



Transport Impact Statement

Project:	Proposed Place of Worship & Community Use Lot 213 Lewis Road, Wattle Grove
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1. Introduction and Background

1.1. Proponent and Proposal

Shawmac Pty Ltd has been commissioned by Peter Hunt Architect on behalf of Fount of Life Outreach Ministries Inc. (FOLOMI) to prepare a Transport Impact Statement (TIS) for a proposed place of worship and community use development in Wattle Grove in the Shire of Kalamunda.

The existing FOLOMI church community will relocate to the proposed site from the existing facility located on the corner of Hale Road and Anderson Road in Forrestfield.

1.2. Location

The site is located about 1.5km south of the Forrestfield District Centre on Lot 213 (No. 28) Lewis Road, Wattle Grove (the site) as indicated in **Figure 1**.

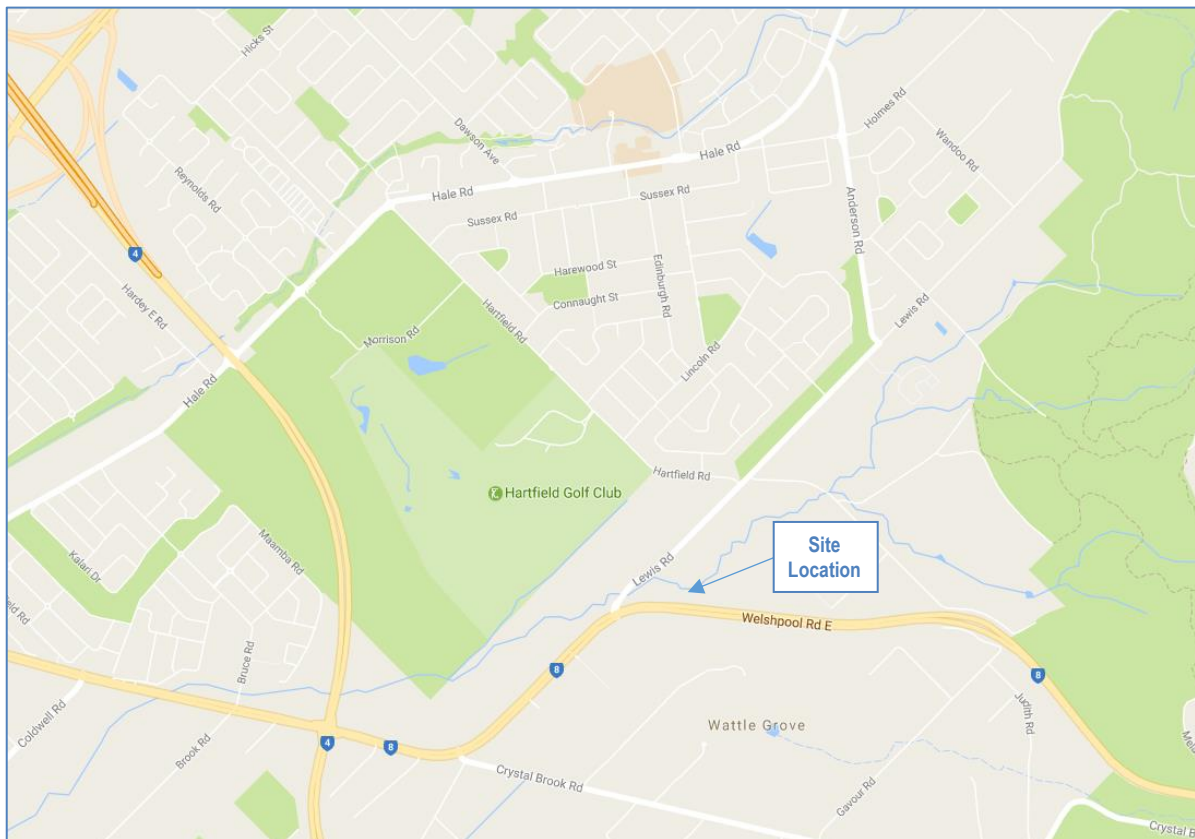


Figure 1: General Site Location

The site is on the south side of Lewis Street and north of Welshpool Road East. An aerial photo showing the existing site and adjacent road network is shown in **Figure 2**.



