treated till date as underground water is considered fit for drinking and we have no issue till now.

**Q7: Is the water ever tested? If yes, how?**

Ans: Yes! It is tested when we bored the well. No special tests are done but the traditional ones. There has been no issue in this regard.

**Q8: How often is it tested?**

Ans: Only at the time of pump installation when it is actually seen that water is dirt free at certain depth. But we are ever ready to consult for lab testing if there is any need of doing so.

**Q9: How does water get to the drinking point?**

Ans: By G.I. pipes (Galvanized Iron<sup>4</sup> pipes).

**Q10: When was this piping system installed?**

Ans: Just a year ago.

**Q11: Can you say about the number of volunteers work at DWD points and every hour, every day and week?**

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<sup>4</sup> Galvanized iron or steel that has been coated with a layer of zinc to protect it from corrosion in a process invented by Luigi Galvani.

Ans: No, we don't manage this, the volunteers come to do service out of devotion and no one controls their schedules and there is no specific rota of their duties, they are free to shift from one point to other. But roughly there are 25-30 volunteers all the time.

In the end of the conversation Bijay Singh added that he would wish EcoSikh to do something about plastics as well, he praised the efforts by Dr. Rajwant Singh and was excited about President's visit to the Golden Temple. Adding to everything he welcomed me with any more questions.

Following this meeting, I went to see the actual scene of the Baba Deep Singh DWD point and soon got a space to volunteer myself in the cleaning section. In the first few minutes I realized everything was well organised, the volunteers were highly focused on hearing/reciting hymns being sung and they talked very little. The majority of the volunteers did the cleaning part, a few brought the used bowls to the cleaning section and a few did the opposite with the clean bowls while just two ladies actually filled the bowls with water to put them on a huge table for visitors. Soon I was a part of the system and the next fresh feeling was that the thoughts were low in my mind and I could focus on listening the hymns and work as well. After some time, I asked the person (who brought me some bowls to clean) about interviewing him and got his positive reply.

#### **An interview with a volunteer 1 (at Baba Deep Singh DWD point<sup>5</sup>):**

**Q1: Please tell me about yourself and how you are connected to this service?**

I am Sunil Mehra, 36 years old. I have been coming to the Golden temple from last 12 years and serving at DWD point with *Guru's* (Master's) grace. I devote couple of hours every day in doing *seva*<sup>6</sup> (service) and sometimes I bring my sons as well. I really feel great in doing this service and I have seen people coming

here and getting cured from various skin diseases like cancer, leprosy etc. I am a gold merchant and since I am coming here my business has grown up and now my son is going to California for higher studies with His grace. What else I can say, this service comes by good fortune and nothing else. It's just His grace.



**DWD stall-Baba Deep Singh Ji**

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<sup>5</sup> Refer to location #2, Appendix 2.

<sup>6</sup> Refer to Appendix 1.

**Q2: Do you come here at weekends as well?**

Ans: Weekends are more important as the count of visitor's doubles. It is more wonderful to serve on those days. I am unable to come here only if I am not well or out of station. But otherwise it is not fixed and I easily shift my hours of service but I really try to make it.

**Q3: Can you to tell how many volunteers do service at this point every day?**

Ans: There is no count but fairly we have 20-25 workers all the time for service. And this count rise up to 40 on very busy days like *Diwali* (Festival of Lights) and *Gurpurabs* (important days related to life of ten Masters, like birthdays, days of leaving the earth etc).

**Q4: Do all the volunteers work under an organisation or SGPC?**

Ans: No, we are all independent and there is no organisation and we have no links with SGPC. This service is open to all and anyone can come and go at anytime without restriction.

**Q5: Is there any kind of rota system amongst the volunteers at personal level?**

Ans: No, as I already said we are all free to come at any hour but normally I see same volunteers at a fixed time, maybe it is their personal ease or schedules.

**Q6: Do you know about the drinking water being treated before served?**

Ans: I have been serving here at this point from last 12 years but never heard this question and there has been no such need. I have never seen any filters being installed at this DWD point.

**Q7: Does it affect your business as you come here every day?**

Ans: Yes! It affects as I told you before.....I mean in a positive way.

*After this he asked for his excuse and got busy in the service.*

***Day two: the Golden Temple, Amritsar***

*The day two had a wonderful start with a seva session at Baba Buddha Ji's beri (tree) DWD point<sup>7</sup> and an on the spot interview with another 2 volunteers. The second volunteer helped in reaching the head of volunteers, Gurpal Singh who worked full time at this DWD point. Gurpal Singh invited me for another session a bit later the same day.*

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<sup>7</sup> Refer to location #4, Appendix 2.

