

Annexure A - eThekweni Municipality Health & Safety Specification



ETHEKWINI MUNICIPALITY Occupational Health & Safety Directorate

BASELINE RISK ASSESSMENT

Document Title	Baseline Risk Assessment
Client	eThekweni Municipality – Human settlements
Project	Construction of 28 Community Residential Units Block E at 8 Donnelly Road, Bluff, Durban
Contract Number	1H-36601
Internal reference	BRA05/10/2025
Compiled by (Safety officer)	Name and surname: Siya Nkosi Signature:  Date: 30/09/2026
Reviewed by (Manager: Safety & Risk)	Name and surname: Arty Zondi Signature:  Date: 30/09/2026

BASELINE RISK ASSESSMENT

1. INTRODUCTION: In accordance with the Occupational Health and Safety Act, (Act 85 of 1993) the Legislator places specific requirements on an Employer. One of these is prescribed in Section 8(i) of the Act where it requires the Employer to ascertain the risks and dangers which may occur within the workplace or section of the workplace and then goes on to establish working procedures or practices.

2. PURPOSE: This is conducted to create a benchmark of the potential risks that apply to the whole project or business operation.

3. SCOPE: This assessment could be approached on a site, regional or national level concerning any facet of the business operation or process or activity.

4. REVIEW AND MONITORING PLAN

The risk assessment form part of the health and safety plan to be applied on the site and must include the following:

- (a) The identification of the risk and hazards to which persons may be exposed.
- (b) An analysis and evaluation of the risk and hazards identified based on a documented method,
- (c) A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- (d) A monitoring plan; and
- (e) A review plan

5. REFERENCES

- (a) Tender document number 1H-36601
- (b) Occupational Health & Safety Act and its Regulations

6. LOCALITY PLAN



SCOPE OF WORK

Site establishment

Site clearing

Electrical installations

Hand tools and electrical tools

Construction vehicles and mobile plants

Public safety

Elevated positions/ Scaffolding

Excavations

Concrete works

Blockwork;

Plastering and Painting

Roof work

Temporary works

Piling

Demolition

Retaining wall

1. RISK ESTIMATION AND EVALUATION

RISK CLASSIFICATION USING A RISK SCORE TECHNIQUE

Exposure (E) How frequently does the hazardous event occur	Risk level
Continuously	10
Frequently (daily)	6
Occasionally (weekly)	3
Unusually (monthly)	2
Rarely (few a year)	1

Probability (P) The probability of a loss when the hazardous event does occur	Risk level
Frequent (happens often)	10
Probable (quite possible)	6
Occasional (unusual, but possible)	3
Remotely possible (has happened somewhere)	1
Improbable (practically impossible)	0.5

Severity (S) Consequences of the hazardous event		Risk level
Catastrophic many fatalities; or interruption of longer than 2 weeks; or asset or environmental damage (or both) exceeding R100m		100
Disaster (few fatalities; or interruption between one and 2 weeks; or asset or environmental damage (or both) exceeding R10m)		40
Very serious (one fatality; or interruption of 6 days; or asset or environmental damage (or both) exceeding R100,000		7
Important (temporary disability; or interruption between 6 and 24 hours; or damage exceeding R10,000		3
Noticeable (first aid needed; or interruption of less than 6 hours; damage exceeding R1000)		1

Risk classification (Risk score = E x P x S)	
Risk score	Risk level
Over 400-----5	
200 to 400 ----- 4	
70 to 200----- 3	
20 to 70----- 2	
Under 20 ----- 1	

High risk – immediate correction needed
 Substantial risk – correction needed
 Possible risk – attention needed
 Risk accepted

BASELINE RISK ASSESSMENT WORKSHEET: IDENTIFYING EXISTING & POTENTIAL RISKS

	Activity	Hazard	Risk	Risk Evaluation			Risk Score	Risk level
				E	P	S		
1	Site establishment							
	Manual and mechanical clearing of the land. Off-loading and positioning of containers by mobile crane. Fencing. Installation of temporary water supply, electricity, ablution facilities	Incompetent construction mobile plant operator. Manual Handling of equipment and materials. Uneven surfaces. Driving on dangerous and undulating terrain. Reckless driving. Electrocution. Incorrect/ poor connection of temporary services	Body injuries/ Accidents. Destruction of services. Burns/ death	2	6	3	36	2
2	Site clearing							
	Clearing of the site using construction mobile plant and hand tools	Incompetent driver/ operator; Unsafe	Accident; property damage; machinery running out of control; Injury to body;	3	6	7	126	3

		construction mobile plant/ hand tools; Petrol and oil spillages; Existing services; Noise	Environmental contamination; Noise induced hearing loss					
3	Electrical installations							
		Incompetent personnel. Unsafe hand-tools/ electrical tools. Unsafe ladder. Electrocution	Improper installation of electricity/ non-compliance with safety standards. Injury to hands. Burns; electric shock	3	3	7	63	2
4	Hand tools and electrical tools							
		Unsafe tools; Untrained or unauthorized operator;	Injury to body; damage of tools	6	3	1	18	1
5	Construction mobile plant and vehicles							
		Untrained operator or driver; noise; dust; vibration; other vehicles	Collision with other vehicles; damage to property; noise induced hearing loss; body pain; death; disablement ect.	6	6	7	252	4
6	Public safety							

		Public exposure to construction activities; fighting over resources	Injury to body; work stoppage; Legal claims	6	6	7	252	4
7	Elevated positions/ Scaffolding							
		Falling from; falling into; Unsafe scaffolding; Untrained erectors; Uneven surfaces	Death; Broken bone; Disablement; Unsafe scaffold; Collapsing scaffolding	6	6	7	252	4
8	Excavations							
	Manual and mechanical excavation of trenches using construction mobile plants and hand tools	Unsafe machinery/ hand tools/ Unprotected trenches/ People exposure to excavations; Falling into excavation	Broken bone/ dislocation/ Accidents/ injuries to hands/ Falling into excavation/ claims and prosecutions	6	6	7	252	4
9	Concrete works							
		Concrete spillage/ Concrete contact with	Soil contamination/ Skin problems	3	3	3	27	2

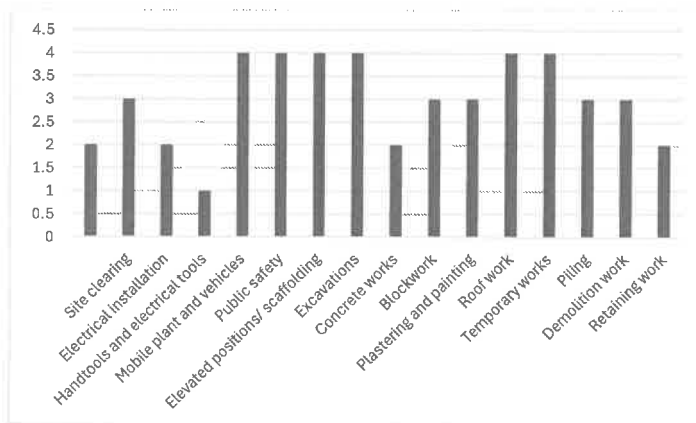
		body						
10	Blockwork							
		Unsafe working at height platforms/ scaffolding; Unsafe hand tools; Contact with mortar	Fall risk; broken bone; dislocation; Injury to hands; Skin dermatitis	6	6	3	108	3
11	Plastering and painting							
		Flying objects; Contact with mortar; Falling from elevated positions; Paint inhalation	Eye damage; Skin irritation; broken bone; Disability; Respiratory disease;	3	6	7	126	3
12	Roof work							
		Working on fall risk position; Unsafe roof access; Untrained roof erectors; No/ poor roof work planning; Collapsing of the roof; Falling objects	Falling from; Falling into; broken borne; death; disablement; Head injuries	6	6	7	252	4

13	Temporary works							
		Collapsing of temporary structure; Incompetent temporary supervision; Noncompliance with engineers drawing/ instruction; Unsafe temporary works	Death; temporary or permanent disable; incorrect erection of temporary works; Injuries to body	6	6	7	252	4
14	Piling							
	Piling works using heavy machinery	Weak and uneven soil; Moving parts of piling rigs; Underground services; Excessive noise and vibration	Heavy rigs can sink or collapse; Struck-by; Crushing risks; Striking hidden services and damage to property	6	6	3	108	3
15	Demolition work							
	Demolition using machinery and handtools	Uncontrolled collapsing of structure; Unsafe machinery and handtools; Flying objects	Struck-by; Injury to body; Machinery running out of control; Eye damage	3	6	7	126	3

16	Retaining walls							
	Excavation and placing retaining blocks	Falling into excavation; Unsafe access into excavation; Manual handling of blocks	Broken bone; Dislocation; Fall into; Injury to hands and feet	3	3	3	27	2

RISK PROFILE:

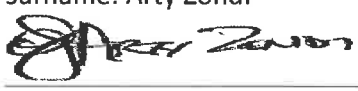
Construction of 28 Community Residential Units Block E at 8 Donnelly Road, Bluff, Durban



ETHEKWINI MUNICIPALITY
Occupational Health & Safety Directorate



**Site Specific Health and Safety Specification in terms of 2014
Construction Regulations 5.1(b)**

Document Title	Site Specific Health and Safety Specification
Client	eThekweni Municipality - Human Settlements
Project Name	Construction of 28 Community Residential Units Block E at 8 Donnelly Road, Bluff, Durban
Contract Number	1H-36601
Internal reference no.	SSHSS05/10/2025
Compiled by (Safety officer)	Name and surname: Siya Nkosi Signature:  Date: 01/10/2026
Reviewed by (Manager: Safety& Risk)	Name and surname: Arty Zondi Signature:  Date: 01/10/2026

PROJECT LOCALITY



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1. DEFINITIONS

For the purpose of this Construction Health and Safety Specification, all definitions in the Occupational Health and Safety Act and Regulations, the abbreviations and the definitions given hereunder shall apply; where definitions may overlap, the most onerous requirement shall apply:

Acronym or Definition	Meaning
Agent	Refer to the Agent appointed by the Client to act on its behalf, and who is appointed in writing
CHSS	Refers to this document as the Construction Health and Safety Specification
Client	Refers to eThekweni Municipality
COIDA	Means Compensation for Occupational Injuries and Diseases Act 130 of 1993
Construction Site	Means the premises and grounds where construction work is being performed
Principal Contractor	Means an employer appointed by the Client to perform construction works
CR	Refers to the Construction Regulations of 2014
DSTI	Refer to Daily Safety Task Instruction
H&S	Refers to Health and Safety
Medical Certificate of Fitness	Means a valid medical certificate of fitness issued by an occupational medicine practitioner, such medical testing shall be relevant to the risks of the construction work on the construction site and shall conform to the Occupational Health and Safety Act and Regulations and to the requirement of this Health and Safety Specification
Method Statement	Refer to a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in the Risk Assessment
OHSA	Refer to the Occupational Health and Safety Act
Regulations	Refer to the Regulations stipulated in the OHSA
S	Refer to a section in the OHSA
SACPCMP	Means the South African Council for the Project and Construction Management Professions
Sub-Contractor	Means an employer appointed by the Principal Contractor

2. PROJECT DESCRIPTION AND SITE ACCESS

The works will take place at 8 Donnelly in the Southern Region of the Municipality in Ward No. 66 and is for the construction of Community Residential Units comprising of 28 units [20 x 1 bedroom and 8 x 2 bedroom units] - 4 storey walk ups. The work will include , inter alia, the following:-

- Demolishing of existing buildings
- Excavation and Earthworks
- Retaining walls
- Piling and pile caps
- Ground Beams and surface bed
- Column, slabs and staircases [4 storeys]
- Roof trusses and sheeting
- Aluminium windows
- Wooden door frames and doors
- Plaster inside and outside
- Electrical and plumbing
- Paint – internal and external
- Balustrades
- External Works

3. LIMITATIONS OF LIABILITY

The Principal Contractor shall enter into a Mandatory Agreement with the Client, as defined in Section 37(2) of the Occupational Health and Safety ACT.

The Principal Contractor shall ensure that each contractor appointed by the Principal Contractor and each sub-contractor appointed by a contractor also into a Mandatory Agreement with the Principal Contractor, as defined in Section 37(2) of the Occupational Health and Safety ACT. These agreements shall be included in the Principal Contractor's H&S File on site and be valid for the duration of the contractors' work on the construction site.

4. PURPOSE OF THE CONSTRUCTION H&S SPECIFICATION

This document defines the minimum management requirement that is to be implemented by the Principal Contractor/Contractor for the management of Health and Safety on any eThekweni Municipality project.

The aim of this document is to present the health and safety aspects that need to be controlled and managed on the project.

