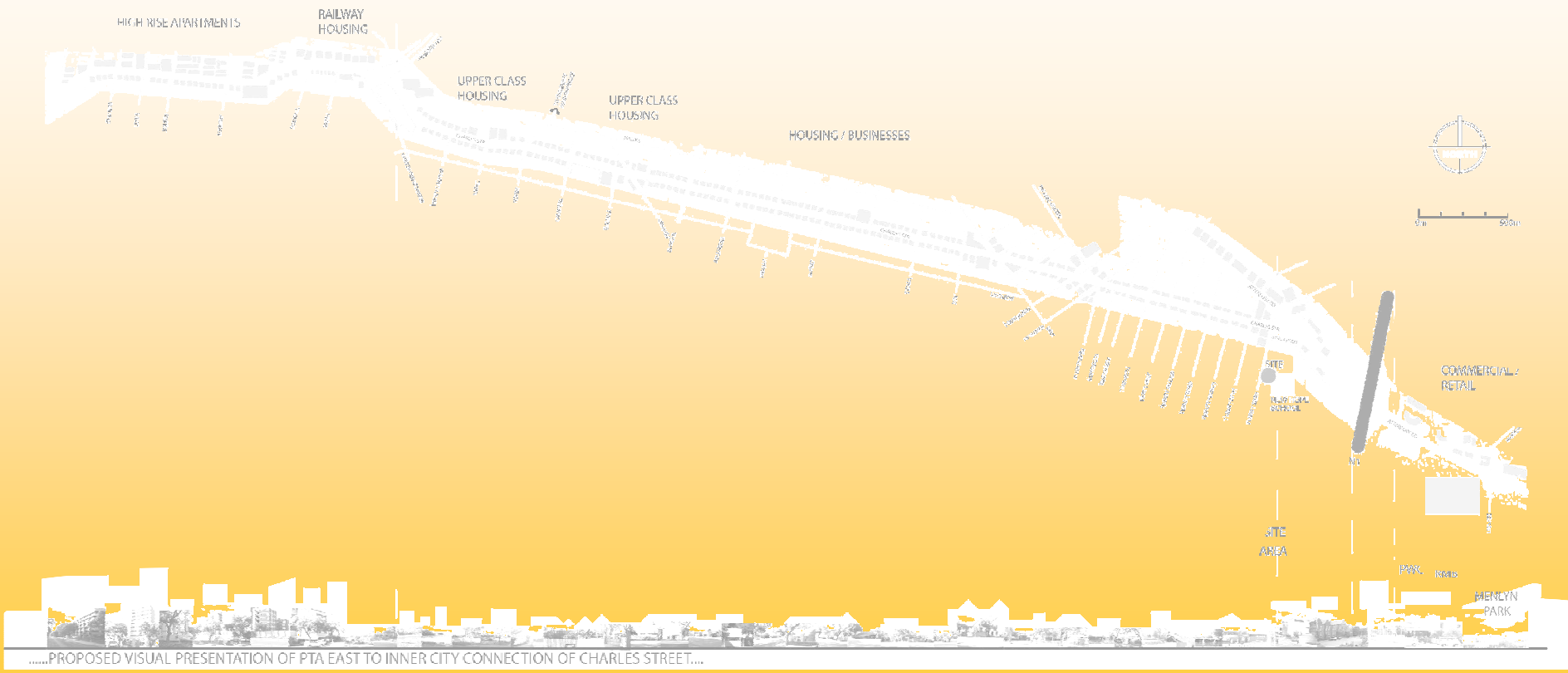
‘ Nothing is as dangerous in architecture as dealing with separated problems; If we split it into separated problems, we split the possibilities to make good building art’ - Alvar Aalto



2.CONTEXT STUDY & SITE ANALYSIS

2.1 INTRODUCTION

The proposed context study will be divided into 2 categories: Macro & Micro sites.

The macro site includes the surrounding suburbs of the proposed site. Movement and context are aspects that will be studied within this area.

The micro site will be an in-depth study of the proposed project site and its immediate context.