Figure 2: Site Location and Adjacent Road Network

1.3. Key Issues

This TIS has been prepared in accordance with the Western Australian Planning Commission (WAPC) *Transport Impact Assessment Guidelines* which recommends consideration of the following:

- Details of the existing site and surrounding transport network.
- Description of the proposed development.
- Estimation of traffic generated by the proposed development and by any other committed developments nearby.
- Distribution of the development traffic onto the road network and assessment of the impact on the surrounding roads, intersections and neighbouring areas.
- Road safety assessment.
- Public transport accessibility.
- Pedestrian and cyclist demand and facilities assessment.
- Parking assessment and management.
- Provision for service vehicles.

1.4. Background Information

Under the Shire of Kalamunda Local Planning Scheme 3 (LPS3), the site is currently zoned *Special Rural*. In 2016, the uses *Community Purpose* and *Place of Worship* were added as 'A' type uses for the site which may be considered for approval by Council and subject to a traffic impact assessment.

2. Existing Situation

2.1. Site and Surrounding Land Uses

The site currently contains a residential dwelling and two associated outbuildings. The Yule Brook currently crosses through the site and the neighbouring properties in an east-west direction. Surrounding land use is also primarily residential development. A mosque is located on the north side of Lewis Road directly opposite the site. Access to the site is currently via a single unsealed driveway from Lewis Road. The site is not accessible from Welshpool Road East.

2.2. Surrounding Road Network

Lewis Road is currently classified as a Local Distributor road and is currently constructed as a kerbed, two-lane, undivided road. It has a 70 km/h speed limit adjacent to the site which gradually reduces to 60 km/h and 50 km/h towards the east. Lewis Road is under the jurisdiction of the Shire of Kalamunda.

Welshpool Road East between Tonkin Highway and Lesmurdie Road is classified as a District Distributor A road and is constructed as a kerbed, four-lane divided road with a wide median. The posted speed limit in the vicinity of the site is 80 km/h. Welshpool Road East is part of the Restricted Access Vehicle (RAV) category 4 network which allows tandem drive prime movers and semi-trailers towing dog trailers up to 27.5m long. Welshpool Road East to the east of Tonkin Highway is classified as an *Other Regional Road* under the Metropolitan Region Scheme and is under the jurisdiction of the Department of Planning.

Lewis Road intersects with Welshpool Road East via a seagull type T-intersection which operates under stop sign priority control. There are auxiliary left and right turn lanes from Welshpool Road East onto Lewis Road. There is a left turn slip lane on Lewis Road and an acceleration lane on Welshpool Road East for vehicles turning right from Lewis Road onto Welshpool Road East. The layout of the intersection is shown in **Figure 3**.