This Health and Safety specification identifies and encompasses the working behaviours and safe work practices that are expected of all employees, Vendors and Contractors, Sub-Contractors and Visitors, engaged on construction site.

Providing a guideline to comply with best Health & Safety practices and the Occupational Health and Safety Act 85/1993 as amended, including reference to applicable legislative requirement.

5. PROJECT HEALTH AND SAFETY COST

The Client must ensure that potential Principal Contractor submitting tenders have made adequate provision for the cost of health and safety measures.

The Principal Contractor shall allow in their cost provision for complying with the requirements of this Construction Health and Safety Specification; resources for the following Health and Safety controls shall be in place.

	H&S cost item	Description
1.	Construction health and safety officer	A full-time Construction health and safety officer is required to ensure that the health and safety plan is implemented on site. The Safety officer must be registered with SACPCMP as a CHSO
2.	Safety file	Full completed with all supporting documents
3.	Training and competencies	Risk assessor, Incident Investigator, Fire fighter, First aider; fall protection planner
4	Medical certificate of fitness	Medical examination of all employees and certification of fitness by an Occupational Medicine Practitioner Pre- employment and annual
5	PPE	Personal Protective Equipment to be provided as per risk exposure, including but not limited to: respiratory protection, hearing protection, hand protection, eye and face protection and fall protection
6	Temporary work	Compliance with Temporary work Regulations
7	Public safety	Notices; signage; barricade ect.
8	Employee facilities	Refer to the Facilities Regulations (ablution toilets)

9	Signage	All construction safety signage required for the project
10	Environmental management	Compliance with all applicable Environmental Management Regulations
11	Fall protection planning and scaffolding	Compliance with all protection and prevention measures

6. SCOPE OF WORK

The works/ risk assessments must include but not limited to:

Site establishment
 Site clearing
 Electrical installations
 Hand tools and electrical tools
 Construction vehicles and mobile plants
 Public safety
 Elevated positions/ Scaffolding
 Excavations
 Concrete works
 Blockwork;
 Plastering and Painting
 Roof work
 Temporary works
 Piling
 Demolition

7. COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT

The Principal Contractor, each contractor and each sub-contractor shall submit proof of Good Standing with COIDA Commissioner or a Mutual Association licensed in terms of Section 30 of COIDA, prior to starting any work on site. A copy of the Letter of Good Standing with COIDA Commissioner must be included in the H&S Plan of each contractor working on the site and must remain updated for the duration of the construction work.

8. APPLICATION FOR CONSTRUCTION WORK PERMIT

The Principal Contractor shall assist the Client in compiling the evidence required by the Department of Labour for the issuing of the Construction Work Permit. The Principal Contractor shall ensure that the H&S Plan presented for approvals includes:

- Evidence that the Principal Contractor made adequate provision for the cost of H&S measures
- Evidence that the Principal Contractor has the necessary competencies and resources to carry out the construction work safely.
- A copy of the Letter of appointment of the Construction Manager in terms of CR 8(1) + proof of his qualification, competence and registration where applicable.
- Proof of the registration of the Principal Contractors safety officer with the SACPCMP.

The Principal Contractor shall display the work permit number at the main site entrance. This display must be conspicuous to the satisfaction of the Department of Labour. The permit must be noticeable. The construction works can only commence once the construction work permit is issued by the Department of Labour

9. MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK

During the submission of your health and safety file for approval, please ensure that at least the following appointments are submitted with the file

- OHS16(1) Resolution letter
- Construction manager CR8(1)
- Construction work supervisor CR8(7)
- Construction health and safety officer CR8(5)
- Risk assessor CR9(1)
- Incident investigator GAR9(2)
- Fall protection planner CR10(1)
- Temporary work
- Excavation supervisor
- Demolition supervisor

9.1 Construction Manager

The Principal Contractor shall appoint a full time competent person as the construction manager with the duty of managing all construction on the site including the duty of ensuring occupational health and safety compliance. The Construction Manager must demonstrate competency in relation to work being performed and the ability to manage construction work which may include making all statutory appointments in terms of health and safety. The experience/ competency must be as indicated in the tender document.

9.2 Construction health and safety officer

The Principal Contractor shall appoint a full-time competent SACPCMP registered Construction Health and Safety Officer for the construction work, with at least 2 years in the construction industry as a construction health and safety officer.

9.3 Construction Supervisor

A Construction Manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site. A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor contemplated in sub regulation (7), and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties in terms of this regulation.

10. PRINCIPAL CONTRACTOR'S HEALTH AND SAFETY PLAN

The Principal Contractor shall submit a suitable, sufficiently documented and coherent specific health and safety plan based on the Client documented Health and Safety Specification. The health and safety plan shall include but not limited to the following.

- Objectives
- Scope of work
- Management of construction and supervision
- Monitoring and review plan
- Sub-contractor management
- Construction Work Permit Application
- COIDA
- Risk Assessment and written Safe Working Procedures
- Incident Management
- First Aid
- Emergency procedures

- Fire Prevention & Protection
- Health and safety rep
- Health and safety committee
- PPE Provision
- Health & Safety Signage
- Construction Vehicles and Mobile Plants
- Hand tools and Electrical Tool Management
- Construction Employees Facilities
- Health & Safety Policies
- Health and Safety Training & Competencies
- Housekeeping
- Hazardous Chemicals
- Inductions
- Medicals
- Stacking and Storage
- Internal and external Audit
- Inspection Registers
- Toolbox Talks
- Environmental management
- Public safety
- Temporary work
- Excavations
- Demolition work
- Scaffolding works
- Roof work

11. HAZARD IDENTIFICATION AND RISK ASSESSMENT

The Principal Contractor shall before commencement of any construction and during such construction works have risk assessments performed by appointed competent person in writing which forms part of the health and safety plan to be applied.

The provisions of Regulation 9 of the Construction Regulations shall be followed in every detail.

12. HEALTH AND SAFETY FILE

The Client must discuss and negotiate with a Principal Contractor the content of the Health and Safety Plan and thereafter finally approve the Health and Safety plan for implementation. The recommended Health and Safety file shall include the following:

- *Health and safety policy*
- *Environmental policy*
- *PPE policy*
- *HIV/ AIDS Policy*
- *Alcohol Abuse Policy*
- *Client health & safety specification and Baseline*
- *Principal contractor health & safety plan*
- *Letter of good standing*
- *Section 37.2 Mandatory Agreement*
- *Contractor appointment letter in terms of CR 5.1(k)*
- *Legal appointments and competencies*
- *Risk Assessments as per scope of work*
- *Safe working procedures for each task*
- *Incident/Accident management procedures*
- *Letter of Award from SCM*
- *Organogram as per appointments*
- *Copy of OHS Act, Construction Regulations 2014 ect.*
- *Environmental management procedures*
- *Induction programme*
- *Emergency procedures*
- *Medical certificate of fitness*
- *Toolbox talks programme/ Plan*
- *Fall protection plan (Must be site specific. Only put equipment and measures that you will be applying on site. Do not generalise)*
- *Proof of registration with Department of Employment and Labour as an electrical contractor (If this work will be subcontracted, please provide subcontractor's registration as an electrical installation contractor)*
- *Roof work method statement (Must be done by Construction manager or Supervisor NOT Safety officer. Must detail step by step execution of tasks)*
- *Demolition method statement is required. Must be done and signed by Demolition supervisor or Construction manager. Must detail step by step execution of demolition work and equipment to be used.*

13. HEALTH AND SAFETY REPRESENTATIVES AND COMMITTEE

Health and Safety Representatives

- The Principal Contractor shall ensure that Health and Safety Representatives are appointed in writing and exercise their functions as defined in OHSA.
- The Principal Contractor shall elect and appoint a health and safety representative regardless of the number of employees on the site.
- The H&S representative shall at all times be on site and report to the Health and Safety Officer and Construction Manager.

Health and Safety Committee

- The Principal Contractor shall ensure that the H&S committee meets on a monthly basis
- The Principal Contractor's management and each contractor shall be represented at the H&S committee meeting; contractors with more than 20 employees shall have an H&S representative at each committee meeting and each contractor shall have a management member attending each H&S committee meeting.

14. CLOSE- OUT CONSOLIDATED HEALTH AND SAFETY FILE

The Principal Contractor shall compile a consolidated H&S file and hand over to EThekwini municipality, Human settlements. OHS Directorate will conduct a project close out using the appropriate checklist before the completion of the project. The closeout file forms part of the project completion requirements for the retention payment.

15. HEALTH AND SAFETY TRAINING

The Principal Contractor shall ensure that employees are trained on health and safety measures this shall include but not limited to:

- Written safe working procedures
- Risk assessments
- Health and safety plan
- Emergency management plan
- Environmental management plan
- Induction
- Toolbox Talks
- Fall protection plan
- Roof work method statement
- Demolition work

16. INCIDENTS MANAGEMENT & FIRST AID

All incidents and accidents as per Section of the Act must be reported, recorded and investigated as per General Administration Regulation 8 & 9. Where a fatality or permanent disabling injury or incident occurs on the Construction site, the Client must ensure that the Principal Contractor provides the Provincial Director with a report contemplated in Section 24 of the Act and the report includes the measures that the Principal Contractor intends to implement to ensure a safe construction site.

17. HEALTH AND SAFETY AUDITS

The Client must ensure that periodic health and safety audits are conducted at intervals mutually agreed upon between the Principal Contractor and the Client at least every 30 days, the copy of the health and safety audit report must be provided to the Principal Contractor within seven days after the audit.

18. FIRE PRECAUTIONS ON CONSTRUCTION SITE

The Principal Contractor shall provide suitable fire extinguishers which shall be serviced regularly in accordance with the manufactures recommendations. Safety signage shall be prominently displayed in all areas where fire extinguishers are located. The Principal Contractor shall arrange for training of the relevant personnel, in the use of fire extinguishers.

The provisions of Regulation 29 of the Construction Regulations as well as Regulation 9 of Environmental Regulation for Workplaces shall be followed in every detail.

19. PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

The Principal Contractor shall ensure that every employee is issued with, and wears SANS-approved P.P.E. as per the conducted risk assessment. Failure to use protective equipment as per the risk assessment shall require disciplinary intervention and this process shall be documented in the induction. No employer shall in respect of anything which he is in terms of this Act required to provide or to do in the interest of health or safety of an employee make any deductions from any employee's remuneration or require or permit any employee to make any payment to him or to any other person.

The provisions of Regulation 2 of the General Safety Regulations shall be followed in every detail.

20. OCCUPATIONAL HEALTH AND SAFETY SIGNAGE

The Principal Contractor shall erect and maintain quality safety signage. The signage shall include but is not limited to:

- The construction work permit number displayed at the entrance
- Access restrictions
- A sign indicating that all visitors must report to the site office and must be accompanied by the Principal Contractor when accessing the site
- The name and telephone number of the responsible person(s)
- Emergency telephone number(s)
- PPE to be worn at the particular site
- When falling objects may occur, relevant barricading and warning signs must be erected
- Excavations, heights structures, temporary structures and all risk areas must be indicated as per the specific methods defined in the H&S Plan.

21. DUTIES OF PRINCIPAL CONTRACTORS AND CONTRACTORS

Contractors and sub-contractors must be given a copy of the H&S specification and any additional specification issued by the Client and shall comply with these specifications integrally. All employers working on the site shall conform to the standard in the CHSS. All the duties of the Principal Contractor in this CHSS equally apply, in full, to contractors of such Principal Contractor and to sub-contractors of such contractors. The Principal Contractor shall ensure that the comprehensive and updated list of all the contractors and sub-contractors on site includes:

- A reference to the agreements between the parties, including all contractors Section 37(2) agreements with the Principal Contractor
- The type of work being done
- The date of the approval of the H&S Plan
- The date of expiry of the COIDA certificate of good standing
- The date of the last monthly audit

The provisions of Regulation 7 of the Construction Regulations shall be followed in every detail.

22. NIGHT; WEEK –END WORK

No night or weekend work shall be performed unless authorized by the Principal Agent or Lead Engineers. Where week end work is planned the Principal Contractor shall ensure that its construction supervisor is on site, this applies even if only contractors or sub-contractors are working on the site. Where week end work is planned each contractor or sub-contractor shall ensure that its construction supervisor is on site, this applies even if the Principal Contractor's manager or supervisor is on the site.

23. CONSTRUCTION EMPLOYEES FACILITIES

The Principal Contractor shall provide at or within reasonable access of every construction site, the following clean, hygienic and maintained facilities:

- (a) Shower facilities after consultation with the employees or employees representatives, or at least one shower facility for every 15 persons;
- (b) at least one sanitary facility for each sex and for every 30 workers;
- (c) changing facilities for each sex; and
- (d) sheltered eating areas.