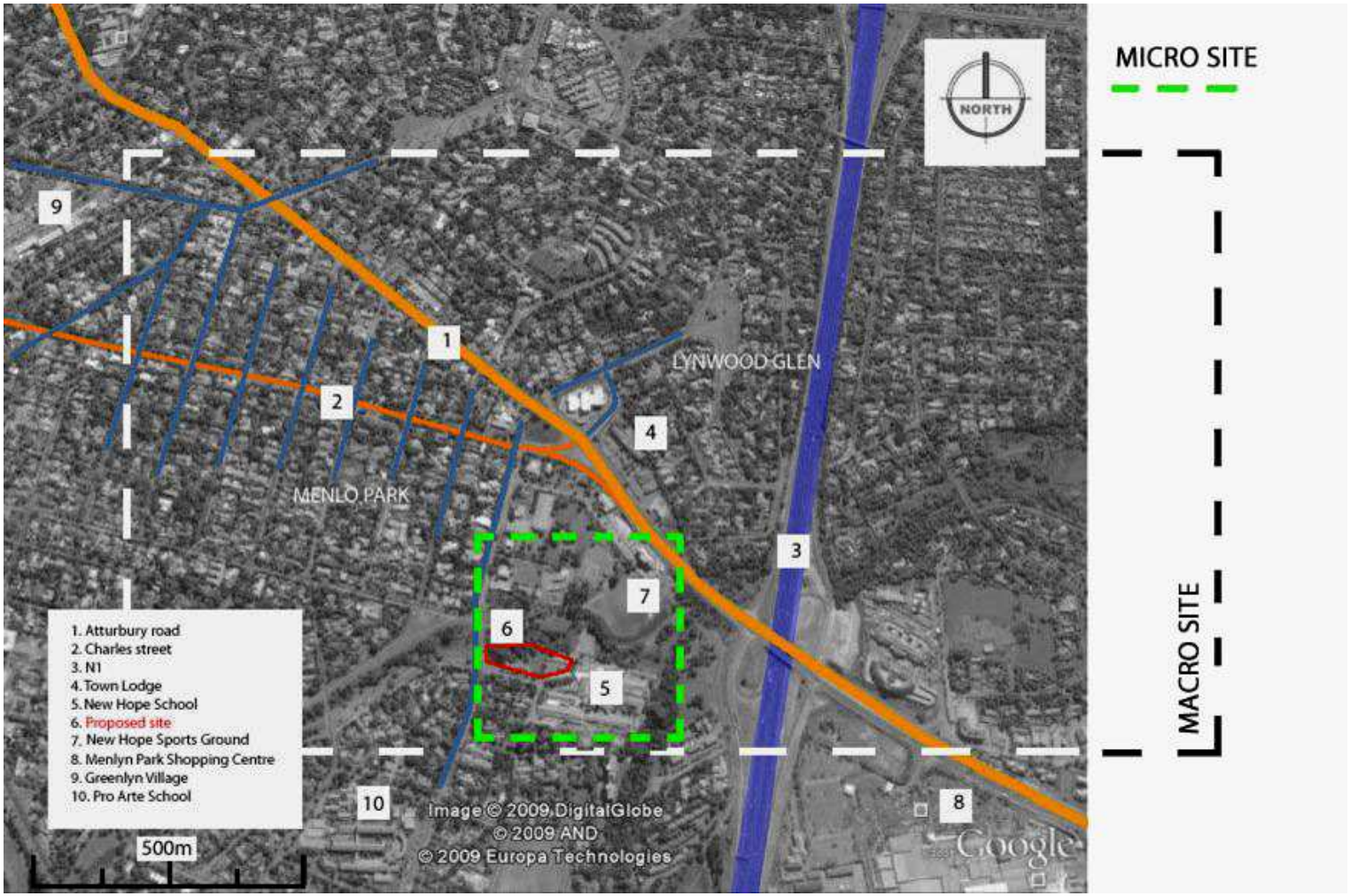


Figure 14. Arial photo indicating the micro and macro site, Google earth map

2.2 MACRO SITE

Menlo Park, Pretoria, is mainly a residential suburb which is bordered by upmarket areas such as Waterkloof, Brooklyn and Lynwood. It is believed that Menlo Park was first established in the late 1950's. At that time it was the most eastern suburb of Pretoria.

Menlo Park is situated next to the N1 between JHB and Pretoria and is central to the main economic nodes of the greater Pretoria area. It is easily accessible from other cities via the N1, N4, R21, R28 and other major routes. Menlo Park is also linked to the inner city through a network of major arterial routes that borders this suburb.