*And I spent last few minutes with Bijay Singh to thank him for the hospitality during the visit.*

After paying my homage, I went to the busiest DWD point near Baba Budha Ji beri. Again the only available space was in the cleaning section. The number of visitors at 8:30 am was moderate but gradually the number increased by 9:00 am. There were around 40 volunteers engaged in their jobs at this DWD point. Three of five cleaning units were filled with 10–12 volunteers on each unit, all busy in cleaning the used bowls. This number was gradually increasing; even few of them left at 9:00 am and many were joining. The feelings were same as in previous session but I was thinking of interviewing someone regular who would answer my queries and guide me about the head of volunteer organisation. Finally around 9:30am the visitor frequency increased and more volunteers were coming to take up. I initiated conversation with a gentleman, a regular volunteer from last 7 years:

### **Interview with Varinder Singh:**

My name is Varinder Singh, 42 and I am from New Amritsar. I have been volunteering this service from last 7 years. I used to serve at another point but because of some reasons I joined this point few years back.

**Q1: How many hours do you do service?**

Ans: 2-3 hours every day.

**Q2: What is your profession and is that affected by this service?**

Ans: I run a construction business and I am a contractor but everything is easily managed. My business is growing since I have started coming here.

**Q3: Are you aware about the water source distributed for drinking?**

Ans: Yes! We got submersible pumps and 2 cemented water tanks.

**Q4: Is this water treated or filtered before used for drinking?**

Ans: I have seen there was a filter some time ago but suddenly it disappeared and then they installed a new submersible due to repeated complaints by visitors. Now the depth is 350 ft.



[Cleaning Units-Near Tree DWD point](#)

**Q5: Do you know who control these matters?**

Ans: No, but I know a woman who is very educated and she is a regular visitor here, I think she can answer your queries.

He tells me about the lady and I approach her for interview. I then met with Manjit Kaur 60, a retired medical practitioner from Primary Health Centre, Verka - Amritsar. The lady was really dedicated volunteer and all her answers were devotion dipped. This meeting wasn't an easy one; I had to be very selective about the questions being asked. But she turned out to be the biggest help.

**Interview with Manjit Kaur:**

**Q1: Madam, how often do you come here?**

Ans: I have been coming here since my childhood and I have grown up in Harimandir Sahib (the Golden Temple).

Q2: Since how long have you been doing this service as a volunteer?

Ans: I don't do anything, I am nothing. Guru Ramdas does everything, *kabeer naa ham keeaa n karehigae naa kar sakai sareer | kiaa jaano kish har keeaa bhaeiou kabeer kabeer* [62] Kabeer (name of the poet), TRANSLATES AS: I have not done anything; I shall not do anything; my body cannot do anything. I do not know what the Lord has done, but the call has gone out: "Kabeer, Kabeer."||62||

**Q3: Please don't mind if I ask you about the organiser of this DWD system?**

Ans: Yes! Guru Ramdas Ji (the 4<sup>th</sup> Master). He manages every little thing here. Who else can do this?

**Q3: Do you know anything about the filtration system?**

Ans: No, I don't have any clue about it. But if there is any fault we ask Gurpal for help.

**Q4: Who is Gurpal, can I see him?**



**Head Volunteer**

Ans: Yes, you can see him; he is just one of us, but he stays here for whole day.

**Interview with Gurpal Singh, session**

**1:**Gurpal Singh alias Pal Singh, 24 turned out to be the key source of all the field information about this point and the

rest of DWD points in the complex. He was the Head Volunteer, who worked for a negligible pay, day and night serving at this DWD point, sorting out any troubles in the system and managing all sort of supplies and serving food to the volunteers. He was serving breakfast to a batch of 5 volunteers in a room near that DWD point, when I went to see him. The meeting held in two sessions, the first meeting ended up in 40 minutes but it helped in figuring out that this man has all the answers for my queries and the data would be authentic.

**Q1: Please give me your brief introduction.**

Ans: I am Gurpal Singh but Pal Singh is commonly used name. And I have been serving as Head *sevadar* (Head volunteer) from last 14 years.

**Q2: Do you have a family? If so, how do you manage?**

Ans: Yes, I am married and I get paid for this service. But I am the only one who gets paid.

**Q3: Who pays you? Is there any organisation behind the scene?**

Ans: Yes! Only this DWD point is managed by an organisation called *Punjabi Sewak Sabha Chhabeel*. And it is a kind of collection from volunteers they pay me as I stay here from 7 am till 9 pm and they understand I would need some money for sustenance.