The provisions of Regulation 2, 3, 4, 6, 7, 9 of the Facilities Regulations shall be followed in every detail.

24. STORAGE AND USE OF FLAMMABLE LIQUIDS

No flammable substances must be stored on site unless these are stored in a flammable store or cabinet approved by the Municipal Chief Fire Officer, no other materials shall be stored in the flammable store or cabinet. Where required the H&S Plan shall include a method statement detailing the safe use, storage, decanting and spill controls for all flammable liquids used and stored on site.

The provisions of Regulation 25 of the Construction Regulations shall be followed in every detail.

25. HAZARDOUS CHEMICAL SUBSTANCE

With respect to hazardous chemical substances used, the contractor shall ensure that:

- All MSDS are included in the H&S File
- A HCS risk assessment is included in the H&S Plan
- The safe use, storage, emergency procedures and safe disposal of hazardous substances are addressed in a method statement(s) included in the H&S Plan.
- Proof of competency and signed letters of appointment of the person responsible for chemical handling is included in the H&S File.

Any hazardous chemical substance intended to be applied on site during the project (i.e. after approval of the H&S Plan) shall be subject to an issue-based risk assessment and method statement which must be presented to the Client Agent prior to the substance being introduced on site.

The provisions of Regulation 3, 5, 7, 8, 9, 9A, 10, 11, 14, 15 of the Hazardous Chemical Substances Regulations shall be followed in every detail.

26. HOUSEKEEPING AND GENERAL SAFE GUARDING ON CONSTRUCTION SITE

The Principal Contractor shall appoint a person responsible for general housekeeping and stacking and storage of materials and equipment on the entire site.

The provisions of Regulation 27 of the Construction Regulations shall be followed in every detail.

27. CONSTRUCTION MEDICALS

A Principal Contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an Occupational Health Practitioner in the form of Annexure 3.

28. STACKING AND STORAGE ON CONSTRUCTION SITE

A Principal Contractor must, in addition to compliance with the provisions for the stacking of articles in the General Safety Regulations, 2003, ensure that—

A competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;

Adequate storage areas are provided;

There are demarcated storage areas; and storage areas are kept neat and under control.

29. INDUCTION AND TOOLBOX PROGRAMME

No contractor may allow or permit any employee or person to enter any site, unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

A contractor must at all times keep on his or her construction site records of the health and safety induction training contemplated in sub-regulation (6) and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor. The Principal Contractor must ensure that the toolbox talks are conducted on weekly basis and the training records kept on the safety file

30. CONSTRUCTION VEHICLES AND MOBILE PLANTS

For any use of construction vehicle and mobile plant in the construction site, contractor must comply with all the provisions of Construction Regulation 23.

31. ORGANOGRAM

Contractor shall submit an organogram outlining the site safety, health and environmental management structure as per appointment. The organogram must reflect the project and the company name and must have legal references

32. ENVIRONMENTAL MANAGEMENT

To ensure compliance with all the applicable environmental management regulations and applicable specifications of this project, please ensure that the minimum below topics are covered:

- Dumpsite,
- Water provision,
- Ablution,
- Waste management,
- Refuelling and spillage management,
- Hazardous chemicals storage and disposal,
- Environmental awareness training,
- No Go Areas,
- Site demarcation etc.
- Demolition

33. EXISTING SERVICES

Where the construction work involves existing services, the contractor must ensure that working around the existing services, disconnection and connection of services is done in a way that does not affect the health or safety of any employee or public member whether direct or indirect. The disconnection and connection of services must not interrupt the provision of services to the public. The contractor must explain how communication will be maintained with the affected parties during this process.

34. PUBLIC SAFETY

The site shall at all times be secured to prevent the unauthorized access of persons to construction risk areas. Appropriate health and safety signage shall be posted and access control to site must be exercised via a single access point. All members entering the site must indicate in what capacity they are visiting the site. The access point must be designed and constructed to allow for temporary parking, entry of construction vehicles, entry of personnel transport vehicles and entry of individual workers and other persons. The principal Contractor shall ensure that each person visiting the site shall be inducted to the site and such abridged induction shall outline the hazards from on-site activities and the precautions to be observed to avoid or minimize those risks. Visitors must only enter when accompanied by a responsible person designated by the Principal Contractor.

Due to the physical location of the site, the contractor must consider other aspects like local businesses and public members that might be affected by the construction work.

35. FALL PROTECTION PLANNING

The Principal Contractor shall ensure that the fall protection plan include a risk assessment for all work carried out from the fall risk position and the safe work procedures. All employees working from fall risk position are subject to medical examination. The Training Program must be in place for employees working from a fall risk position. The procedures addressing the inspection, testing and maintenance of all fall risk protection equipment. The rescue plan detailing procedure, personnel and suitable equipment to be used to rescue a person. The Principal Contractor must that a competent person is designated to be responsible for the preparation of the fall protection plan. **The provisions of Regulation 10 of the Construction Regulations shall be followed in every detail.**

36.TEMPORARY WORK

Temporary works Supervisor

The Principal Contractor shall submit the proof of competency and appointment letter of the competent person(s) appointed as temporary works supervisor in the Health & Safety Plan. The temporary works supervisor shall supervise all temporary works operations and shall ensure that all equipment used in temporary works structure are carefully examined and checked for suitability before being used.

The provisions of Regulation 12 of the Construction Regulations shall be followed in every detail.

37.EXCAVATIONS

The Principal Contractor must ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose. The Principal Contractor shall take cognisance of the geotechnical study pertaining to the conditions of the construction site and must plan all excavation work in accordance with the recommendations of the professional engineer. The Principal Contractor must ensure that every excavation, including all bracing and shoring, is inspected daily, prior to the commencement of each shift and that no person enters the excavation or works in a risk zone until the excavation is assessed and declared safe. All excavations must be left open for the minimum of time required and those that are left open on the site must be protected by a barrier or a fence of at least one meter in height as close to the excavation as is practicable. The protective barrier or fence must adequately prevent persons from falling into the excavation and barrier taping is not sufficient for this purpose. Excavation shoring and bracing, if required shall be designed by a designer appointed in writing who shall inspect and approve the installed shoring and bracing. Where persons work, inspect or test excavations, warning signs must be in place next to an excavation

The provisions of Regulation 13 of the Construction Regulations shall be followed in every detail.

38. DEMOLITION WORK

The Principal Contractor must appoint a competent person in writing to supervise and control all demolition work on site. A contractor must ensure that before any demolition work is carried out, and in order to ascertain the method of demolition to be used, a detailed structural engineering survey of the structure to be demolished is carried out by a competent person and that a method statement on the procedure to be followed in demolishing the structure is developed by that person. During a demolition, the competent person contemplated in sub regulation (1) must check the structural integrity of the structure at intervals determined in the method statement contemplated in sub regulation (2), in order to avoid any premature collapses.

The contractor must comply with all the provisions of Regulation 14 of the Construction Regulations 2014.

Annexure B – Bills of Quantities (BOQ)

Item No		Qty	Rate	Amount
	<u>BILL NO. 1</u>			
	<u>PRELIMINARIES</u>			
	<u>PREAMBLES FOR TRADES</u>			
	The General Preambles for Trades 2017 as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from the brevity of description of items fully described in the said General Preambles will be entertained Supplementary preambles and/or specifications are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles The contractor's price for all items throughout these bills of quantities must take into account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications <u>Standard of Materials</u> All materials must comply with the requirements of the NHBRC (National Home Builders Registration Council). In the absence of detailed specifications for any item or items, the National Building Regulations, the latest applicable South African Bureau of Standards Specification, or where such does not exist, then the latest applicable British Standard Specification shall apply.			
	Carried to Collection		R	
	Bill No. 1 Preliminaries PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

**Item
No**

Qty

Rate

Amount

PRELIMINARIES

Where explanations or comments are reflected in these Preliminaries, same are to be read as supplementing as opposed to varying the provisions of the relevant clauses

**SECTION A: PRINCIPAL BUILDING
AGREEMENT - JBCC Series**

NOTES

The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contract Committee shall be the applicable building agreement, amended as hereinafter described

The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities

Contractor's are referred to the abovementioned documents for the full intent and meaning of each clause thereof

These clauses are hereinafter referred to by clause number and heading only Where standard clauses or alternatives are not entirely applicable to this contract, such modifications, corrections or supplements as will apply are given under each relevant clause heading and such modifications, corrections or supplements shall take precedence notwithstanding anything contrary contained in the abovementioned documents

Where any item is not relevant to this specific contract such item is marked N/A, signifying "not applicable"

Carried to Collection

R

Bill No. 1

Preliminaries

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No		Qty	Rate	Amount
	<u>SECTION A: PRINCIPAL BUILDING AGREEMENT</u>			
	<u>Interpretation (A1-A7)</u>			
1	Clause 1.0 - Definitions and interpretation	Item		
2	Clause 2.0 - Law, regulations and notices	Item		
3	Clause 3.0 - Offer and acceptance	Item		
4	Clause 4.0 - Cession and assignment	Item		
5	Clause 5.0 - Documents	Item		
6	Clause 6.0 - Employer's agents	Item		
7	Clause 7.0 - Design responsibility	Item		
	<u>Insurance and security (A8-A11)</u>			
8	Clause 8.0 - Works risk	Item		
9	Clause 9.0 - Indemnities	Item		
10	Clause 10.0 - Insurances	Item		
11	Clause 11.0 - Securities	Item		
	<u>Execution (A12 - A17)</u>			
12	Clause 12.0 - Obligations of the parties	Item		
13	Clause 13.0 - Setting out	Item		
14	Clause 14.0 - Nominated subcontractors	Item		
15	Clause 15.0 - Selected subcontractors	Item		
16	Clause 16.0 - Direct contractors			
	Attendance on direct contractors	Item		
17	Clause 17.0 - Contract instructions	Item		
	Carried to Collection		R	
	Bill No. 1			
	Preliminaries			
	PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Item No		Qty	Rate	Amount
	<u>Completion (A18 - A24)</u>			
18	Clause 18.0 - Interim completion	Item		
19	Clause 19.0 - Practical completion	Item		
20	Clause 20.0 - Completion in sections	Item		
21	Clause 21.0 - Defects liability period and final completion	Item		
22	Clause 22.0 - Latent defects liability period	Item		
23	Clause 23.0 - Revision of date for practical completion	Item		
24	Clause 24.0 - Penalty for late or non-completion	Item		
	<u>Payment (A25 - A27)</u>			
25	Clause 25.0 - Payment	Item		
26	Clause 26.0 - Adjustment of the contract value and final account	Item		
27	Clause 27.0 - Recovery of expense and/or loss	Item		
	<u>Suspension and termination (A28 - A29)</u>			
28	Clause 28.0 - Suspension by the contractor	Item		
29	Clause 29.0 - Termination by employer	Item		
	<u>Dispute resolution (A30)</u>			
30	Clause 30.0 - Dispute resolution	Item		
Carried to Collection			R	
Bill No. 1 Preliminaries PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No		Qty	Rate	Amount
	<u>SECTION B: PRELIMINARIES</u>			
	<u>Interpretation (B1)</u>			
31	Clause 1.1 - Definitions	Item		
32	Clause 1.2 - Interpretation	Item		
	<u>Documents (B2)</u>			
33	Clause 2.1 - Checking of documents	Item		
34	Clause 2.2 - Provisional bills of quantities	Item		
35	Clause 2.3 - Availability of construction information	Item		
36	Clause 2.4 - Ordering of materials and goods	Item		
	<u>Previous work and adjoining properties (B3)</u>			
37	Clause 3.1 - Previous work - dimensional accuracy	Item		
38	Clause 3.2 - Previous work - defects	Item		
39	Clause 3.3 - Inspection of adjoining properties	Item		
	<u>The site (B4)</u>			
40	Clause 4.1 - Handover of site in stages	Item		
41	Clause 4.2 - Enclosure of the works	Item		
42	Clause 4.3 - Geotechnical and other investigations	Item		
43	Clause 4.4 - Encroachments	Item		
44	Clause 4.5 - Existing premises occupied	Item		
45	Clause 4.6 - Services - known	Item		
	Carried to Collection		R	
	Bill No. 1 Preliminaries PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Item No		Qty	Rate	Amount
	<u>Management of contract (B5)</u>			
46	Clause 5.1 - Management of the works	Item		
47	Clause 5.2 - Progress meetings	Item		
48	Clause 5.3 - Technical meetings	Item		
	<u>Samples, shop drawings and manufacturer's instructions (B6)</u>			
49	Clause 6.1 - Samples of materials	Item		
50	Clause 6.2 - Workmanship samples	Item		
51	Clause 6.3 - Shop drawings	Item		
52	Clause 6.4 - Compliance with manufacturer's instructions	Item		
	<u>Deposits and fees (B7)</u>			
53	Clause 7.1 - Deposits and fees	Item		
	<u>Temporary services (B8)</u>			
54	Clause 8.1 - Water	Item		
55	Clause 8.2 - Electricity	Item		
56	Clause 8.3 - Ablution and welfare facilities	Item		
57	Clause 8.4 - Communication facilities	Item		
	<u>Prime cost amounts (B9)</u>			
58	Clause 9.1 - Responsibility for prime cost amounts	Item		
	<u>Attendance on subcontractors (B10)</u>			
59	Clause 10.1 - General attendance	Item		
60	Clause 10.2 - Special attendance	Item		
	Carried to Collection		R	
	Bill No. 1 Preliminaries PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Item No		Qty	Rate	Amount
	<u>General (B11)</u>			
61	Clause 11.1 - Protection of the works	Item		
62	Clause 11.2 - Protection/isolation of existing works and works occupied in sections	Item		
63	Clause 11.3 - Security of the works	Item		
64	Clause 11.4 - Notice before covering work	Item		
65	Clause 11.5 - Disturbance	Item		
66	Clause 11.6 - Environmental disturbance	Item		
67	Clause 11.7 - Works cleaning and clearing	Item		
68	Clause 11.8 - Vermin	Item		
69	Clause 11.9 - Overhand work	Item		
70	Clause 11.10 - Tenant installations by direct contractors	Item		
71	Clause 11.11 - Advertising	Item		
	<u>SECTION C: SPECIFIC PRELIMINARIES</u>			
72	Standard Conditions of Tender	Item		
73	Additional Conditions of Tender	Item		
74	Standard Conditions of Contract	Item		
75	Contract Data Schedule	Item		
76	Additional Conditions of Contract	Item		
	Carried to Collection		R	
	Bill No. 1 Preliminaries PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Bill No. 1