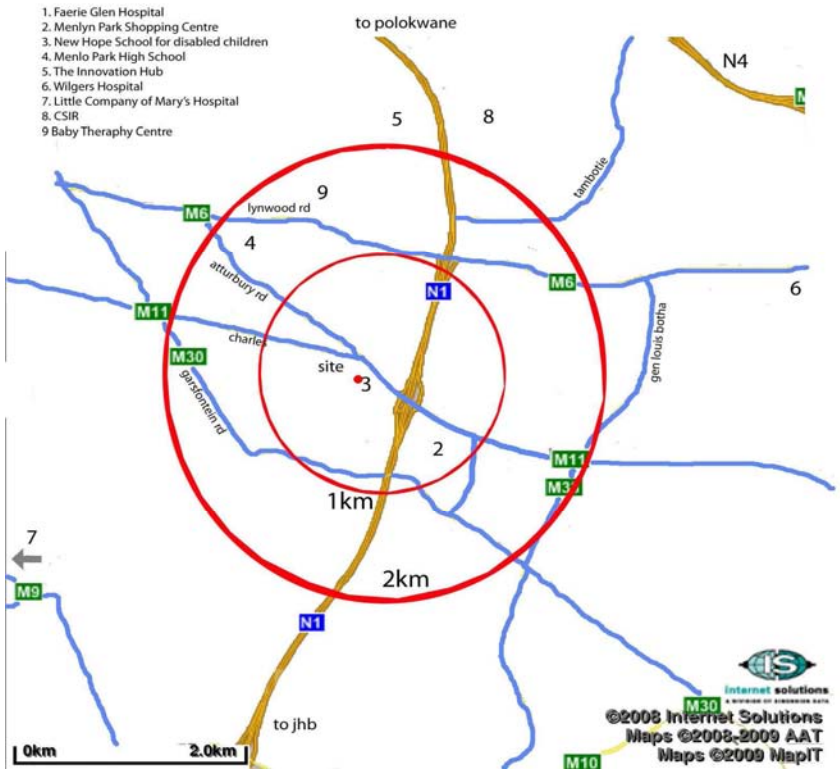


Figure 15. 2 km study area context map

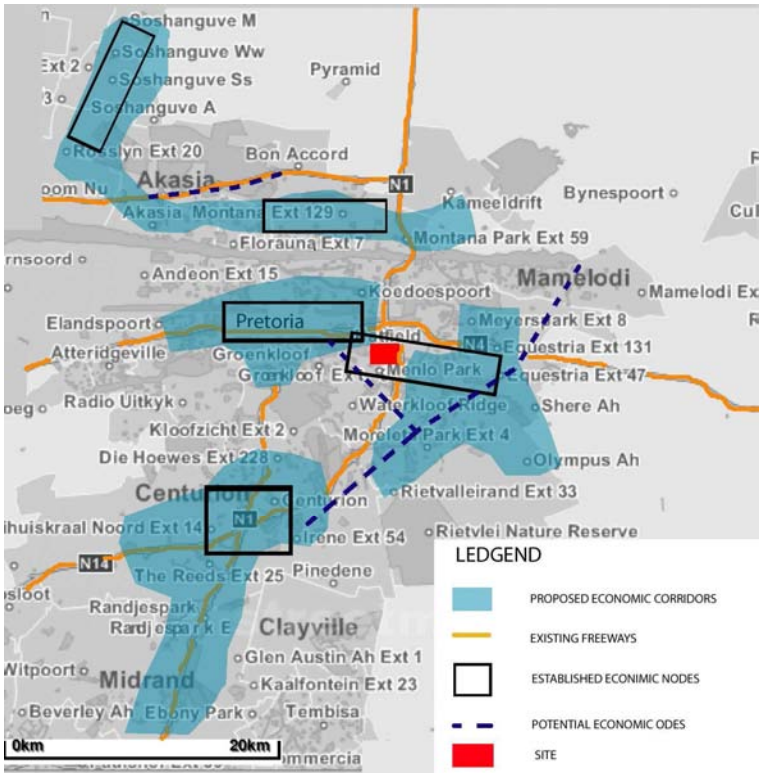


Figure 16. Existing economical node map, www.streetmap.co.za

2.2.1 MACRO SITE CONTEXT

The macro site is bordered by three main arterial routes, Garsfontein, Lynwood and General Louis Botha streets.

The site is situated less than a kilometer from Menlyn shopping Centre and in close proximity of more retail and commercial buildings.

This area is emphasized by the N1 north and south splitting it in two.

Although the area consists of more than 60% residential developments, this area is recognized by a wide range of activities, such as shopping opportunities, retail and commercial spots, schools and various recreational options.