**Q4: What kind of organisation is this? How do they manage?**

Ans: It is a non-profit organisation, constitutes of around 30-35 members. The members include electrical engineers, pipe fitters, fridge mechanics and one of them owns a pump company as well. So everything here is managed really easily. I am called by the volunteers whenever there is a fault in any of the systems and I call them and take care till the job is repaired or replaced. I feel blessed being a part of the system.

**Q5: Who is the head of the organisation?**

Ans: Joginder Singh (head) and Mohinder Singh (deputy).

**Q6: Please tell about the filtration system in the drinking water supply?**

Ans: We had a filtration system in the past and it was declared failure after couple of years and now we just have submersible pumps.

**Q7: What kind of problems did you face with filters? Please explain what happened.**

Ans: Filters were there from 2006 to 2008, the main problem was:

1. Volume of water supply was much less than the requirement. It was very slow.
2. At least 1.25" diameter pipe is needed, at full flow, to meet the normal day's water requirement. Filter system was just very low in capacity.
3. There was no substitute during maintenance and repairs.

## Session II (Gurpal Singh):

### **Q8: What is the source of water?**

Ans: We have 350 ft deep bore well and it is the 3<sup>rd</sup> one. Previously we used 120ft and then a 300ft deep well a few months back. And we got two cemented water tanks of 5000 litres each.

### **Q9: Why were the depths changed in the past?**

Ans: The water level dropped down and we dug at 300ft from 120ft. But at 300ft, the water started to smell. So the depth was increased this summer.

### **Q10: Is the water tested now? What kind of tests do you perform and how regularly?**

Ans: From the past few years, a man [he meant a volunteer] comes here to collect water samples every month, from all over the Golden Temple complex. I hope he runs a lab or contact a lab out of devotion and announces the result verbally. I am not aware of the name of the test but we have never got any negative results from him.

### **Q11: How does the drinking water gets to the point?**

Ans: By G.I. Pipes. The cold water from refrigerators is mixed with the normal water of tanks and collected at the serving point in a permanently installed marble tub. From here 2 volunteers fill it in the bowls on the stalls.

### **Q12: When was this piping system installed?**

Ans: 10 years back we had Iron pipes which were renewed around 4 years ago and in 2009 G.I. pipes were installed.

### **Q13: Other than the source requirements for drinking water, what are the other components of DWD system and how do you maintain them?**

Ans; Right now we got:

1. **6 refrigerators:** these refrigerators independently cater water to a common pipe and they can be cleaned independently whiles other will still work. We clean them regularly (once a month).
2. **2 cemented Water (5000 litres each) tanks:** are cleaned every 1-2 months.

3. **3-4 tubs:** each of 300 litres capacity, used to prepare squash in extreme summers (washed as used).
4. **Thousands of bowls to serve water:** these are cleaned as they are used. We use wood ash and cow dung ash to clean all these bowls which is the traditional way and it is bio-safe.

**Q14: How do you manage the rota of the volunteers? How do you manage the requirement of volunteer every hour each day?**

Ans: There is no rota. Everyone comes on their own will and own schedules. This doesn't require any management, the number of volunteer's increases as the number of visitors increase, it is so simple. People come here from far off areas to do this. This is a part of culture. Stay here for another day and you will find foreigners doing service for water.

**Q15: Then please inform us about the number of volunteers present each hour of a day?**

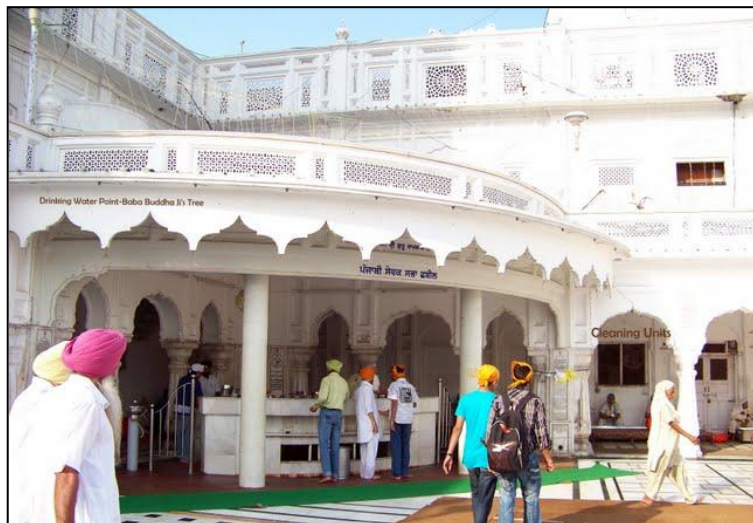
Ans: I will divide this information as:

Time	No. Of Volunteers
6:00-8:00 am	40
8:00-10:00 am	40-50
10:00-12:00 pm	55-60
12:00-9:00 pm	around 60
9:00 pm-6:00 am	20-25

Note: these are the figures for the largest and busiest of four distribution points.