Preliminaries

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Bill No. 1

Preliminaries

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No		Qty	Rate	Amount
	<u>BILL NO. 2</u>			
	<u>EARTHWORKS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Nature of ground</u>			
	The Tenderer must acquaint himself with the nature of the material to be excavated. Excavation in 'earth' shall be defined as excavation in all types of material.			
	<u>Subterranean water</u>			
	No information regarding subterranean water is available. The Tenderer must acquaint himself of the presence and depth of subterranean water and allow for same in his pricing.			
	<u>Carting away of excavated material</u>			
	Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site.			
	<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Reduced levels under floors	m3	41	
2	Trenches	m3	166	
3	Holes	m3	52	
	Carried to Collection		R	
	Bill No. 2 Earthworks PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Item No			Qty	Rate	Amount
	<u>Back excavation of vertical sides of excavation in earth for working space including backfilling compacted to 98% Mod AASHTO density</u>				
4	Exceeding 0,5m and not exceeding 1,5m deep for placing and removing formwork to footings, ground beams, pile caps, foundation walls, etc against excavated face	m2	654		
	<u>Extra over trench and hole excavations in earth for excavation in</u>				
5	Soft rock	m3	22		
6	Hard rock	m3	11		
	<u>Extra over trench and hole excavations in earth for breaking up and removing</u>				
7	Brickwork	m3	11		
8	Unreinforced concrete	m3	11		
9	Reinforced concrete	m3	11		
	<u>Extra over back excavation in earth for working space for excavation in soft rock</u>				
10	Exceeding 0,5m and not exceeding 1,5m deep for placing and removing formwork to footings, ground beams, pile caps, foundation walls, etc against excavated face	m2	56		
	<u>Extra over back excavation in earth for working space for excavation in hard rock</u>				
11	Exceeding 0,5m and not exceeding 1,5m deep for placing and removing formwork to footings, ground beams, pile caps, foundation walls, etc against excavated face	m2	34		
Carried to Collection				R	
Bill No. 2 Earthworks PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
	<u>Extra over all excavations for carting away</u>				
12	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	172		
	<u>Risk of collapse of excavations</u>				
13	Sides of trench and hole excavations not exceeding 1,5m deep	m2	654		
	<u>Keeping excavations free of water</u>				
14	Keeping excavations free of water other than subterranean water		Item		
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density</u>				
15	Backfilling to trenches, holes, etc	m3	87		
	<u>Compaction of surfaces</u>				
16	Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 98% Mod AASHTO density	m2	406		
	<u>Prescribed density tests on filling</u>				
17	"Modified AASHTO Density" test	No	10		
	<u>SOIL POISONING</u>				
	<u>Soil insecticide</u>				
18	Under floors, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	406		
19	To bottoms and sides of trenches etc	m2	899		
Carried to Collection				R	
Bill No. 2 Earthworks PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Bill No. 2

Earthworks

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Bill No. 2

Earthworks

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No		Qty	Rate	Amount
	<u>BILL NO. 3</u>			
	<u>PILING</u>			
	<u>SUPPLEMENTARY SPECIFICATION</u>			
	INDEMNITY			
	The contractor shall take full responsibility for piling work and shall guarantee that piling work will support the calculated loads laid down by the engineer without injurious settlement. The actual lengths of piles shall be determined on site by the contractor in consultation with the engineer who will give all assistance possible. This does not in any way relieve the contractor of his responsibility or obligation to provide the specified guarantee. The contractor shall indemnify the employer against any injury to or death of any person and all loss or damage to all structures resulting from the failure of any pile. In the event of the failure of any pile the contractor shall make good such pile and all consequent damage at his own expense. The contractor shall insure in a policy, approved by the architect, against risks arising out of the responsibilities, guarantee and indemnities specified. The contractor shall pay all premiums in respect of this insurance policy. The guarantee shall be for the amount of R 5 000 000-00 rand (Five Million Rand) and shall be effective for a period of 5 (Five) years from the date of completion of the contract.			
	Carried to Collection		R	
	Bill No. 3 Piling PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Item No		Qty	Rate	Amount
	SCOPE OF WORK The work comprises the installation of 300mm, 350mm and 450mm diameter continuous flight auger pressure grouted and reinforced piles with a nominal working load capacity of 350kN, 500kN and 800kN. The contractor is to visit the site in order to acquaint himself fully with the nature of the works, establishment, access, transport requirements, etc.			
	<u>GUARANTEE AND INSURANCE</u>			
1	Provision of the specified piling guarantee and insurance	Item		
	<u>ESTABLISHMENT</u>			
2	Transporting and establishment on site of necessary plant for the execution of the work and removal thereof on completion	Item		
3	Setting up plant at pile position	No	76	
	<u>PRESSURE GROUTED AUGERED PILES</u>			
	<u>Drilling not exceeding 10m deep below ground level</u>			
4	300mm Diameter pile shafts	m	300	
5	350mm Diameter pile shafts	m	300	
6	400mm Diameter pile shafts	m	160	
	<u>Drilling exceeding 10m but not exceeding 15m deep below ground level</u>			
7	300mm Diameter pile shafts	m	150	
8	350mm Diameter pile shafts	m	150	
9	400mm Diameter pile shafts	m	80	
	Carried to Collection		R	
	Bill No. 3 Piling PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Item No			Qty	Rate	Amount
	<u>Drilling exceeding 15m but not exceeding 20m deep below ground level</u>				
10	300mm Diameter pile shafts	m	30		
11	350mm Diameter pile shafts	m	30		
12	400mm Diameter pile shafts	m	16		
	<u>Drilling in strata of a more difficult character</u>				
13	Extra over drilling in earth for drilling in hard rock	m3	6		
	<u>Extra over drilling for carting away</u>				
14	Surplus material from pile holes to a dumping site to be located by the contractor	m3	125		
	<u>30MPa Grout</u>				
15	300mm Diameter pressure grouted 350kN piles	m	480		
16	350mm Diameter pressure grouted 500kN piles	m	480		
17	400mm Diameter pressure grouted 650kN piles	m	256		
	<u>TEST BLOCKS</u>				
18	Making and testing 150 x 150mm concrete strength test cube	No	1		
	<u>REINFORCEMENT</u>				
	<u>Mild steel reinforcement</u>				
19	8mm Diameter helical bars	t	3,65		
	<u>High tensile steel reinforcement</u>				
20	12mm Diameter bars	t	9,51		
Carried to Collection				R	
Bill No. 3 Piling PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
<u>TESTING</u>					
21	Transporting and establishment on site of necessary testing plant for the execution of the work and removal thereof on completion		Item		
22	Sonic integrity testing 300mm diameter pile to a maximum load of 350kN	No	30		
23	Sonic integrity testing 350mm diameter pile to a maximum load of 500kN	No	30		
24	Sonic integrity testing 450mm diameter pile to a maximum load of 800kN	No	16		
<u>STANDING TIME</u>					
NOTE :					
Standing time will be payable only for plant and crew that is standing during the applicable ordinary hours of work, for periods during which, in the opinion of the Engineer, the total pile installation operation is at a stand still because of reasons approved by the Engineer. Standing time will not be payable in respect of inclement weather.					

25	Plant and crew standing time due to suspension of work for reasons approved by the Engineer (measured in hours)	Hrs	24		
<u>The following items will be paid only in respect of abandoned pile holes as approved by the Engineer</u>					
26	Boring only not exceeding 10m deep	m	80		
Carried to Collection				R	
Bill No. 3 Piling PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Bill No. 3

Piling

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Piling

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

R

Item No			Qty	Rate	Amount
	<u>BILL NO. 4</u>				
	<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Principal Agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the Principal Agent. (Test cubes are measured separately). Formwork to sides of ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks".				
	<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
	<u>15MPa / 19mm concrete</u>				
1	Surface blinding under footings and bases	m3	11		
	<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
	<u>25MPa / 19mm concrete</u>				
2	Strip footings	m3	43		
	Carried to Collection				R
	Bill No. 4 Concrete, Formwork & Reinforcement PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No			Qty	Rate	Amount
3	Pile caps	m3	29		
4	Foundation beams	m3	24		
5	Surface beds on waterproofing	m3	41		
6	Thickening out 100mm thick surface bed to 150mm thick x 270mm wide at top, tapering along one side to 200mm wide at bottom including additional formwork, excavation, etc	m	47		
7	Thickening out 100mm thick surface bed to 260mm thick x 320mm wide at top, tapering along one side to 250mm wide at bottom including additional formwork, excavation, etc	m	45		
8	Thickening out 100mm thick surface bed to 250mm thick x 450mm wide at top, tapering along both sides to 250mm wide at bottom including additional formwork, excavation, etc	m	18		
<u>REINFORCED CONCRETE</u>					
<u>30MPa/19mm concrete</u>					
9	Slabs including beams and inverted beams	m3	356		
10	Isolated beams	m3	8		
11	Stairs including landings, beams and inverted beams	m3	9		
12	Columns in foundations	m3	3		
13	Columns	m3	50		
<u>TEST BLOCKS</u>					
14	Making and testing 150 x 150 x 150mm concrete strength test cube	No	192		
Carried to Collection				R	
Bill No. 4 Concrete, Formwork & Reinforcement PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
	<u>CONCRETE SUNDRIES</u>				
	<u>Stripping back head of concrete pile to expose reinforcement including trimming to defined level and bending reinforcement as necessary for casting into pile cap</u>				
15	300mm Diameter pile for a height of 1375mm	No	30		
16	350mm Diameter pile for a height of 1375mm	No	30		
17	450mm Diameter pile for a height of 1375mm	No	16		
	<u>Finishing top surfaces of concrete smooth with a wood float</u>				
18	Surface beds, slabs, etc	m2	1 709		
19	On treads and risers of stairs	m2	52		
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>				
20	Tops of beams, walls, etc	m2	36		
	<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>				
	<u>Rough formwork to sides</u>				
21	Strip footings not exceeding 300mm high	m	377		
22	Pile caps	m2	132		
23	Foundation beams	m2	69		
24	Rectangular columns in foundations	m2	39		
25	Rectangular columns	m2	691		
26	Inverted beams	m2	23		
27	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	1 067		
	Carried to Collection				R
	Bill No. 4 Concrete, Formwork & Reinforcement PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No			Qty	Rate	Amount
28	Sloping and stepped outer edges of stairs 330mm high extreme	m	57		
	<u>Rough formwork to soffits</u>				
29	Slabs propped up exceeding 1,5m and not exceeding 3,5m high	m2	1 303		
30	Stairs with sloping soffits	m2	34		
	<u>Rough formwork to sides and soffits</u>				
31	Isolated beams propped up exceeding 1,5m and not exceeding 3,5m high	m2	83		
	<u>Boxing in rough formwork to form</u>				
32	25 x 25mm Chamfer at vertical corners, top or bottom edges, etc	m	1 212		
	<u>MOVEMENT JOINTS, ETC</u>				
	<u>Two layers 3mm masonite board with 2 layers of 2 ply malthoid joints between two sheets of galvanised slip joints between horizontal concrete surfaces</u>				
33	Not exceeding 300mm wide	m	104		
34	Exceeding 300mm wide	m2	4		
	<u>Saw cut joints</u>				
35	3 x 30mm Saw cut joints in top of concrete	m	70		
	<u>REINFORCEMENT</u>				
	<u>Mild steel reinforcement to structural concrete work</u>				
36	Bars of various diameters	t	9		
Carried to Collection					R
Bill No. 4 Concrete, Formwork & Reinforcement PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
	<u>High tensile steel reinforcement to structural concrete work</u>				
37	Bars of various diameters	t	88		
	<u>Fabric reinforcement</u>				
38	Type 100 fabric reinforcement in concrete apron slabs, etc	m2	406		
Carried to Collection					R
Bill No. 4 Concrete, Formwork & Reinforcement PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Bill No. 4

Concrete, Formwork & Reinforcement

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Bill No. 4

Concrete, Formwork & Reinforcement

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

**Item
No**

Qty

Rate

Amount

SAMPLES

Samples of all masonry building units, except those for walls described as "load bearing", shall consist of a minimum of 6 units. Samples of building units to be used in walls described as "load bearing" shall consist of 30 units from every 30 000 units delivered to site.