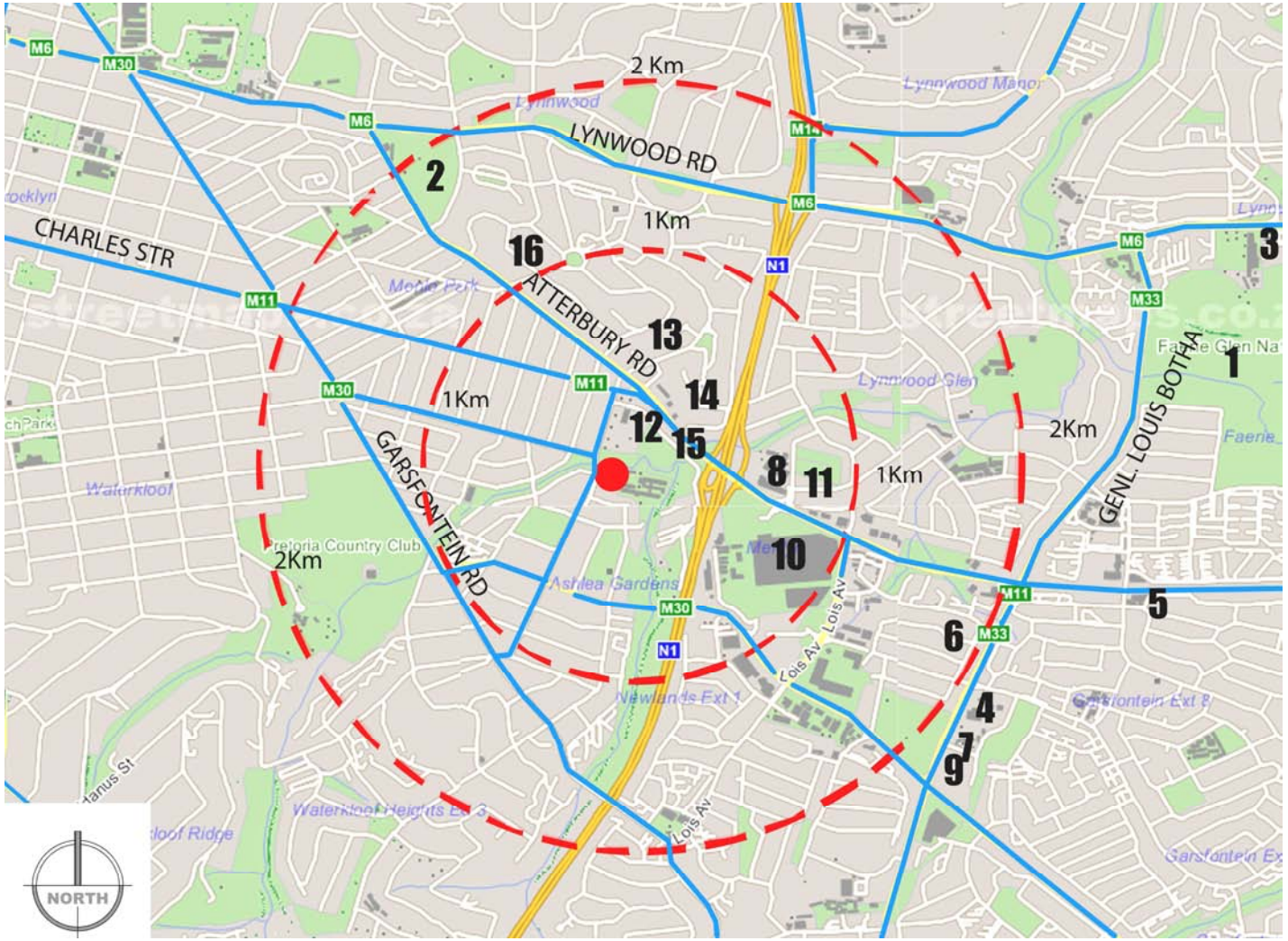


Figure 17. City-wide context map.

2.2 MACRO SITE

Figure 18. Faerie glen nature

Figure 19. Menlo park high school

Figure 20. Wilgers Hospital

Figure 21. Virgin Active Menlyn

Figure 18 to figure 33 is a photographic study of the city-wide context the proposed project should connect to.

Figure 22. Fearie glen Hospital

Figure 23. Menlyn Maine

Figure 24. Menlyn Mercedes garage

Figure 25. PWC building

Figure 26. Menlyn BMW garage

Figure 27. Menlyn shopping centre

Figure 28. RMB offices

Figure 29. View towards the west from N1, Atterbury road offramp

Figure 30. New Investec offices

Figure 31. City town lodge, Atterbury road

Figure 32. Attitude office park, Atterbury road

Figure 33. BOE building,

2.2.2 MOVEMENT & ACCESSIBILITY

The site is easy accessible from almost all major economic corridors via the N1 and various other main routes like Charles, Atterbury, Garsfontein and Lynwood roads.

The existing pick-up and drop-off transport system of New Hope School will be utilized and extended for the purpose of the new Rehabilitation Centre.

Charles Street is allocated as n proposed commercial/retail corridor that forms a direct link between the city centre and the east of Pretoria. Charles Street is currently upgraded to widen the link between the city and Pretoria east.

Although there is no train or Gautrain connections linked to the Menlo Park area, the area is frequently serviced by taxi's and busses.

