Pedestrian spine that will become the backbone which all the sport facilities will feed from in the developing sports hub.
According to the site analysis the surrounding sites are mainly sports venues that contribute that this area can be classified as a sports hub in Centurion. According to the Centurion Integrated Development Framework this zone should be used for sport development and recreational facilities. With all the surrounding sports facilities a central pedestrian spine is developing from which all the facilities will feed from. The Centurion Rugby Club will be upgraded for rugby, soccer and other sport that need fields for training. Any further sports development will take place on the eastern side of South Street. The pedestrian spine will be the linkage between the existing sports hub and new proposals for sport facilities.
Proposed area for HPC. Interactive connection with river front.

Proposed area for accommodation which will be connected with a pedestrian bridge to the developing sports hub.

Proposed Learning Centre for high performance athletes of school going age and hostels

Proposed Parking area for developing sports hub

Indicate the main routes between different areas of Hi Performance Sport Centre as well as links with the sports hub.

Connection between the proposed HPC and SuperSport Park.

Proposed area for further sport development which will contribute to the existing sports hub.

Proposed central parking for developing sports hub.

Pedestrian spine which will become the backbone from which all the sport facilities will feed from

Main entrance to site and sports hub. Will became an important node in further development of sports hub.

This entrance may become the primary entrance to the developing spots hub.

Entrance limited for services only
SportScience Centre

The Hi-Performance centre sport science services vision is to be a state of the art leader in revolutionizing the management of sport performance and sport development in South-Africa.

The sport science services will offer a seamless product mix, appealing to the high performance athletes who belong to the top echelons of their national, provincial, club or school structure, performance enhances who want to improve their performance, health and fitness enthusiasts, and patients requiring rehabilitation and intervention who are required by virtue of an injury or illness to a frequent curative service.

Medical Research Centre

With the aim of being the state of the art leader in multi disciplinary assessments, the assessment centre will offer a range of products focussing on scientific analysis and the measurement of an individual entailing physical and psychological assessment.

The product mix will include:
- Comprehensive biophysical measures
- Lifestyle behaviour assessment and potential to improve lifestyle management of individuals
- Measurement of individual potential in specific sport, such as rugby, soccer, tennis, etc.
- Comprehensive medical profiling
- Assessment of individual rehabilitation potential related to orthopaedic, neurological and cardiovascular conditions
- Assessment of specific Performance Management Potential of an individual.
Sport Science Gym

The sport science gym is set to revolutionize the health and fitness industry in South Africa by:

- Using advanced training technology
- Employing multi disciplinary professional staff members and applying a scientific paradigm.
- Lifestyle management and education
- Outcomes-based measurement and reporting on multi disciplinary intervention strategies
- Networking and initiating synergistic relations with other role players in the industry

Sport Science Gymnasium uses the most advanced equipment and technology currently available in the fitness industry using SmartTechnology®, which provides an outstanding way to manage exercise and training. This is integrated with other software programs to provide a comprehensive member management system.

The Smart Key® is a computerized key that is assigned to each member once they have been through a health and fitness assessment. The key stores all personal data and is used to log training sessions. For each training session it is inserted into the control panel of the TechnoGym® System equipment, where it directs and controls the workout intensity and records all the information from the session. The Wellness Expert® is an interactive touch screen computer console providing feed for members to view workout details for the day, test results, previous training results and performance indices, and to download the information saved from a completed workout onto the central database.

The training system used by Sport Science Gymnasium during lifestyle management is uniquely sophisticated in that:

- All cardiovascular training is heart rate controlled (even spinning and aerobics classes). Heart rate controlled training increases the individual effectiveness and safety of cardiovascular training. It enables one to exercise at an intensity that stimulates the optimal adaptation for specific goals without the risk of under or over training. It also provides a safe environment for members with high cardiac risk, or previous cardiac problems to exercise in a safe, monitored manner.
- Strength training controls range and speed of motion. Once again, the control facilitates optimal adaptation and avoidance of injuries. It also provides an environment for those members with special exercise needs to work safely.
- The individual “key” directs and controls each workout, and gives immediate feedback on exercise execution and records workout data. This biofeedback system ensures that the intensity of exercise and rate of progression is determined individually and internally. Internal control means the system is responding to the person holistically, which is essential as mental, emotional, and psychological factors all contribute toward physiological responsiveness.
Auditorium

The Auditorium will provide a high tech environment focussing on comfort with ergonomically designed chairs, and will be enhanced by state of the art audiovisual equipment. The auditorium will be available for hiring to groups and will also be able to screen movies and sporting footage at regular intervals for individuals and groups to enjoy.

Learning Centre

The learning centre’s vision is to create a centre of academic distinction that compliments and echoes the vision of its sport partners.

The learning centre will offer a flexible and internationally recognised academic programme to high performance athletes of school going age. The learning centre will acknowledge and support the unique sporting needs of its learners, but will also place a high premium on academic excellence. It will embrace the Hi-Performance centre philosophy of holistic development, and will aim at developing well-rounded sporting individuals.