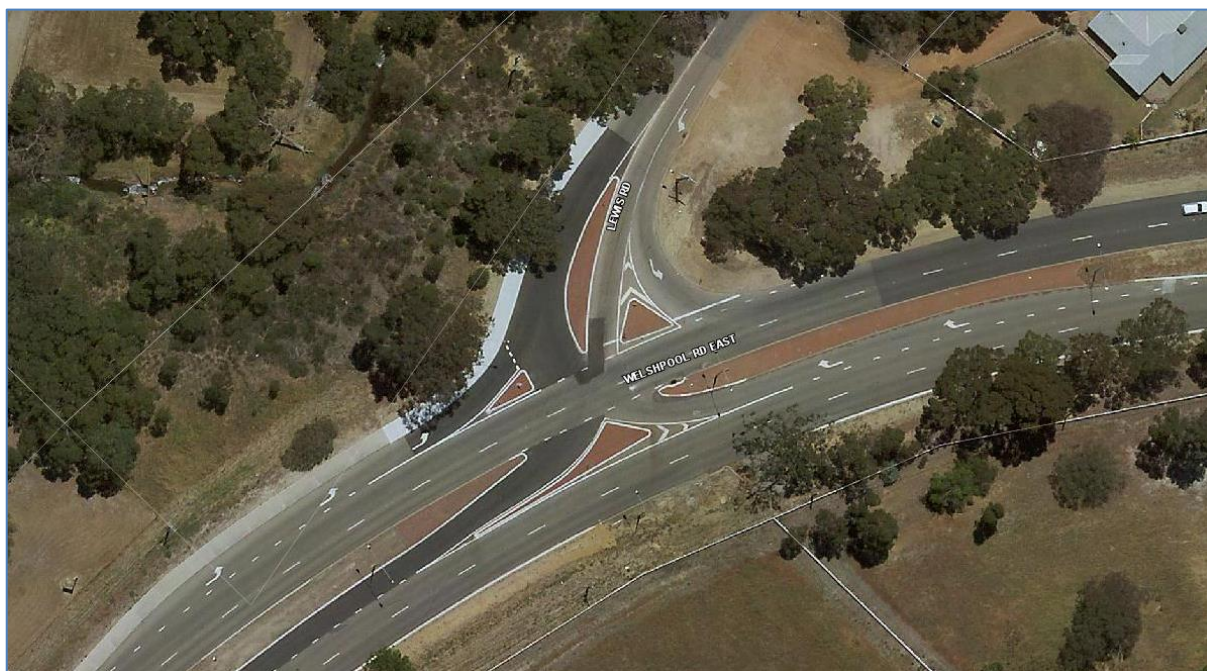


Figure 3: Welshpool Road East / Lewis Road Intersection Layout

2.3. Traffic Counts

The latest traffic data for Lewis Road and Welshpool Road East were obtained from the Shire of Kalamunda and Main Roads WA (MRWA) as summarised in **Table 1**. As the highest level of traffic generation from the site will be the Sunday church service, the Sunday traffic volumes have been used.

Table 1: Existing Sunday Traffic Data

Road and Location	Daily	Sunday Traffic			Date and Source
		Regular Sunday Peak (12 - 1PM)	Church Arrival Peak (9 - 10AM)	Church Departure Peak (2 - 3PM)	
Lewis Road East of Welshpool Road	4,434 vpd	410 vph	270 vph	348 vph	Sep 2016 SoK
Welshpool Road East of Tonkin Highway	13,068 vpd	1,150 vph	755 vph	1,062 vph	Dec 2015 MRWA
Welshpool Road West of Lesmurdie Road	10,738 vpd	998 vph	678 vph	923 vph	Sep 2016 SoK

* SoK - Shire of Kalamunda

3. Development Proposal

3.1. Proposed Land Use

The proposed development comprises a place of worship (church) and a community use facility which includes a short term lodge (approx. 3 month stay) for up to 6 people, a caretaker's lodge, a community garden, a petting farm and a half basketball court. The existing house and outbuildings will be retained. The place of worship comprises a main hall (440 sqm) and supporting facilities such as a kitchen, classrooms for children and store rooms. It is understood that the place of worship will be used for various other community activities including special services, seminars, youth activities and counselling services.

The development is likely to be staged with the church being developed as stage 1 and the remaining facilities constructed as stage 2. The development plans are attached as **Appendix A**.

4. Hours of Operation

The type of activities and hours of operation proposed on the site vary throughout the week. A schedule of the likely activities and operating hours from the proponent is attached in **Appendix B**.

The Sunday church service between 10 a.m. and 2 p.m. will be the busiest activity on the site with regards to traffic generation. Two peak periods of generation were assessed including the arrival peak hour from 9:00 a.m. to 10:00 a.m. and the departure peak hour from 2:00 p.m. to 3:00 p.m. at the conclusion of the Sunday service.

The peak periods on the road network were not considered as there are no significant traffic generating activities proposed on the site during these periods. It is noted that the weekday peak is generally higher than the proposed development peak, particularly on Welshpool Road East.

5. Traffic Generation and Distribution

5.1. Vehicle Trip Generation

The existing regular Sunday church service has an average attendance between 80 and 100 people arriving in approximately 20 to 25 vehicles each Sunday as observed by the current operator of the church. The majority of attendees are families. It has been estimated that attendance at the regular service may increase to approximately 120 people with a maximum of 300 people for special services which would occur approximately twice annually (e.g. Christmas and Easter). The assessment has therefore been based on the maximum attendance of 300 people as a 'worst-case' scenario.

The vehicular trip generation potential of the proposed place of worship has been based on the generation rate of the existing facility which indicates a trip rate of 1 vehicle trip (1 inbound movement / 1 outbound movement) per 4 attendees. Based on the maximum attendance of 300 people, the site would generate a total of 75 vehicle trips per day (75 inbound movements / 75 outbound movements).