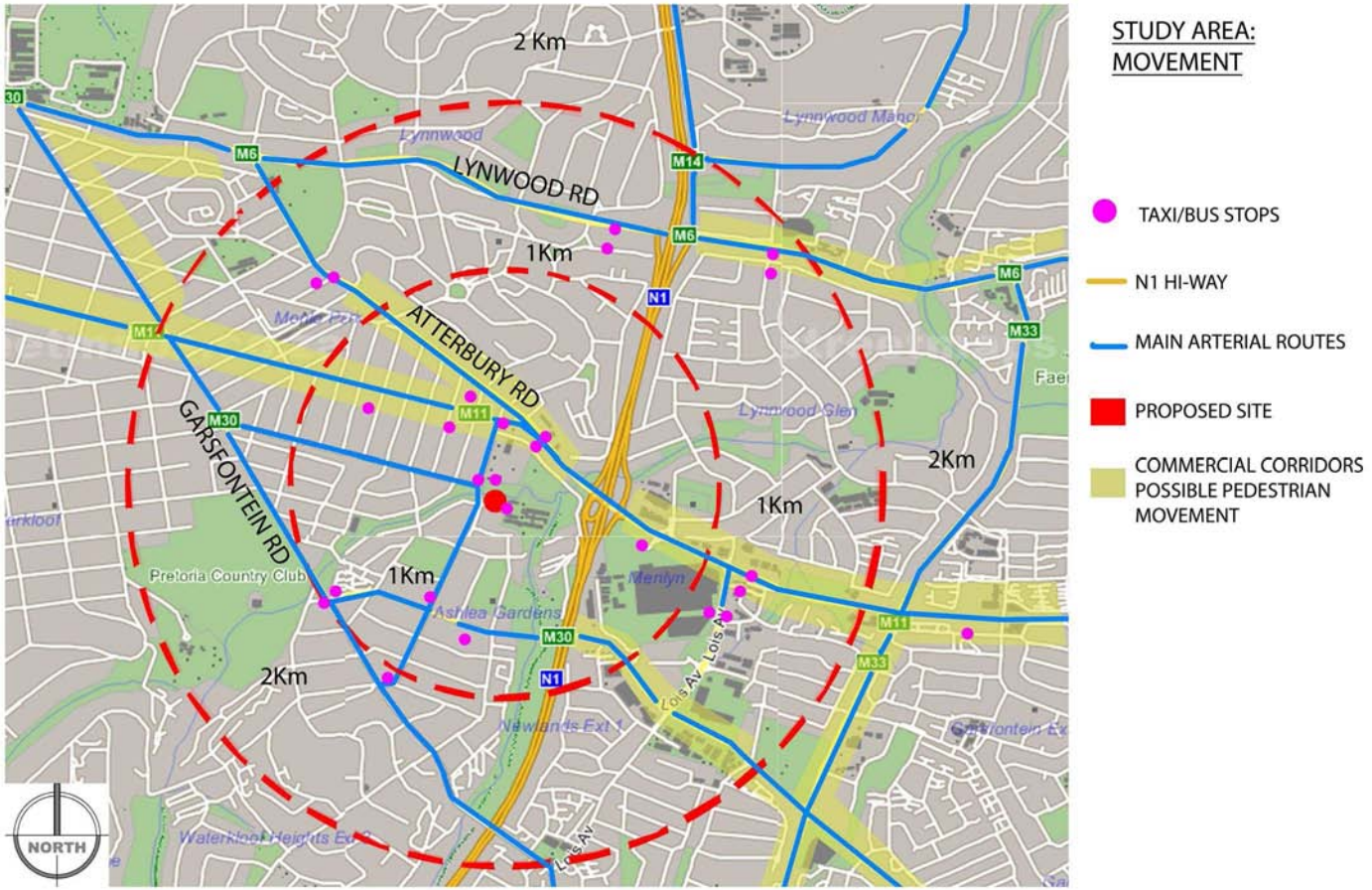


Figure 34. Movement map for macro site

2.2 MACRO SITE

This diagram indicates the direct link from the proposed site to the inner city via Charles street. Charles street is currently being up-graded by the City of Tshwane through a R87 million project .

Charles street is currently zoned with business rights and forms the basis of the economic belt with small and medium businesses between Pretoria East and the CBD.

This economic corridor would attract people and thus expose the proposed Rehabilitation Centre.

This movement study solves the problem of choosing a site within an existing economic node or belt which will be accessible for people from all parts of Pretoria as well as from cities

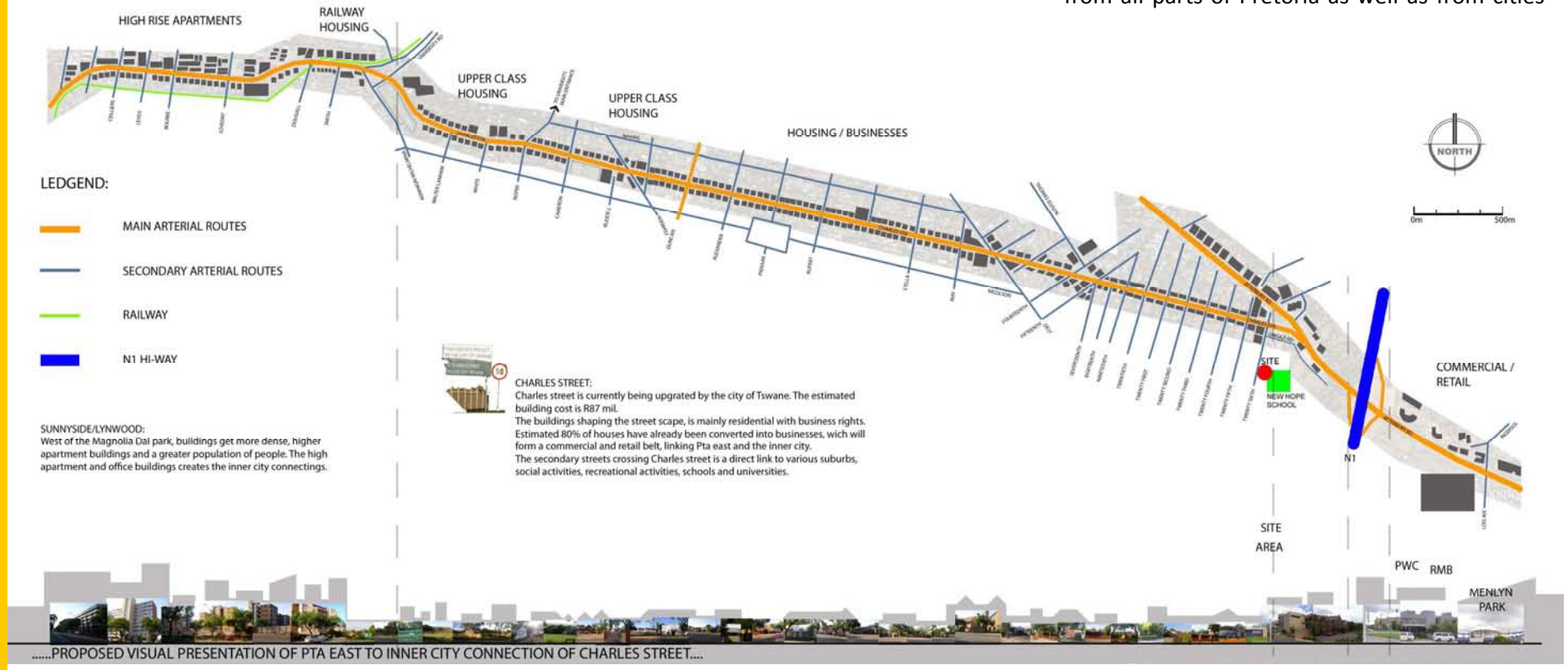


Figure 35. Charles street link between Pretoria East and the inner city

2.3 MICRO SITE

The project site is located on the north western edge of New Hope School. The proposed site would be consolidated with the existing site of New Hope School.