The learning centre will support learners in their goal to achieve academic distinction by offering:

- A curriculum of the highest academic standard that is recognised by Universities and Technikons, nationally and internationally
- Establishing and maintaining communication with various sports coaches to detail the academic and sport programmes of learners
- Designing tailor-made academic paths for students, taking cognisance of their sporting programmes
- Offering a structured learning environment in which learning is facilitated by supportive and highly qualified teachers and tutors
- Embracing technology by providing interactive computer assisted learning programmes that allow learners to keep up with their studies despite their demanding schedules.
- Allowing learning to take place at learners’ own time and pace
- Implementing a system of continues assessment that will allow learners and teachers to monitor the academic progress of learners
- Implementing a comprehensive life skills programme to equip learners with necessary skills to fulfil their roles as responsible citizens of the world.
## Accommodation Schedule

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Area</th>
<th>Total area</th>
<th>Light intensity</th>
<th>Temperatures</th>
<th>Ventilation</th>
<th>Air changes</th>
</tr>
</thead>
</table>
### Administrative area
- **Entrance**: 151 m², 18 ºC, 0.50 W/m³ ºC
- **Reception**: 30 m², 18 ºC, 0.33 W/m³ ºC
- **Administrational offices**: 4 rooms, 22 m² per office, 88 m², 20 ºC, 0.33 W/m³ ºC
- **Strongroom**: 5 m², 18 ºC, 0.08 W/m³ ºC
- **Security office**: 12 m², 20 ºC, 0.33 W/m³ ºC
- **Shop**: 341 m², 18 ºC, 0.17 W/m³ ºC
- **Circulation**: 12 m²
### Gymnasium
- **Control desk/Supplements**: 24.6 m², 500 lux, 20-60 ºC
- **4 Consultation rooms**: 16.3 m² per room, 65 m², 500 lux, 18-21 ºC, 0.17 W/m³ ºC
- **Circuit training and Cardio equipment**: 420 m², 200 lux, 16 ºC, 0.25 W/m³ ºC
- **Weight training**: 361 m², 200 lux, 16 ºC, 0.25 W/m³ ºC
- **VIP Weight training**: 275 m², 200 lux, 16 ºC, 0.25 W/m³ ºC
- **Aerobics**: 245 m², 200 lux, 16 ºC, 0.25 W/m³ ºC
- **Toilets**: 87 m², 100 lux, 24 ºC, 0.33 W/m³ ºC
  - **Male**: 83.8 m²
  - **Female**: 101 m²
### Circulation
- **Restaurant**: 45 m²
  - **Restaurant**: 701 m², 1.4 m² per seat, 462 m², 200 lux, 18 ºC, 0.33 W/m³ ºC
  - **Kitchen**: 101 m², 500 lux, 18 ºC, 0.33 W/m³ ºC
  - **Circulation**: 115 m²
  - **Toilets**: 23 m², 100 lux, 24 ºC, 0.33 W/m³ ºC
  - **Male**: 11.5 m², 23 m², 100 lux, 24 ºC, 0.33 W/m³ ºC
  - **Female**: 11.5 m², 23 m², 100 lux, 24 ºC, 0.33 W/m³ ºC
### Medical
- **Reception/Office**: 20 m², 200 lux, 20 ºC, 0.50 W/m³ ºC
- **Storeroom**: 3 m², 15 ºC, 0.08 W/m³ ºC
- **Waiting room**: 27.8 m², 18 ºC, 0.67 W/m³ ºC
- **5 Consultation rooms**: 22.6 m² per room, 113 m², 500 lux, 18-21 ºC, 0.17 W/m³ ºC
- **Circulation**: 30.9 m², 263.2 m², 200 lux, 18 ºC, 0.25 W/m³ ºC
- **Toilets**: 37.4 m², 100 lux, 24 ºC, 0.33 W/m³ ºC
  - **Male**: 17.9 m², 23 m², 100 lux, 24 ºC, 0.33 W/m³ ºC
  - **Female**: 19.5 m², 23 m², 100 lux, 24 ºC, 0.33 W/m³ ºC
### Auditorium
- **100 persons**: 275.9 m², 100 lux, 18 ºC, 0.67 W/m³ ºC
### Swimming
- **2055 m²**: 8 lanes
  - **Swimming pool**: 1512 m², 200 lux, 26 ºC, 0.17 W/m³ ºC
  - **Pavilion for 1200 people**: 600 m², 200 lux, 26 ºC, 0.17 W/m³ ºC
  - **Pump and services**: 95 m², 18 ºC, 0.25 W/m³ ºC
  - **Office and administration**: 130 m², 200 lux, 20 ºC, 0.5 W/m³ ºC
  - **Circulation**: 182 m²
### Squash
- **2 Courts**: 63.8 m², 127.6 m²
  - **Pavilion for 132 people**: 71 m², 18 ºC, 0.25 W/m³ ºC
  - **Circulation**: 21 m²
### Indoor openspace
- **5312 m²**: 200 lux, 18 ºC, 0.25 W/m³ ºC
### TOTAL
- **11,218 m²**