5.2. Distribution

Based on the layout of the road network and the surrounding residential areas the distribution of traffic to and from the site is assumed to be as follows:

- 60% of site traffic is distributed to and from the north along Lewis Road;
- 40% of site traffic is distributed to and from the south along Lewis Road of which:
 - 30% is from the west along Welshpool Road East; and
 - 10% is from the east along Welshpool Road East.

The resulting increase in traffic on surrounding road network is as follows:

- | | |
|--|--------------------|
| • Lewis Road | +150 vpd (+75 vph) |
| • Welshpool Road East - west of Lewis Road | +45 vpd (+23 vph) |
| • Welshpool Road East - east of Lewis Road | +15 vpd (+8 vph) |

The estimated increase in traffic is relatively low compared to the existing traffic flows. Austroads *Guide to Traffic Management Part 3 - Traffic Studies and Analysis* notes that the typical midblock capacity of urban roads with interrupted flow is between 900 and 1,000 passenger cars per lane per hour (pc/h/ln). The increased traffic flows are well below the capacity of the existing roads and therefore it is concluded that the vehicular traffic impact of the proposed development will be minimal. It is also worth noting that the church service does not coincide with the peak periods on the road network and that the assessment has been based on the maximum attendance which is likely to occur only twice annually. Every other Sunday church service is likely to generate a much lower volume of vehicular trips.

6. Vehicle Access and Parking

6.1. Access

Vehicle access to and from the site is proposed via an entry crossover from Lewis Road at the location of the existing access and an exit crossover close to the eastern boundary of the site. An internal driveway is proposed along the western boundary of the site including a new bridge across the creek to access the lodge and the

caretakers building.

6.2. Parking

A car park with 50 bays is proposed on the northern portion of the lot between the road and the place of worship as part of Stage 1 development and an additional smaller car park for 10 cars is will be constructed adjacent to the lodge dwellings as part of Stage 2 development. Temporary parking for about 28 bays will also be provided as part of Stage 1 in the various open spaces on the site.

The staged supply of parking was assessed in accordance with Table 3 of the Shire of Kalamunda *Local Planning Scheme No. 3* (LPS3) as shown in **Table 2** and **Table 3** below.

Table 2: Shire of Kalamunda LPS3 Parking Requirements - Stage 1 - Place of Worship

Land Use	LPS3 Requirement	Quantum	Required bays	Provided Bays
Place of Worship	1 bay per 5m ² of NLA	440 sqm	88 bays	50 bays

Table 3: Shire of Kalamunda LPS3 Parking Requirements - Stage 2 - Lodge, Garden & Petting Farm

Land Use	LPS3 Requirement	Quantum	Required bays	Provided Bays
Community Purpose	1 bay for every 5 persons the facility is designed to accommodate	6 persons	2 bays	10 bays

As per the above table, the proposed car parking supply for the place of worship is 38 bays short of the LPS3 requirements.

The Shire of Kalamunda policy P-DEV 41 *Framework for Assessing Requests for Variation to the Number of Car Parking Bays* provides guidance for considering requests for the reduction of the number of car bays prescribed under LPS3. The Shire may apply, at its discretion, a greater or lesser requirement for car parking bays than that stipulated as the minimum in Table 3 for any zone if:

“The circumstances of a development justify such variation and there will not be any resultant lowering of safety, convenience and amenity standards, it may permit a reduction in the number of car parking spaces required by Table 3 of Local Planning Scheme No. 3.”

In this instance, LPS3 requirement is considered to overestimate the car parking requirement for the place of worship and the appropriate car parking supply is better determined from the likely attendance numbers and capacity provided by the church operator and from observations made during the existing Sunday church service. The majority of attendees are families and the average occupancy for vehicles travelling to and from the Sunday church service is 4 people per car.

It is noted that the parking requirement for a place of worship according to various neighbouring local government areas is also 1 space for every 4 seats or attendees including the City of Gosnells, City of Belmont, City of Swan and the City of Canning.

From this rate, the estimated car parking demand from the proposed place of worship would be 30 bays during the regular church service (120 attendees) indicating that the 50 bays proposed should be sufficient and would provide some room for growth in attendance.

For the twice annual church service where the attendance is predicted to reach 300 people, the parking demand is estimated to be 75 bays. Temporary unsealed parking areas will be made available within the open areas on the site during these services. Approximately 28 temporary parking bays are indicated on the plans which would adequately meet the increased parking demand. Further to this, at the completion of Stage 2, the 10 bay car park adjacent to the lodge could also be used to accommodate overflow parking for the special church services.