There is no recorded information about the number of volunteers and the above information is based on my daily observation. Nobody controls this number or ask anyone to come at exact time of a particular day. It is totally on their choice.

**Q16: Do you know anything about submersible pump, I mean about its design and**



### capacity?

Ans: [At this he made a phone call to the company dealer *Kalsi Pumps.*] He just told me the power i.e. 1.5 HP motor.

### Q17: How do you manage to get the cleaning ash and what's the quantity?

Ans: It is collected from villagers around. This ash collection is done by a single volunteer; he owns a big soap factory. He distributes jute bags among the villagers around, who use wood and cow dung fuels. The collection is done after a month. And then he brings around 25 jute bags full of ash every month in a trolley. This ash is reused as it is dried again and again.

### Q18: What about the other 3 DWD points in the Golden Temple?

Ans: See Baba Buddha Ji's *beri* (fruit tree) DWD is the busiest point in the whole complex. The other ones:

- 1) Baba Deep Singh DWD point is nearly 50% busy as this one.
- 2) The DWD near the *Kraah Prasad* (Holy Food) purchase point<sup>8</sup> is 30-40% of this one.
- 3) Whereas the least active one is the *Brahm Buta* DWD point<sup>9</sup> which is just 10-20% of this one.

### Q19: Is the water supply sufficient in extreme summers with the system you have?

Ans: Yes, the water requirement is almost three folds in the summers but there have been no problems till date. We also serve squash (sweetened water + 15 % milk) during special occasions in summers. For that we have spare tubs (3-4, each of 300 litres capacity). The squash is prepared in the rooms behind and tubs are brought at DWD point and just imagine it takes around 7-8 minutes to empty 300 litres.

That was the end of the meeting, I thanked him for all the valuable information and time that he provided. Guralp Singh welcomed me saying, "I am always here for any kind of help."

After this meeting I had another volunteer session for 20 minutes. I transferred the used bowls from stalls to the cleaning section. I think this is one of the busiest positions, there was no stop. I had to collect all the used bowls without disturbing the public and distribute them to the cleaning units. Right after this session I went to thank Bijay Singh

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<sup>8</sup> Refer to location #3, Appendix 2.

<sup>9</sup> Refer to location #1, Appendix 2.

for providing all the important information to EcoSikh. Bijay Singh welcomed any further help in the EcoSikh mission.

**Conclusion:** As stated in the executive summary, the DWD system of the Golden Temple can be replicated elsewhere depending on the presence of some important factors<sup>10</sup>. Only the basic components of the DWD system are managed by an actual organization. The rest of the functioning as well as the regular water testing, totally relies on regular/local volunteers (mostly housewives, retired or aged), for whom *seva* (volunteer service) is an inseparable part of their daily routine. And this *seva* is solely based on their devotion to the Guru (Master). The funding involved is the donations by the devotees.

**Possible ways to reduce the number of volunteers engaged in the process:**

1. The stalls could be replaced by taps with utensils for self service.
2. Quick dishwashing machines could be introduced (though this has an ecological as well as financial cost).

**Ravneetpal Singh**

**October 2010**

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<sup>10</sup> Refer to possibilities of replicating DWD at page 2.

## Appendix 1:

**Seva:** In Sikhism seva or sewa refers to the “selfless service”. According to Guru Amar Das (the third Master), “He who is turned towards the Guru finds repose and joy in seva”. Three varieties of seva are sanctioned in Sikh teachings:

“*Tann*” - rendered through physical means.

“*Mann*” - ended through mental apparatus.

“*Dhan*” - rendered through material resources.



[Cutting vegetables for the free kitchen](#)

It is performed without expecting material reward. The one who performs it is called *sevadar*. Sikhs engage in organising all the events in the temple like washing dishes, cleaning and serving food etc. Selfless service in the community is also considered *seva*. For example, Sikhs are encouraged to perform unpaid work in hospitals, old age homes and community centres. In summers, Sikhs serve free drinking water or squash at various public places. Providing financial help to the poor is also considered *seva*. Helping the poor in getting education is also a way of doing *seva*. The two fundamentals of Sikhism are *seva* and *simrin* (meditation). It is stressed that one should meditate while doing selfless service.