Carried to Collection

R

Bill No. 5
Masonry

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No			Qty	Rate	Amount
<u>FOUNDATIONS</u>					
<u>Blockwork in "Corobrik Corocrete Coroblok" or equal approved 7MPa concrete masonry blocks in class I cement mortar</u>					
1	190mm Walls in M200 blocks	m2	94		
<u>SUPERSTRUCTURE</u>					
<u>BLOCKWORK</u>					
<u>Blockwork in "Corobrik Corocrete Coroblok" or equal approved 3,5MPa concrete masonry blocks in Class II cement mortar</u>					
2	90mm Walls in M100 blocks	m2	788		
3	190mm Walls in M200 blocks	m2	1 451		
4	190mm Walls in M200 blocks in beamfilling	m2	17		
5	190mm Walls in M200 blocks above wall plate level	m2	64		
<u>BLOCKWORK SUNDRIES</u>					
<u>Galvanised blockwork reinforcement</u>					
6	75mm Wide reinforcement built in horizontally	m	1 970		
7	150mm Wide reinforcement built in horizontally	m	4 301		
<u>"Fabcon" or equal approved pre-stressed fabricated lintels</u>					
8	90 x 110mm Lintels in lengths not exceeding 3m	m	87		
9	140 x 110mm Lintels in lengths not exceeding 3m	m	237		
Carried to Collection				R	
Bill No. 5 Masonry PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Bill No. 5

Masonry

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Bill No. 5

Masonry

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No		Qty	Rate	Amount
	<u>BILL NO. 6</u>			
	<u>WATERPROOFING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect, prior to submission of Tenders.			
	<u>Waterproofing</u>			
	Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets, etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs.			
	<u>DAMPPROOFING OF WALLS AND FLOORS</u>			
	<u>One layer of 375 micron "Consol Plastics Brikgrip DPC" or equal approved embossed damp proof course</u>			
1	In walls	m2	45	
2	In walls under window cills	m2	31	
	<u>One layer of 250 micron "Consol Plastics Gunplas USB Green" or equal approved waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>			
3	Under surface beds	m2	452	
	Carried to Collection			
	Bill No. 6 Waterproofing PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH		R	

Item No			Qty	Rate	Amount
	<u>WATERPROOFING TO ROOFS, BASEMENTS, ETC</u>				
	<u>4mm "Derbigum SP4" fully bonded waterproofing laid in strict accordance with manufacturer's instructions</u>				
4	On flat roofs	m2	12		
5	On tops and sides of inverted beams	m2	8		
6	Sealing edges to brickwork or concrete	m	21		
7	Additional membrane at 100mm diameter outlet	No	2		
	<u>PROTECTIVE ROOFING PAINT</u>				
	<u>Two coats "Silvakote" bituminous aluminium paint</u>				
8	On waterproofing to roofs	m2	12		
9	On tops and sides of inverted beams	m2	10		
	<u>JOINT SEALANTS, ETC</u>				
	<u>"Sikaflex-11FC" or equal approved silicone sealing compound</u>				
10	Pointing joint between aluminium window frames and blockwork	m	1 018		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
11	3 x 10mm In saw cut joints in floors	m	70		
12	10 x 10mm In isolation joints in floors including raking out expansion joint filler as necessary	m	453		
	Carried to Collection				R
	Bill No. 6 Waterproofing PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Bill No. 6

Waterproofing

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Bill No. 6

Waterproofing

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

R

Item No		Qty	Rate	Amount
	<u>BILL NO. 7</u>			
	<u>ROOF COVERINGS, ETC</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect, prior to submission of Tenders.			
	<u>CORRUGATED METAL SHEETING AND ACCESSORIES</u>			
	<u>0,55mm "Safintra Saflok 700" or equal approved Zincalume Z200 roof sheet with "Colorplus" finish on one side in single lengths fixed to timber purlins and 0,55mm Zincalume sheet steel accessories with "Colorplus" finish on one side (Colour to Architects approval)</u>			
1	Roof covering with pitch not exceeding 25 degrees	m2	484	
2	Ridge flashing 462mm girth thrice bent including silicone sealant	m	42	
3	"Sondor" or equal approved polyclosures to suit profile of roof sheeting	m	167	
4	Positive fixing of roof sheeting at eaves	m	167	
	Carried to Collection		R	
	Bill No. 7 Roof Coverings PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Bill No. 7

Roof Coverings

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Bill No. 7

Roof Coverings

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item
No

Qty

Rate

Amount

BILL NO. 8

CARPENTRY AND JOINERY

SUPPLEMENTARY PREAMBLES

Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect, prior to submission of Tenders.

Joinery

Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.

Fixing

Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.

ROOFS, ETC

- a) The design, manufacture and transportation of the roof trusses, bracing, etc shall be under the control of a registered Engineer in accordance with SANS 1900, SANS 10166 and SANS 100163. It shall be required from the manufacturer of the trusses to lodge a written guarantee that his construction has been designed by a qualified Structural Engineer and that he is in possession of a capability certificate issued by the Institute for Timber Construction and approved by the Engineer.

Carried to Collection

R

Bill No. 8

Carpentry & Joinery

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No		Qty	Rate	Amount
b)	Erection must be carried out as described in "The erection and Bracing of Timber Roof Trusses" published by the Truss Plate Association of South Africa Ltd. and the National Timber Research Institute, CSIR.			
c)	Descriptions of roof trusses shall be deemed to include for design, manufacture, supply, hoisting and fixing in position, trimming ends, notching, etc and for any temporary and permanent bracing.			
<u>Prefabricated plate nailed timber roof truss construction</u>				
The following is applicable in respect of roof trusses:				
Trusses are at maximum 900mm centres. Roof Covering is Zincalume roof sheeting timber battens. Ceilings are 6,4mm plasterboard and 4mm fibre-cement board ceilings. The dimensions in the descriptions of the trusses are nominal and actual measurements are to be obtained from site before design or fabrication commences.				
<u>Sawn softwood trusses</u>				
1	Double pitched roof truss 10000mm span x 1200mm high with 700mm eaves overhang projection both sides	No	47	
<u>Sawn softwood</u>				
2	38 x 76mm Wall plates	m	82	
3	50 x 75mm Purlins	m	1 315	
<u>Sundries</u>				
4	Two coats creosote on sawn timbers	m2	1 053	
Carried to Collection			R	
Bill No. 8 Carpentry & Joinery PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No			Qty	Rate	Amount
	<u>EAVES, VERGES, ETC</u>				
	<u>"Everite" or equal and approved pressed fibre-cement</u>				
5	225 x 10mm Fascia boards including galvanised steel H-profile jointing strips	m	83		
6	200 x 80mm Barge boards including galvanised steel H-profile jointing strips	m	23		
	<u>DOORS, ETC</u>				
	<u>Semi-solid core flush panel doors with commercial veneer on both sides suitable for painting hung to steel frames</u>				
7	40mm Door, 813 x 2032mm high	No	64		
	<u>Wrot meranti doors hung to steel frames</u>				
8	44mm Framed, ledged and braced batten door 813 x 2032mm high filled in with 22mm V-jointed boarding both sides	No	32		
				R	
Carried to Collection					
Bill No. 8					
Carpentry & Joinery					
PROPOSED COMMUNITY RESIDENTIAL UNIT					
BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Bill No. 8

Carpentry & Joinery

COLLECTION

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Bill No. 8

Carpentry & Joinery

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No			Qty	Rate	Amount
	<u>BILL NO. 9</u>				
	<u>CEILINGS & PARTITIONS</u>				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>Descriptions:</u>				
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted" the bolts have been given elsewhere.				
	<u>NAILED UP CEILINGS</u>				
	<u>6,4mm "Rhino" gypsum plasterboard with H-type jointing strips</u>				
1	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres in one direction	m2	266		
2	Extra over ceiling and brandering for 650 x 650mm trap door of 38 x 38mm wrot softwood rebated framing with 38 x 114mm sawn softwood trimmers covered with ceiling board and fitted flush in opening with 19 x 50mm wrot softwood fillet all round	No	7		
	<u>4mm "Everite Nutec" fibre-cement boards with H-profile cover strips over joints</u>				
3	Ceilings including 38 x 50mm sawn softwood brandering at 400mm centres in one direction only	m2	108		
	Carried to Collection				R
	Bill No. 9 Ceilings & Partitions PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No		Qty	Rate	Amount
4	Extra over ceiling for opening for 650 x 650mm trap door complete with trimmers, frame, cross branders, ceiling board, hinges, etc as described	No 5		
	<u>"Rhino" gypsum plasterboard cornices</u>			
5	75mm Coved cornices	m 1 459		
Carried to Collection				R
Bill No. 9 Ceilings & Partitions PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Bill No. 9

Ceilings & Partitions

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Bill No. 9

Ceilings & Partitions

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

R

Item No			Qty	Rate	Amount
	<u>BILL NO. 10</u>				
	<u>IRONMONGERY</u>				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect, prior to submission of Tenders.				
	<u>Finishes to ironmongery</u>				
	Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Polished brass PL Polished and lacquered PT Epoxy coated SD Sanded				
	<u>LOCKS</u>				
	<u>"Union" or equal approved</u>				
1	Two lever mortice lockset with CH furniture	No	64		
2	Three lever mortice lockset with CH furniture	No	32		
	<u>LETTERS, NAMEPLATES, ETC</u>				
	<u>"Union" or equal and approved</u>				
3	152 x 152mm "AL-5066-06ASE05" engraved aluminium plate with fire hose reel pictogram	No	8		
4	152 x 152mm "AL-5066-06ASE06" engraved aluminium plate with fire extinguisher pictogram	No	8		
	Carried to Collection				R
	Bill No. 10 Ironmongery PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No		Qty	Rate	Amount
5	152 x 152mm "AL-5066-06ASE08" engraved aluminium plate with directional pictogram	No 36		
	<u>3mm Thick clear perspex plate with 3mm rounded corners size 200 x 100mm high with 80mm high computer vinyl letters on reverse side fixed to door with 2 No. stainless steel screws (Font : Arial Narrow, Colour : to Architects approval)</u>			
6	Plate with three letters and numerals	No 28		
	<u>BATHROOM FITTINGS</u>			
7	Vandal proof satin chromium plated toilet two roll holder	No 28		
	<u>SUNDRIES</u>			
8	Rubber door stop plugged	No 96		
Carried to Collection				R
Bill No. 10 Ironmongery PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Bill No. 10

Ironmongery

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Bill No. 10

Ironmongery

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

R

Item No		Qty	Rate	Amount
	<u>BILL NO. 11</u> <u>METALWORK</u> <u>SUPPLEMENTARY PREAMBLES</u> Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect, prior to submission of Tenders. <u>Descriptions</u> Descriptions of bolts shall be deemed to include nuts and washers. Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork of concrete. Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described.			
	<u>GALVANISED STEEL HANDRAILS, BALUSTRADES, ETC</u> <u>Handrails to staircase</u> 1 Handrails formed of 50 diameter x 3mm thick circular hollow section continuous handrails tig welded onto plate with stainless steel pins epoxy grouted at 1200mm centres (Refer Handrail Detail - Drawing No. DONN H101)	m	32	
	Carried to Collection Bill No. 11 Metalwork PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH		R	