The site is bordered by Ceceilia road on the southern side and by 26th avenue on the western side. To the north of the site, an open green area is formed around Waterkloof spruit that is running from east to west, originating from the Waterkloof suburbs and flowing into the Struben dam in Faerie Glen.

The current stand number is 162 Ceceilia road, erf 155, Ashlea Gardens.

Figure 36. 200 m radius map of project area

2.3.1 CONTEXT

PROPOSED SITE:

The proposed site is currently zoned as open green area, but is not being used as one. However, the open green area north of the site does accommodate people using it for its purposes.

NEW HOPE SCHOOL

New Hope School was established in 1971 by Dr. Potgieter and started with only 33 children and is today one of the largest learning centers in the country, which makes provision for the education and treatment of learners with special educational needs.

Education and therapy are provided by almost 70 teachers and therapists in an educational environment which accommodates learners of all cultures, classes and beliefs. This learning center is state subsidized and is managed by a governing body.

At present New Hope has 410 learners who receive instruction on pre-primary, primary and secondary levels. Outpatients comprising of babies from 0-3 years old are treated twice a week. Cerebral palsied learners who are too disabled to follow the ordinary school curriculum are taught in special classes.

Continual education and evaluation is done by a multi-disciplinary team comprising of psychologists, speech therapists, occupational therapists, physiotherapists and teachers.

Currently the rehabilitation area is cramped into a small space which was originally allocated for classrooms.

WATERKLOOFSPRUIT:

Waterkloofspruit forms a major feature of the proposed site and could be rehabilitated and incorporated into the design. The spruit originates in the waterkloof area, mostly because of storm water run off, flowing from east to west and end up in the Struben dam in Faerie Glen.

SPORTS GROUNDS:

The school's sports grounds are detached from the school building and connected by a paved road through the green area.