Guru Ji states, “**Seva karat hoe nehkammi || Tis ko hoat prapat swami ||**” *One who performs selfless service, without the thought of reward, shall attain his Lord and the Master.* The motive is to build good community relations along with moral elevation. According to Gurbani (teachings by the Masters) -

\* One should do *seva* as a duty to society.

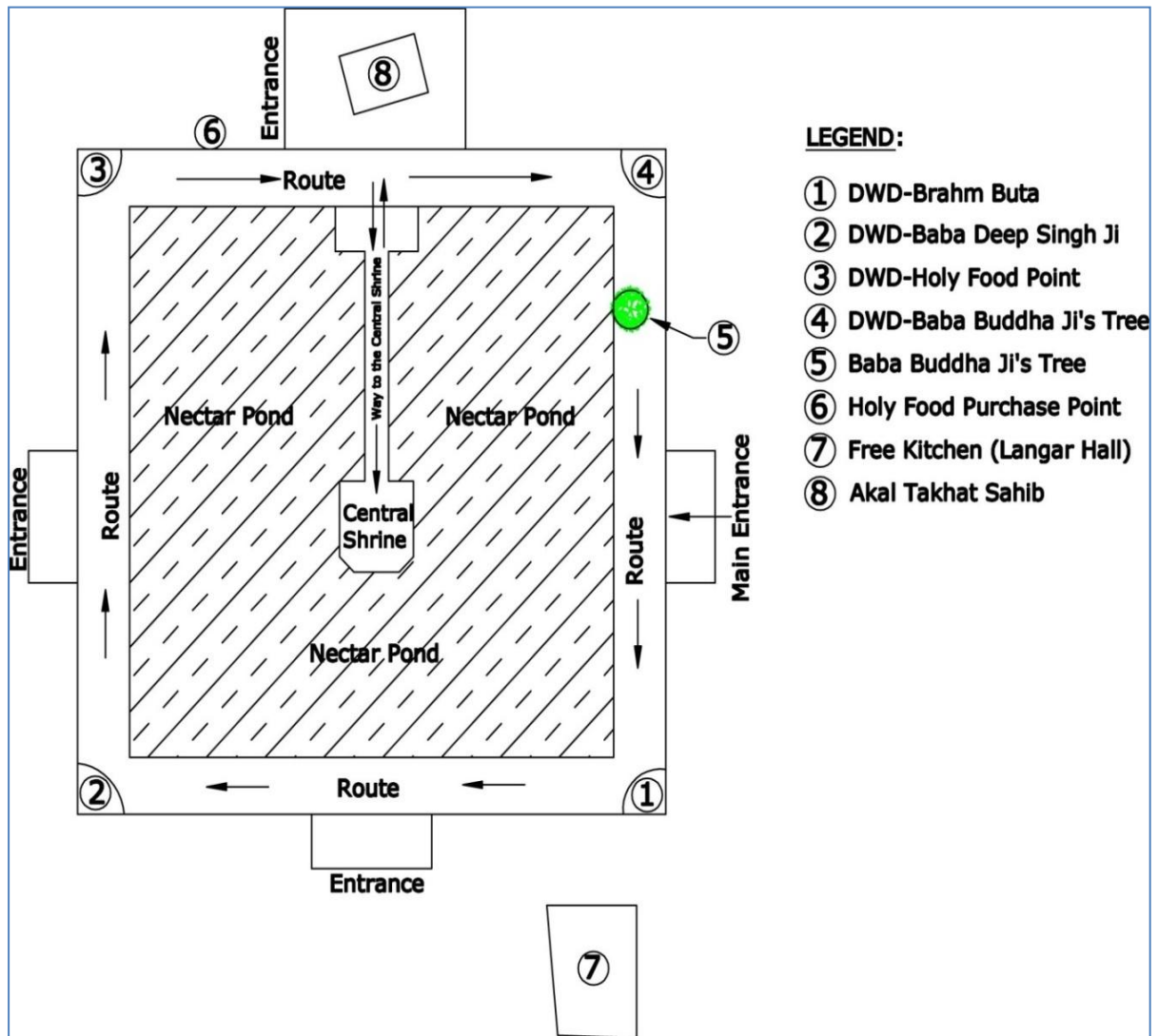
\* *Seva* brings tranquillity and serenity to the mind.

\* A Sikh has to make concerted effort to seek opportunities to perform *seva*.

\* *Seva* brings “honor in the Lord’s Court”. “

**Vich duniya sev kamayiae || Ta dargah baisan payiae ||** *In the midst of this world, do seva, and you shall be given a place of honor in the Court of the Lord’.*

## Appendix 2



Sketch of the Golden Temple