Item No		Qty	Rate	Amount
	<u>Welded balustrading</u>			
2	Balustrading 1000mm high formed of 50mm diameter x 3mm thick circular hollow section continuous handrails tig welded onto plate, 4 No. 25 x 3mm horizontal flat section rails welded onto 2 No. 50 x 50mm hollow section balusters at 1250mm centres, with 100mm epoxied in top of concrete including 100 x 100 x 5mm thick cover plate (Refer Balustrade Detail - Drawing No. DONN H101)	m	37	
3	Extra over for flat closed end	No	16	
	<u>GALVANISED WELDED SCREENS AND GATES</u>			
4	Single gate 900 x 1500mm high formed of 50 x 50 x 3mm hollow section external frame filled in with "RS 40 Mentis Grid" infill tack welded to frame including 3 No. 25mm diameter x 40mm long "pin-type" hinge fixed onto and including 50 x 50 x 3mm x 1500mm high frame post including fixing posts to brickwork or concrete with fishtail lugs (Refer Detail G3 - Drawing No.DONN H101)	No	12	
5	Single gate 900 x 1750mm high formed of 50 x 50 x 3mm hollow section external frame filled in with "RS 40 Mentis Grid" infill tack welded to frame including 3 No. 25mm diameter x 40mm long "pin-type" hinge fixed onto and including 50 x 50 x 3mm x 1750mm high frame post including fixing posts to brickwork or concrete with fishtail lugs (Refer Detail G2 - Drawing No.DONN H101)	No	8	
Carried to Collection			R	
Bill No. 11 Metalwork PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No			Qty	Rate	Amount
	<u>GALVANIZED PRESSED STEEL DOOR FRAMES</u>				
	<u>"Durowin" or equal approved 1mm thick single rebated frames with adjustable striking plate including pair of steel hinges per door leaf, rubber buffers to the lock jambs and fixing lugs welded on, suitable for 90mm block walls</u>				
6	Frame for door 813 x 2032mm high	No	64		
	<u>"Durowin" or equal approved 1,2mm thick double rebated frames with adjustable striking plate including pair of steel hinges per door leaf, rubber buffers to the lock jambs and fixing lugs welded on, suitable for 140mm block walls</u>				
7	Frame for door 813 x 2032mm high	No	32		
	<u>ALUMINIUM WINDOWS AND SHOPFRONTS</u>				
	All work shall comply with the recommended performance requirements as set out by AAMSA (Association of Architectural Aluminium Manufacturers of South Africa) in their latest edition of the "Selection Guide" and "Quality Standard Guide for Installed Architectural Windows, Doors and Shopfronts."				
	All anodising to be minimum 25 microns. Epoxy powder coating shall be minimum 50 microns.				
	All aluminium to be Interpon D1025 Colour Matt stone grey Class 1 ANP 37030 / LL230P.				
	Carried to Collection				
	Bill No. 11 Metalwork				
	PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Bill No. 11

Metalwork

COLLECTION

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Bill No. 11

Metalwork

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No			Qty	Rate	Amount
	<u>BILL NO. 12</u>				
	<u>PLASTERING</u>				
	<u>SCREEDS</u>				
	<u>Screeds wood floated on concrete</u>				
1	Average 50mm thick on ledges	m2	24		
2	Average 60mm thick on floors to falls	m2	12		
	<u>GRANOLITHIC</u>				
	<u>Tinted granolithic on concrete</u>				
3	25mm Thick on floors and landings	m2	1 620		
4	25mm Thick on treads and risers of stairs including readings	m2	52		
5	25mm Thick on narrow widths	m2	1		
6	Skirting 100mm high	m	1 724		
7	Skirting 100mm high stepped over treads and risers	m	86		
	<u>INTERNAL PLASTER</u>				
	<u>Cement plaster on blockwork and small part on concrete</u>				
8	On walls	m2	2 898		
9	On narrow widths	m2	67		
	<u>Cement plaster on concrete</u>				
10	On ceilings	m2	1 356		
	Carried to Collection				
	Bill No. 12 Plastering PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				R

Bill No. 12

Plastering

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Bill No. 12

Plastering

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No			Qty	Rate	Amount
	<u>BILL NO. 13</u>				
	<u>TILING</u>				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	NOTE :				
	The contractor is to provide a rate breakdown for the rate of each Prime Cost amount under the related items.				
	<u>Descriptions</u>				
	Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding.				
	<u>WALL TILING</u>				
	<u>150 x 150mm "Johnson" or equal approved Ceramic wall tiles fixed with adhesive to plaster (plaster elsewhere) and flush pointed with tinted waterproof jointing compound</u>				
1	On walls in isolated panels, splashbacks, etc	m2	118		
2	Fair exposed cutting and fitting around pipes not exceeding 50mm internal diameter	No	112		
	<u>EDGE TRIMS</u>				
3	PVC edge trim	m	157		
	Carried foward to Final Summary				R
	Bill No. 13 Tiling PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item
No

Qty

Rate

Amount

BILL NO. 14

PLUMBING AND DRAINAGE

SUPPLEMENTARY PREAMBLES

Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect, prior to submission of Tenders.

High density polyethylene pipes :

Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips at maximum 500mm centres, with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external

uPVC pipes and fittings:

Soil, waste and vent pipes and fittings shall be solvent weld jointed.

uPVC pressure pipes and fittings:

Pipes for water supply shall be of the class stated.

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.

Carried to Collection

R

Bill No. 14

Plumbing & Drainage

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

**Item
No**

Qty

Rate

Amount

Copper pipes:

Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers.

Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type.

Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls etc, casting in, building in or suspending not exceeding 1m below suspension level.

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.

Excavations

No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling.

"Soft rock" and "hard rock" shall be as defined in "Earthworks".

Carried to Collection

R

Bill No. 14

Plumbing & Drainage

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

**Item
No**

Qty

Rate

Amount

Laying, backfilling, bedding, etc. of pipes

Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.

Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following:

SANS 1200 L : Medium-pressure pipelines

LD : Sewers

LE : Stormwater drainage

Pipe trenches etc shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200

DB : Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200

LB : Bedding (Pipes).

Unless otherwise described bedding of rigid pipes shall be class B bedding

Flush pans

Flush pans shall have straight or side outlets and "P" or "S" traps as necessary.

Stainless steel sinks

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

Sealing around sanitary fittings, etc

Joints around sanitary fittings at junction with walls, etc are to be sealed with an approved silicone sealant and prices shall include for this.