Figure 37. Photo of entrance of New Hope School

Figure 38. Photo of Waterkloof spruit

Figure 39. New Hope School sport grounds

2.3 MICRO SITE

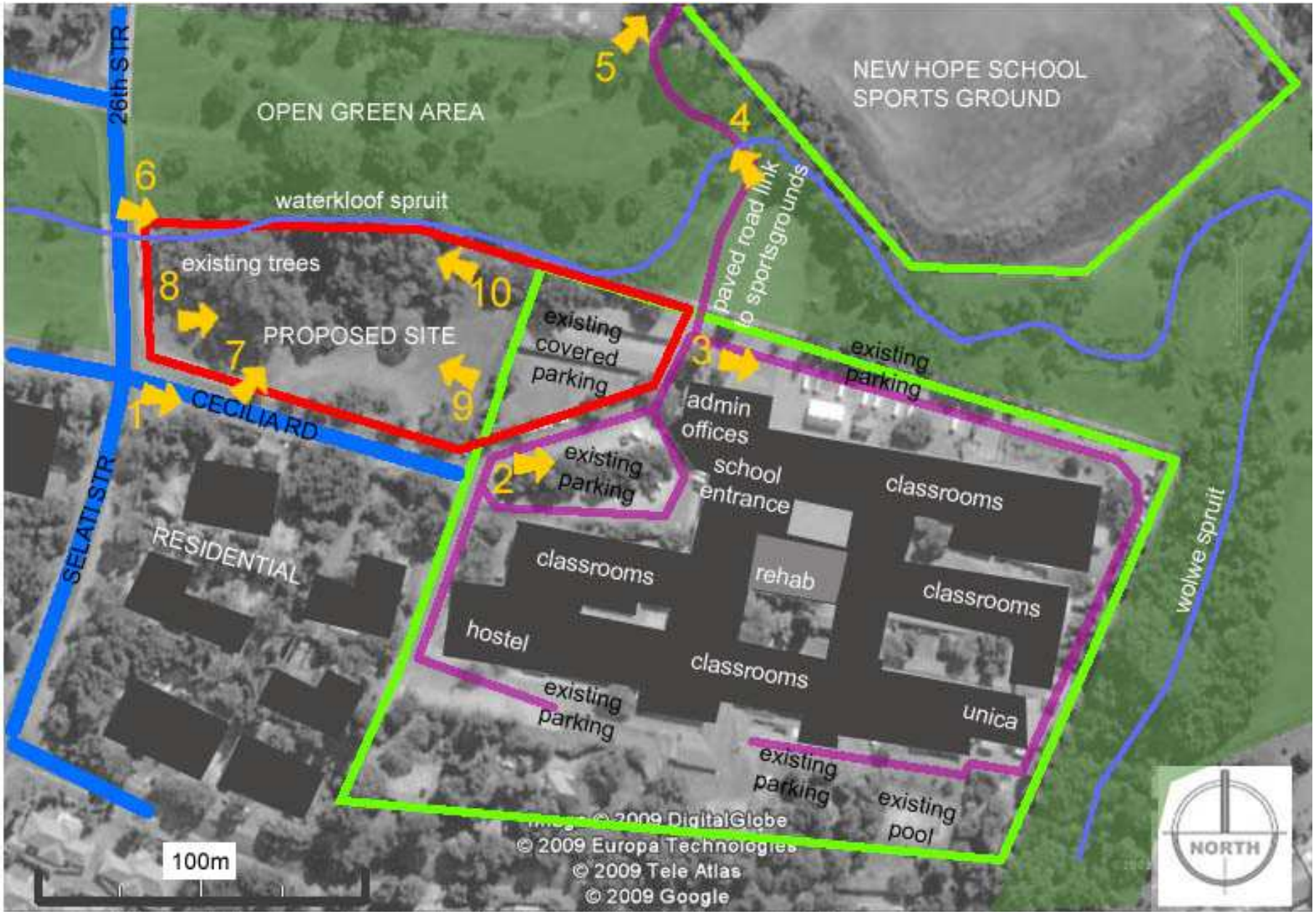


Figure 40. Accommodation diagram of micro site

2.3 MICRO SITE

Figure 41. View towards main entrance gate of New Hope School

Figure 42. Main entrance of New Hope School building

Figure 43. View towards existing New Hope School transport parking area

Figure 44. Existing bridge over Waterkloof spruit on interior road towards sport grounds

Figure 45. Road towards sport grounds

Figure 46. Waterkloof spruit

Figure 47. Proposed site photo.

Figure 48. Proposed site photo

Figure 49. Proposed site photo

Figure 50. Proposed site photo

2.3.2 MOVEMENT & ACCESSIBILITY

The main entrance to the existing school site is situated on the eastern end of Ceceilia road.

When entering the school site, the visitor will face a deformed circle that leads to the drop-off zone and all internal roads will initiate from here. The inside of the circle is currently being used for personnel parking mixed with visitor parking, if the visitor could find a space.

A 4 meter wide paved road leads to the scattered parking areas around the School, which works on a first come first serve basis.

The vehicular movement and parking arrangements within the School site could be redesigned in a more organized manner by allocating the parking.

The current circle at the entrance of the school would be redesigned to present an organized entrance to the School.

A designed square would be created to link the existing School and the new Rehabilitation Centre.