The 10 bays proposed adjacent to the lodge meets the minimum parking requirements of LSP3 for the Stage 2 development.

7. Provision for Service Vehicles

Waste collection will occur via typical kerbside collection along Lewis Road.

8. Public Transport Access

The only public transport service in the vicinity of the site is Transperth Bus Route 282 which operates between Perth (Elizabeth Quay Bus Station) and Kalamunda Bus Station. The nearest stops are located on both sides of Welshpool Road East about 200 metres east of Lewis Road and about 550 metres walking distance from the site. There are services available approximately every hour on weekdays and every 2 hours on weekends and public holidays.

Based on the proposed land use, the public transport demand of the site is likely to be low and therefore the existing services are considered to be adequate.

9. Pedestrian and Cycle Access

There is an existing 2.5 metre wide (approx.) dual use path along the north side of Welshpool Road East between Tonkin Highway and Lewis Road which continues along the north side of Lewis Road to Hartfield Road. The existing path infrastructure is considered to be sufficient to meet any pedestrian and cyclist trips to and from the

site.

10. Site Specific Issues

10.1. Crash Data

The crash history for the adjacent road network at mid-block locations and at intersections between January 2012 and December 2016 was obtained from the MRWA *Reporting Centre*.

3 incidents were recorded along Lewis Road between Welshpool Road East and Hartfield Road.

32 incidents were recorded at the Lewis Road / Welshpool Road intersection during the five year period including 10 rear ends, 17 right angle crashes, 2 right turn thru crashes, 2 hit objects and 1 other / unknown. The intersection was listed on the State Black Spot Program for 2015/2016 and several upgrades were implemented at the intersection in April 2016 including:

- An acceleration lane on Welshpool Road East for vehicles turning right from Lewis Road.
- Left turn arrows painted on the pavement on Lewis Road.
- A new splitter island and give way line marking to establish priority between right and left turning vehicles from Welshpool Road East onto Lewis Road.

Although the proposed uses will slightly increase the volume of traffic on the surrounding road network, the magnitude of increase in traffic is relatively low and not considered to increase the risk of crashes. Further, the majority of proposed activities on the site occur on weekends or outside of the road network peak periods when the volume of traffic is much lower.

11. Conclusion

A Transport Impact Assessment of the proposed use of Lot 213 Lewis Road, Wattle Grove as a Place of Worship and Community Use site concluded the following:

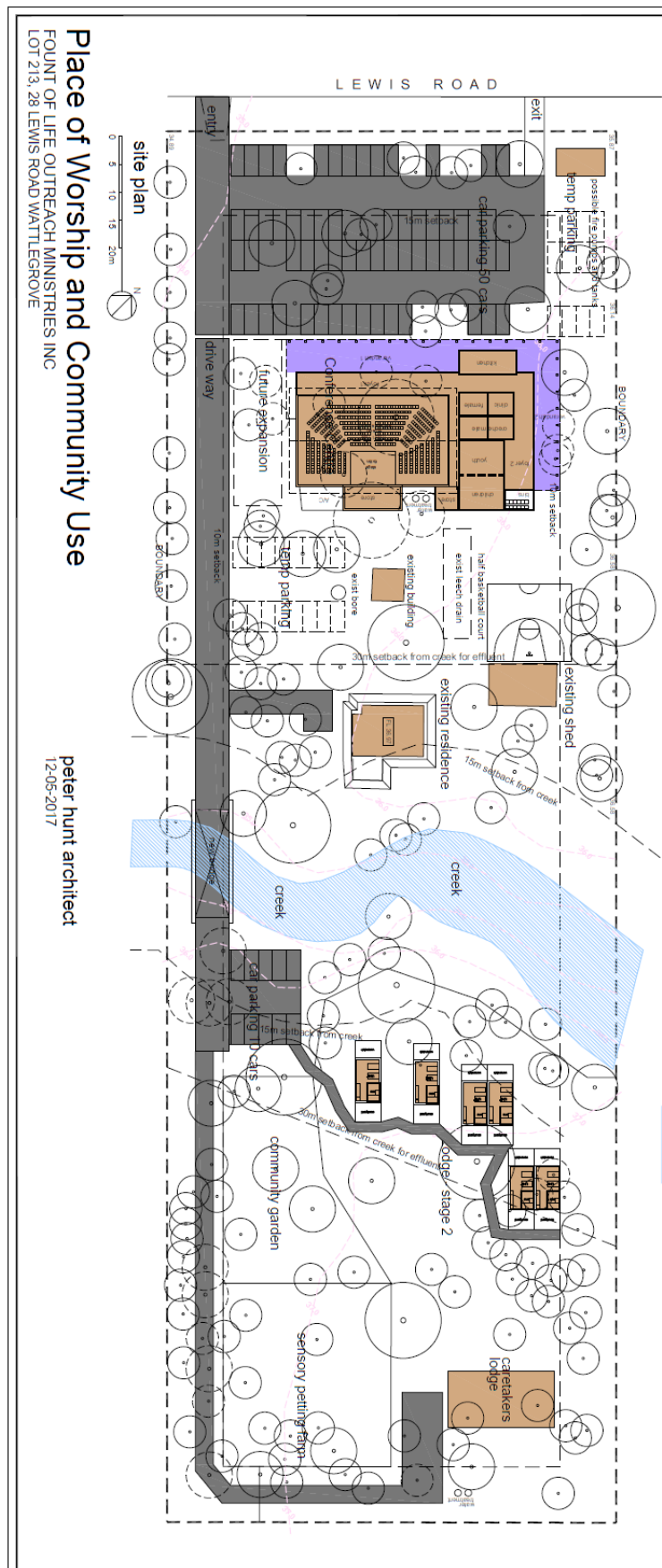
- The volume of traffic generated by the proposed land use is low and the majority of activity on the site occurs outside of the peak periods on the road network. The existing road networks has sufficient capacity to accommodate the traffic generated by the site.
- The proposed car parking supply was assessed in accordance with the requirements of Shire's Local Planning Scheme which indicates that overall proposed parking supply is 38 bays short of the scheme requirements. A reduction in the car parking requirement for the place of worship is being sought in accordance with the Shire's Policy P-DEV 41. It has been demonstrated that the likely parking demand will be approximately 30 bays and as such the proposed 50 bays adjacent to the place of worship is

considered to be adequate. The 'shortfall' in parking can be further justified by the 10 bay car parking area adjacent to the lodge and the various open spaces that can be used as overflow parking for special occasions that may have higher than typical attendance.

- The existing public transport services are considered to be adequate.
- The existing path network is also adequate to meet the needs of any pedestrian and cyclist demand of the site.



Appendix A – Site Plan



Appendix B – Site Activities and Times of Operations

	Activity	Nature	Operating Times	Approx. number of people
1	Conference Centre			
	Church	Sundays	10am – 2pm	100 people + 20 youth/children 300 people (approximately twice annually)
	Seminars / conferences / special services	Weekdays	Varies between 10am – 4pm depending on the nature of the seminar (counselling 2hrs / mental health may be 2 hrs, drug and alcohol sessions 4 hrs, etc). Can range from a couple of hours, half – full day.	1 – 60 people depending on nature and frequency of seminars held.
	Youth/Children's activities	Friday	6.30pm – 9pm	30-50 children
2	Community Garden	Monday - Saturday	10am-3pm	10 – 30 people per day when established
3	Children with disability sensory petting farm	Monday - Saturday	10am-3pm	10 – 30 children per day when established
4	Barnabas Box	Daily food distribution to struggling families.	Only on an as needs basis – primarily between 8am – 5pm – at the moment we drop off food hampers on an average 4 families a week. Once centre is built families can drive in to pick up a hamper.	10 families per week when established
5	Lodges	Daily - short term stay for counselling services in mental	24/7 stay	6 people max.

	Activity	Nature	Operating Times	Approx. number of people
		health issues.		
6	Angel Baskets	Daily - Mental health and wellbeing support for victims of abuse /crime.	Only on an as needs basis – primarily between 8am – 5pm – at the moment avg. of 3 families a week.	10 families per week when established
7	Clinics - Free health checks/audiometry and Occupational Therapy assessments for the community.	A couple of days a week (to be determined)	A couple of hours each day depending on clinic services. i.e. GP services 2 hrs Monday, OT services 2 hrs Tuesday, Audiometry 2 hrs Wednesday, etc.	Unsure just yet – perhaps 5 families a day.
8	Online English Tutorials	A couple of days a week (to be determined)	A couple of hours on selected days	10 students at a time