Carried to Collection

R

Bill No. 14

Plumbing & Drainage

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No			Qty	Rate	Amount
	<u>DRAINAGE</u>				
	<u>STORMWATER DRAINAGE</u>				
	<u>Heavy duty uPVC pipes</u>				
1	110mm Pipes laid in and including trenches not exceeding 1m deep	m	5		
2	110mm Ditto exceeding 1m and not exceeding 2m deep	m	8		
3	160mm Pipes laid in and including trenches not exceeding 1m deep	m	5		
4	160mm Ditto exceeding 1m and not exceeding 2m deep	m	75		
5	160mm Ditto exceeding 2m not exceeding 3m deep	m	7		
	<u>Extra over heavy duty uPVC pipes for fittings</u>				
6	110mm Bend	No	36		
7	110mm 90 degree long radius bend	No	8		
8	160mm Bend	No	18		
9	160 x 110mm Reducing junction	No	9		
	<u>Brick catchpits (covers, gratings and frames are billed separately)</u>				
10	Catchpit 600 x 600mm not exceeding 500mm deep internally	No	1		
11	Catchpit 600 x 600mm exceeding 500mm and not exceeding 1m deep internally	No	2		
12	Ditto exceeding 1m and not exceeding 1,25m deep internally	No	1		
	Carried to Collection				
					R
	Bill No. 14 Plumbing & Drainage PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No			Qty	Rate	Amount
13	Ditto exceeding 1,25m and not exceeding 1,5m deep internally	No	1		
14	Ditto exceeding 1,5m and not exceeding 1,75m deep internally	No	1		
15	Ditto exceeding 1,75m and not exceeding 2m deep internally	No	1		
16	Ditto exceeding 2m and not exceeding 2,25m deep internally	No	1		
<u>Gratings, covers, etc</u>					
17	600 x 600mm x 50,0kg Cast iron dished grating and frame	No	8		
<u>Connection</u>					
18	Cutting into side of existing inspection chamber for and connecting 160mm pipe including inserting 160mm channel junction and making good concrete benching	No	1		
19	Locate and connect 160mm uPVC pipes to existing stormwater pipe below ground	No	1		
<u>SOIL DRAINAGE</u>					
<u>Heavy duty uPVC pipes</u>					
20	50mm Pipes laid in and including trenches not exceeding 1m deep	m	18		
21	110mm Pipes laid in and including trenches not exceeding 1m deep	m	37		
22	110mm Ditto exceeding 1m and not exceeding 2m deep	m	5		
23	160mm Pipes laid in and including trenches not exceeding 1m deep	m	10		
Carried to Collection				R	
Bill No. 14 Plumbing & Drainage PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
24	160mm Ditto exceeding 1m and not exceeding 2m deep	m	31		
25	160mm Ditto exceeding 2m not exceeding 3m deep	m	8		
<u>Extra over heavy duty uPVC pipes for fittings</u>					
26	50mm Bend	No	14		
27	50mm Junction	No	7		
28	110mm Bend	No	10		
29	110mm Junction	No	7		
30	110 x 50mm Reducer	No	7		
31	110mm Diameter rodding eye consisting of plain bend at bottom jointed to drain pipe, vertical piping not exceeding 1000mm long including all necessary slow bends, cast iron 'ABC' cover and frame, 150mm thick mass concrete 15MPa/19mm surround all round and including all necessary additional excavation, etc	No	4		
32	160mm Bend	No	10		
33	160 x 110mm Reducing junction	No	7		
34	160mm Diameter rodding eye consisting of plain bend at bottom jointed to drain pipe, vertical piping not exceeding 1000mm long including all necessary slow bends, cast iron 'ABC' cover and frame, 150mm thick mass concrete 15MPa/19mm surround all round and including all necessary additional excavation, etc	No	4		
<u>Inspection chambers (covers and frames elsewhere)</u>					
35	Brick inspection chamber size 450 x 450mm and not exceeding 1m deep internally	No	1		
Carried to Collection				R	
Bill No. 14 Plumbing & Drainage PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No		Qty	Rate	Amount
36	Ditto exceeding 1m and not exceeding 1,25m deep internally	No 1		
37	Ditto exceeding 2m and not exceeding 2,25m deep internally	No 1		
<u>Covers and frames</u>				
38	450 x 450mm x 15kg Type 14B cast iron single seal manhole cover and frame	No 3		
<u>Precast Concrete Gulleys</u>				
39	Precast concrete gulley with 160mm diameter uPVC gulley trap with 110mm diameter outlet and joint to uPVC drain pipe including PVC grating	No 7		
<u>Connection</u>				
40	Cutting into side of existing inspection chamber for and connecting 160mm pipe including inserting 160mm channel junction and making good concrete benching	No 1		
<u>SUNDRIES TO ALL DRAINAGE</u>				
41	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m3 10		
42	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock	m3 5		
43	Extra over excavation for pipe trenches, chambers, etc for carting away surplus material to a dumping site to be located by the contractor	m3 15		
44	Extra over backfilling to drain trenches, chambers, etc for earth backfilling supplied by the contractor	m3 70		
Carried to Collection			R	
Bill No. 14 Plumbing & Drainage PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No			Qty	Rate	Amount
	<u>PLUMBING</u>				
	<u>RAINWATER DISPOSAL</u>				
	<u>uPVC gutters</u>				
45	125mm Half round eaves gutters	m	84		
46	Extra over gutters for stopped end	No	4		
47	Extra over eaves gutter for outlet for 110mm diameter pipe	No	8		
	<u>uPVC pipes</u>				
48	110mm Diameter rainwater pipe	m	92		
49	Extra over 110mm rainwater pipe for bend	No	114		
50	Extra over 110mm rainwater pipe for shoe	No	8		
51	110mm Fullbore adapter	No	2		
	<u>"Fulbore" cast iron outlets</u>				
52	110mm 90 Degree side outlet	No	2		
	<u>SANITARY FITTINGS</u>				
	<u>"Franke" or equal approved</u>				
53	"Model Quinline QLX611" Grade 304 18/10 stainless steel single bowl sink (Code 101.0039.859), size 900 x 500mm wide with one 343 x 410 x 166mm deep bowl, including 50mm waste and plug and including galvanised gallow brackets (taps and traps elsewhere measured)	No	28		
Carried to Collection				R	
Bill No. 14 Plumbing & Drainage PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No		Qty	Rate	Amount
	<u>"Vaal" or equal approved</u>			
54	"Model Daisy" (Code 700803) vitreous china basin size 510 x 400mm wide with one semi-punched tap hole, integrated overflow, chainstay hole, waste, plugs and chromium plated caps (Code 8513Z0) fixed to wall using 2 No. 10mm fixing bolts (Code 8448Z0) supported on classic floor mounted pedestal (Code 715000), (waste unions, traps and taps elsewhere measured)	No	28	
55	"Model Daisy" white 90 degree top inlet open rim vitreous china wall hung WC size 470 x 360 x 395mm high (Code 751400) matching 9 litre cistern (Code 7116SC) tuscan wooden seat (Code 8515Z000) complete with fittings and flush pipe elbow (pan connector elsewhere measured)	No	28	
	<u>"Libra" or equal approved</u>			
56	"Model Capri" acrylic bath tub, size 1500 x 700 x 365mm including universal chromium plated waste union with back nut and rubber plug chain and stay and fixed to wall (Taps, traps elsewhere measured)	No	28	
Carried to Collection			R	
Bill No. 14 Plumbing & Drainage PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No			Qty	Rate	Amount
<u>TRAPS, ETC</u>					
<u>Flexible rubber</u>					
57	32mm Rubber P-trap	No	28		
58	50mm Deep seal rubber P-trap	No	28		
59	50mm Rubber bath trap	No	28		
<u>TAPS, VALVES, ETC</u>					
60	15mm Stopcock	No	168		
61	22mm Stopcock	No	28		
<u>"Cobra Watertech" or equal approved</u>					
62	15mm "Metsi" chromium plated single lever wall type sink mixer (Code MI-266/041/10)	No	28		
63	15mm "Metsi" chromium plated one hole basin mixer (Code MI-294)	No	28		
64	15mm "Metsi" chromium plated single lever wall type bath mixer with diverter and hand shower attachment (Code MI-251/15/HQ)	No	28		
65	15mm Angle regulating valve with 350mm braided flexi hose (Code 832-350F)	No	112		
<u>SANITARY PLUMBING</u>					
<u>Soil, waste & vent uPVC pipes</u>					
66	50mm Pipes to walls, columns, soffits, etc	m	168		
67	110mm Pipes to walls, columns, soffits, etc	m	98		
<u>Extra over uPVC pipes for fittings</u>					
68	50mm Bend	No	112		
69	50mm Access bend	No	28		
Carried to Collection				R	
Bill No. 14 Plumbing & Drainage PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
70	50mm Junction	No	84		
71	50mm Access junction	No	28		
72	110mm Bend	No	28		
73	110mm Access bend	No	35		
74	110mm Junction	No	28		
75	110mm Access junction	No	28		
76	110mm Pan connector	No	28		
77	110 x 50mm Reducer	No	28		
78	110 x 50mm Junction	No	28		
79	110 x 50mm Access reducing junction	No	28		
80	110mm "GI Two way" vent valve	No	7		
<u>WATER SUPPLIES</u>					
<u>HDPE Class 12 rigid high density polyethylene pipes with plastic compression fittings</u>					
81	28mm Fittings	No	300		
82	25mm Pipes laid in and including trenches not exceeding 1m deep	m	196		
83	75mm Pipes laid in and including trenches not exceeding 1m deep	m	57		
<u>Extra over rigid high density polyethylene pipes for plastic compression fittings</u>					
84	25mm Fittings	No	70		
85	75mm Reducer	No	28		
86	75mm Elbow	No	25		
Carried to Collection				R	
Bill No. 14 Plumbing & Drainage PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
87	75mm Tee	No	28		
88	80mm "1003/125" Fullway gate valve	No	3		
	<u>Class 1 copper pipes</u>				
89	15mm Pipes to walls, etc	m	70		
90	Ditto but chased in	m	583		
91	22mm Pipes to walls, etc	m	896		
92	Ditto but chased in	m	76		
93	28mm Pipes to walls, etc	m	346		
	<u>Extra over class 1 copper pipes for capillary fittings</u>				
94	15mm Fittings	No	840		
95	22mm Fittings	No	224		
96	28mm Fittings	No	140		
	<u>Extra over class 1 copper pipes for brass compression fittings</u>				
97	15mm Fittings	No	28		
98	22mm Fittings	No	28		
99	28mm Fittings	No	28		
	<u>Class 3 copper pipes</u>				
100	42mm Pipes laid in and including trenches not exceeding 1m deep	m	6		
	<u>Extra over class 3 copper pipes for brass compression fittings</u>				
101	42mm Reducer	No	8		
Carried to Collection				R	
Bill No. 14 Plumbing & Drainage PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
102	42mm Elbow	No	8		
103	42mm Tee	No	2		
	<u>Inspection chambers (covers and frames elsewhere)</u>				
104	Brick inspection chamber size 450 x 450mm and not exceeding 1m deep internally	No	3		
	<u>Covers and frames</u>				
105	450 x 450mm x 15kg Type 14B cast iron single seal manhole cover and frame	No	3		
	<u>Connection</u>				
106	Cutting into existing 75mm HDPE water supply pipe for and including connection with 75mm HDPE pipe including all fittings, etc	No	1		
	<u>WATER METER</u>				
107	"Kent" or equal approved 22mm water meter	No	28		
	<u>WATER SUPPLIES TO FIRE APPLIANCES</u>				
	<u>HDPE Class 12 rigid high density polyethylene pipes with plastic compression fittings</u>				
108	75mm Pipes laid in and including trenches not exceeding 1m deep	m	50		
	<u>Extra over rigid high density polyethylene pipes for plastic compression fittings</u>				
109	75mm Elbow	No	6		
110	75mm "1003/125" Fullway gate valve	No	3		
	<u>Galvanised mild steel pipes</u>				
111	25mm Pipes	m	22		
				R	
Carried to Collection					
Bill No. 14					
Plumbing & Drainage					
PROPOSED COMMUNITY RESIDENTIAL UNIT					
BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
112	32mm Pipes	m	12		
113	40mm Pipes	m	6		
114	75mm Pipes	m	24		
	<u>Extra over galvanised mild steel pipes for fittings</u>				
115	25mm Fittings	No	8		
116	32mm Bends	No	16		
117	32 x 25mm Reducer	No	8		
118	40 x 32mm Reducer	No	4		
119	75mm Tee	No	8		
120	75 x 25mm Reducing tee	No	8		
	<u>Paint to galvanised mild steel pipes</u>				
121	25mm Pipes	m	22		
122	32mm Pipes	m	12		
123	40mm Pipes	m	6		
124	75mm Pipes	m	24		
	<u>Class 2 copper pipes</u>				
125	28mm Pipes to walls, etc.	m	16		
	<u>Extra over class 1 copper pipes for capillary fittings</u>				
126	28mm Elbow	No	8		
127	28mm Tee	No	8		
Carried to Collection				R	
Bill No. 14 Plumbing & Drainage PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No		Qty	Rate	Amount
	<u>FIRE APPLIANCES ETC</u>			
	<u>"Chubb"</u>			
135	"Everyway" hose reel complete with 30m plastic hose, chromium plated stopcock, shut-off nozzle and wall bracket	No 8		
136	76 x 65mm Tamper proof brass hydrant	No 8		
137	4,5kg Dry chemical fire extinguisher complete with wall brackets plugged to wall	No 16		
	<u>Fire hydrant pedestals</u>			
138	Unreinforced concrete hydrant pedestal 900mm high cast around vertical pipe with bottom 300mm below ground, 300 x 300mm square at base and tapering to octagonal shaped top 200 x 200mm overall including necessary excavation, formwork and two coats of paint to exposed surfaces	No 1		
	<u>TESTING</u>			
139	Testing the whole of the stormwater drainage, soil drainage, water supply, fire service and sanitary plumbing system, etc including fittings	Item		
Carried to Collection			R	
Bill No. 14 Plumbing & Drainage PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Bill No. 14

Plumbing & Drainage

COLLECTION

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Carried foward to Final Summary

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Bill No. 14

Plumbing & Drainage

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No		Qty	Rate	Amount
	<u>BILL NO. 16</u>			
	<u>PAINTWORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>SABS Specifications</u>			
	High gloss enamel paint : SANS 630 Grade I			
	Oil gloss enamel paint : SANS 631			
	Primers for wood for external work : SANS 678 Type I			
	Primers for wood for internal work : SANS 678 Type III			
	Zink chromate primers for steel : SANS 679 Type I			
	Wash primer (metal etch) : SANS 723			
	Varnish for interior use : SANS 887 Type I			
	Emulsion paints : SANS 1586			
	<u>PAINTWORK, ETC TO NEW WORK</u>			
	<u>ON FLOATED PLASTER</u>			
	<u>One coat alkali resistant primer, one undercoat and one finishing coat PVA emulsion paint</u>			
1	On internal walls	m2	2 847	
2	On external walls	m2	2 321	
	Carried to Collection			
	Bill No. 16			
	Paintwork			
	PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			
			R	

Item No			Qty	Rate	Amount
	<u>One coat alkali resistant primer, one undercoat and one finishing coat acrylic co-polymer emulsion paint</u>				
3	On ceilings and beams	m2	1 901		
	<u>ON FIBRE-CEMENT</u>				
	<u>One coat alkali resistant primer, one undercoat and two coats pure acrylic emulsion paint</u>				
4	On ceilings and cornices	m2	108		
5	On fascias and barge boards	m2	53		
	<u>ON PLASTER BOARD</u>				
	<u>One coat alkali resistant primer, one undercoat and two coats emulsion paint</u>				
6	On ceilings and beams	m2	382		
	<u>ON METAL</u>				
	<u>One coat calcium plumbate primer</u>				
7	On backs of frames not exceeding 300mm girth	m	490		
	<u>One coat calcium plumbate primer, one undercoat and one finishing coat polyurethane velvet enamel paint on galvanised steel</u>				
8	On door frames	m2	147		
	<u>ON WOOD</u>				
	<u>One coat wood primer, one undercoat and one finishing coat polyurethane velvet enamel paint</u>				
9	On doors	m2	270		
	Carried to Collection				R
	Bill No. 16 Paintwork PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Bill No. 16

Paintwork

COLLECTION

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Carried foward to Final Summary