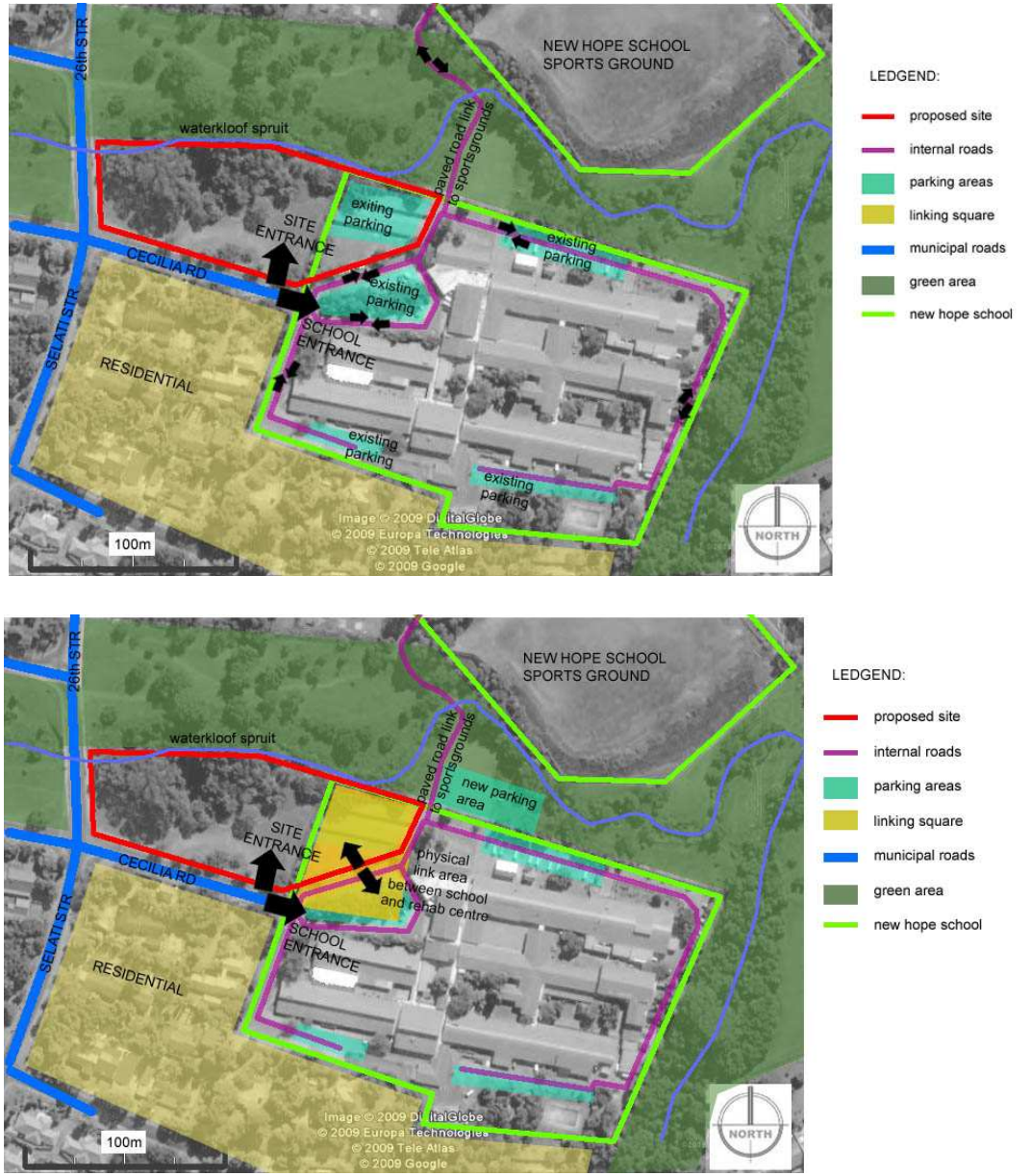


Figure 51. Movement diagrams of proposed site.

2.4 PHYSICAL CONTEXT

2.4.1 NATURAL FEATURES

CLIMATE:

Pretoria falls into the temperature eastern plateau region. Generally this area consists of predominantly grasslands with scattered trees in the wetter areas. Summers are warm to hot, with fairly dry air, relieved by thunder storms generated by thermal air movement. Hail is not uncommon. Winter days are pleasantly sunny with clear cold to very cold nights. (Napier,2000)

RAIN:

The rainy season occurs from November to March, peaking in January. 50 to 80 days of rain can be expected annually.

CLIMATE FACTS:

January temperature:	20 to 25deg C
June temperature:	10 to 15 deg C
Prevailing winds:	NE to NW in winter
Relative humidity:	3 0 %
Hours sunshine:	60%
Average Rainfall:	670mm
Winter solstice:	22 June 41deg
Summer solstice:	22 December 88deg

The large north faced site boundary provides a great opportunity for a building design that is climatically automated by natural elements. The prevailing North eastern wind in the summer flowing over the spruit could provide good cooling down possibilities with effective design.

The penetrating angle of the sun will be kept in mind when designing internal spaces. The natural elements like hail, could lead to the use of gutters for capturing of rain water and using it for external purposes.

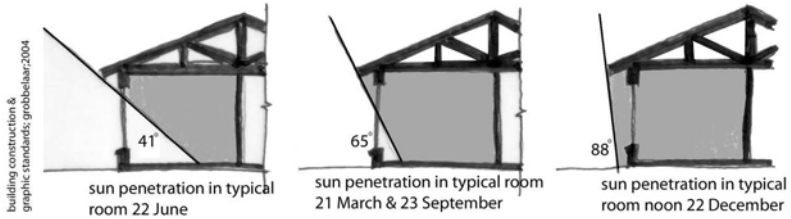


Figure 52. Penetrating angles of the sun

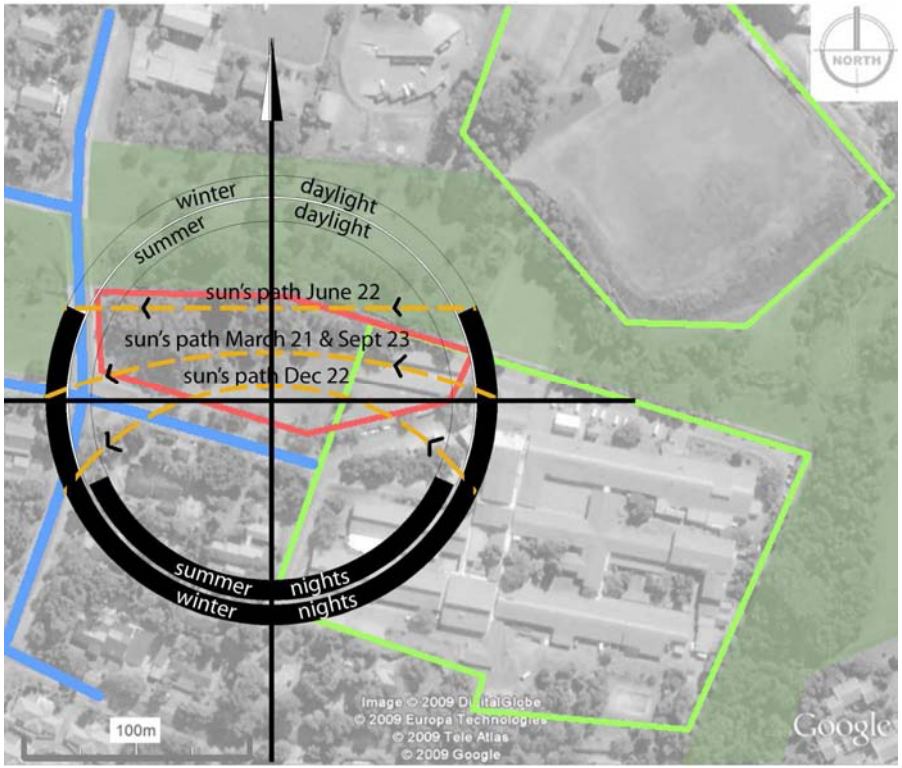


Figure 53. Sun solstice