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Bill No. 16

Paintwork

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No			Qty	Rate	Amount
	<u>BILL NO. 17</u>				
	<u>EXTERNAL WORKS</u>				
	<u>DEMOLITIONS, ETC</u>				
	<u>Breaking up and removing precast concrete</u>				
1	Precast pannel fence 1,8m high	m	15		
	<u>Breaking up and removing reinforced concrete including cutting off and removing reinforcement</u>				
2	Strip footings	m3	8		
3	Concrete surface beds, aprons, steps, cover slabs, etc not exceeding 150mm thick	m2	12		
	<u>Breaking down and removing brickwork, etc</u>				
4	M200 Blockwork	m2	66		
	<u>Demolishing and removing</u>				
5	Single storey building with pitched roof approximately 4,5 x 4,5m overall on plan and 3m high at eaves comprising concrete surface bed, brick internal and external walls and concrete roof tiles on timber trusses (approximately 21m2 on plan)	No	1		
6	Single storey building with pitched roof approximately 8 x 8m overall on plan and 3m high at eaves comprising concrete surface bed, brick internal and external walls and concrete roof tiles on timber trusses (approximately 64m2 on plan)	No	1		
	Carried to Collection				R
	Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No		Qty	Rate	Amount
7	Single storey building with pitched roof approximately 15 x 17m overall on plan and 3m high at eaves comprising concrete surface bed, brick internal and external walls and concrete roof tiles on timber trusses (approximately 250m2 on plan)	No 1		
	<u>Relocating existing services</u>			
8	Allow the budgetary amount of R 20 000-00 (Twenty Thousand Rand) for Relocating existing services	Item		20 000,00
	<u>SITE CLEARANCE, ETC</u>			
	<u>Site clearance, etc</u>			
9	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2 985		
10	Stripping average 150mm thick layer of top soil and stockpiling on site	m2 985		
	<u>REMOVAL OF TREES, ETC</u>			
	<u>Cutting down and removing, grubbing up roots and filling in holes</u>			
11	Tree exceeding 200mm and not exceeding 500mm girth	No 5		
12	Tree exceeding 500mm and not exceeding 1m girth	No 2		
	<u>BULK EXCAVATION, FILLING, ETC</u>			
	<u>Open face excavation in earth over sloping site</u>			
13	Open face excavation	m3 493		
Carried to Collection			R	
Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No			Qty	Rate	Amount
	<u>Extra over bulk excavation in earth for excavation in</u>				
14	Soft rock	m3	30		
15	Hard rock	m3	10		
	<u>Extra over all excavations for carting away</u>				
16	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	273		
	<u>Keeping excavations free of water</u>				
17	Keeping excavations free of water other than subterranean water		Item		
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site including haulage approximately not exceeding 100m from perimeter of excavations or stock piles compacted to 95% Mod AASHTO density</u>				
18	Over site to form platforms	m3	220		
	<u>Earth filling supplied by the contractor under floors, etc compacted to 95% Mod AASHTO density</u>				
19	Over site to form platforms	m3	273		
	<u>Prescribed density tests on filling</u>				
20	"Modified AASHTO Density" test	No	15		
Carried to Collection				R	
Bill No. 17					
External Works					
PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
	<u>WALKWAYS, ETC</u>				
	<u>Excavation in earth not exceeding 2m deep</u>				
21	Reduced levels under floors	m3	19		
	<u>Extra over all excavations for carting away</u>				
22	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	19		
	<u>Keeping excavations free of water</u>				
23	Keeping excavations free of water other than subterranean water		Item		
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 98% Mod AASHTO density</u>				
24	Under floors, steps, pavings, etc	m3	67		
	<u>Compaction of surfaces</u>				
25	Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 98% Mod AASHTO density	m2	187		
	<u>Soil insecticide</u>				
26	Under floors, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	187		
	<u>25MPa/19mm Reinforced concrete</u>				
27	Surface beds on waterproofing	m3	9		
28	Ramped surface beds on waterproofing	m3	10		
29	Steps on waterproofing	m3	2		
	Carried to Collection				R
	Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No			Qty	Rate	Amount
	<u>High tensile steel reinforcement to structural concrete work</u>				
40	Bars of various diameters	t	0,20		
	<u>Fabric reinforcement</u>				
41	Type 100 fabric reinforcement in pavings, apron slabs, etc	m2	187		
	<u>Brickwork of NFP bricks in class II mortar</u>				
42	One brick balustrade walls	m2	81		
	<u>Brickwork reinforcement</u>				
43	150mm Wide reinforcement built in horizontally	m	242		
	<u>One layer of 250 micron "Consol Plastics Gunplas USB Green" or equal approved waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>				
44	Under surface beds	m2	187		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
45	3 x 10mm In saw cut joints in floors	m	72		
46	10 x 10mm In isolation joints in floors including raking out expansion joint filler as necessary	m	201		
	<u>Tinted granolithic on concrete</u>				
47	Average 25mm thick on floors to falls	m2	187		
48	25mm Thick on treads and risers of stairs including reedings	m2	25		
49	Skirting 100mm high stepped over treads and risers	m	29		
Carried to Collection				R	
Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
	<u>Cement plaster on brickwork and small part on concrete</u>				
50	On walls	m2	161		
51	On narrow widths	m2	19		
	<u>Cement plaster on concrete</u>				
52	On raking soffits of stairs	m2	5		
	<u>Handrails to staircase</u>				
53	Handrails formed of 50 diameter x 3mm thick circular hollow section continuous handrails tig welded onto plate with stainless steel pins epoxy grouted at 1200mm centres (Refer Handrail Detail - Drawing No. DONN H101)	m	1		
54	Ditto, but raking handrails	m	32		
55	Extra over for bend to 50mm internal radius	No	2		
56	Extra over for flat closed end	No	10		
	<u>Welded balustrading</u>				
57	Balustrading 1000mm high formed of 50mm diameter x 3mm thick circular hollow section continuous handrails tig welded onto plate, 4 No. 25 x 3mm horizontal flat section rails welded onto 2 No. 50 x 50mm hollow section balusters at 1250mm centres, with 100mm epoxied in top of concrete including 100 x 100 x 5mm thick cover plate (Refer Balustrade Detail - Drawing No. DONN H101)	m	2		
58	Ditto, but raking balustrading	m	27		
59	Extra over for bend to 50mm internal radius	No	1		
60	Extra over for flat closed end	No	6		
Carried to Collection				R	
Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
	<u>One coat alkali resistant primer, one undercoat and one finishing coat PVA emulsion paint</u>				
61	On external walls	m2	180		
	<u>One coat alkali resistant primer, one undercoat and one finishing coat acrylic co-polymer emulsion paint</u>				
62	On ceilings and beams	m2	5		
	<u>One coat calcium plumbate primer, one undercoat and one finishing coat polyurethane velvet enamel paint on galvanised steel</u>				
63	On rails, bars, pipes, etc not exceeding 300mm girth	m	33		
64	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	58		
	<u>BOUNDARY WALLS, RETAINING WALLS, ETC</u>				
	<u>Open face excavation in earth</u>				
65	To remove sloping banks	m3	155		
	<u>Excavation in earth not exceeding 2m deep</u>				
66	Trenches	m3	303		
	<u>Back excavation of vertical sides of excavation in earth for working space including backfilling compacted to 95% Mod AASHTO density</u>				
67	Exceeding 0,5m and not exceeding 1,5m deep for placing and removing formwork to footings against excavated face	m2	225		
Carried to Collection				R	
Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No		Qty	Rate	Amount
68	Exceeding 1,5m and not exceeding 3,5m deep for placing and removing formwork to footings against excavated face	m2	148	
	<u>Extra over trench and hole excavations in earth for excavation in</u>			
69	Soft rock	m3	20	
70	Hard rock	m3	5	
	<u>Extra over back excavation in earth for working space for excavation in soft rock</u>			
71	Exceeding 0,5m and not exceeding 1,5m deep for placing and removing formwork to footings against excavated face	m2	20	
72	Exceeding 1,5m and not exceeding 3,5m deep for placing and removing formwork to footings against excavated face	m2	10	
	<u>Extra over back excavation in earth for working space for excavation in hard rock</u>			
73	Exceeding 0,5m and not exceeding 1,5m deep for placing and removing formwork to footings against excavated face	m2	10	
74	Exceeding 1,5m and not exceeding 3,5m deep for placing and removing formwork to footings against excavated face	m2	5	
	<u>Extra over all excavations for carting away</u>			
75	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	144	
	<u>Risk of collapse of excavations</u>			
76	Sides of trench and hole excavations not exceeding 1,5m deep	m2	167	
77	Sides of bulk excavations exceeding 1,5m deep	m2	260	
Carried to Collection			R	
Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No		Qty	Rate	Amount
	<u>Keeping excavations free of water</u>			
78	Keeping excavations free of all water other than subterranean water	Item		
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density</u>			
79	Backfilling to trenches, holes, etc	m3	175	
	<u>Coarse river sand filling supplied by the contractor</u>			
80	Backfilling behind retaining walls	m3	80	
	<u>15MPa / 19mm concrete</u>			
81	Surface blinding under footings and bases	m3	12	
	<u>25MPa / 19mm concrete</u>			
82	Retaining wall footing	m3	78	
83	Retaining walls	m3	63	
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>			
84	Tops of beams, walls, etc	m2	43	
	<u>Rough formwork to sides</u>			
85	Retaining wall footings not exceeding 300mm high	m	305	
86	Retaining wall footings exceeding 300mm high	m2	14	
87	Retaining walls	m2	360	
88	Retaining walls with total height exceeding 3,5m and not exceeding 5m above bearing level	m2	139	
Carried to Collection			R	
Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No			Qty	Rate	Amount
	<u>Test Blocks</u>				
89	Making and testing 150 x 150 x 150mm concrete strength test cube	No	45		
	<u>Two layers three ply malthoid slip joints between horizontal concrete and brick surfaces including cement mortar bed</u>				
90	Not exceeding 300mm wide	m	63		
	<u>Mild steel reinforcement to structural concrete work</u>				
91	Bars of various diameters	t	1,05		
	<u>High tensile steel reinforcement to structural concrete work</u>				
92	Bars of various diameters	t	21,15		
	<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar</u>				
93	One brick walls	m2	46		
94	345mm Hollow walls of two half brick skins with 115mm cavity filled in with and including 25MPa/19mm mass concrete filling	m2	47		
	<u>Bagging of 1:3 cement and sand mixture</u>				
95	On brick walls, piers, etc	m2	47		
96	On concrete walls, columns, etc including removing fins, irregularities, etc.	m2	229		
	<u>Galvanised brickwork reinforcement</u>				
97	150mm Wide reinforcement built in horizontally	m	271		
98	230mm Wide reinforcement built in horizontally	m	277		
Carried to Collection				R	
Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
	<u>One layer of 500 micron "Consol Plastics Hyperlastic Orange" waterproof sheeting sealed at laps with "Superstik" tape</u>				
99	Vertically to walls	m2	276		
	<u>Two coats "Brixeal" bitumen emulsion waterproof coating</u>				
100	Vertically behind retaining walls	m2	276		
	<u>10mm Softboard protection</u>				
101	Vertically behind retaining walls	m2	276		
	<u>Cement plaster on brickwork and small part on concrete</u>				
102	On walls	m2	35		
103	On narrow widths	m2	14		
	<u>Cement plaster on concrete</u>				
104	On walls	m2	157		
105	On narrow widths	m2	22		
	<u>One coat alkali resistant primer, one undercoat and one finishing coat PVA emulsion paint</u>				
106	On external walls	m2	228		
	<u>Subsoil drainage</u>				
107	110mm Slotted uPVC agricultural pipes laid behind retaining wall including excavations, etc and 12mm crushed stone encasing size 300 x 300mm and "Bidum U14" geofabric filter blanket wrapped around encasing with 150mm side and 300mm end laps including stitching	m	224		
108	Extra over for 110mm bend	No	14		
Carried to Collection				R	
Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
	<u>Weep pipes</u>				
109	75mm uPVC weep pipe not exceeding 1m long "Bidum U24" geofabric filter sock at end of pipe, size 300 x 300mm	No	222		
	<u>FENCING</u>				
	<u>Galvanised mild steel palisade fencing and accessories with anti-vandal fixings on brick plinths (brickwork measured elsewhere)</u>				
110	40 x 40 x 3mm Angle section rails welded to pales and posts	m	150		
111	40 x 40 x 2mm Angle section pales 2100mm long with "Spearpoint" shaped top welded to rails at 165mm centres	No	525		
112	76 x 76 x 3mm Hollow section post 2100mm long with 3mm flat section pyramid capping and 150 x 150 x 3mm base plate welded to post and bolted to top of brick/concrete wall with and including four expansion bolts	No	48		
Carried to Collection					R
Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No		Qty	Rate	Amount
	<u>LANDSCAPING</u> <u>General plant material</u> All plant material (plants, shrubs, trees, etc) shall be obtained from a registered nursery and shall be free from damaged parts, parasites, fungus, other plant diseases or insects. No container bound plants will be acceptable. <u>Cultivation and preparation of planting areas</u> All surface rocks and stones larger than 50mm shall be removed before commencing cultivating and preparation. The entire area shall be ripped and rotavated using approved machinery by breaking up the earth to a depth of 300 at 600mm centres in both directions, unless otherwise described, and then levelled. Where fertilizer or compost is specified, it shall be worked into the topsoil to a depth of 300mm and finished to final levels. All fertilizer to areas to be grassed shall be strewn on the final layer before final finishing is commenced and worked mechanically into the top 150mm soil. <u>Maintenance period</u> All planted areas shall be maintained for a period of three months after practical completion as defined in the contract. This maintenance shall consist of keeping clear of weeds and litter, loosening all soil where necessary, replacing damaged, diseased or dead plants, pruning, cutting and mowing as necessary and watering so as to keep the plant material in a healthy growing condition.			
	Carried to Collection Bill No. 17 External Works PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH		R	

Bill No. 17

External Works

COLLECTION

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Bill No. 17

External Works

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No		Qty	Rate	Amount
	<u>BILL NO. 18</u>			
	<u>ELECTRICAL INSTALLATION</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Proprietary items or material</u>			
	Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Electrical Engineer prior to tender closing			
	<u>PRELIMINARIES & GENERAL</u>			
1	Any additional item(s) required to complete the works: The items shall fully detailed and priced under a covering letter	Item		
	<u>GENERAL ITEMS</u>			
2	Liaise with Telkom for the approval of conduits, cable trays, sleeves, power skirting and JB's installed	Item		
3	Earth cable trays and ladders with 10mm ² Cu PVC cable jumpers across joints, splices, elbows, tees etc	Item		
4	Liaison with various sub-contractors in regard to final building dimension, access routes, limiting sizes, constraint of equipment etc	Item		
5	Liaise with builder during construction of penetrations in concrete and brickwork to ensure they are formed in the correct positions	Item		
6	Liaise with relevant sub-contractors in regard to cable entry requirements, phase rotation and control wiring connection facilities required and to be provided in each sub-contractors switchboard for use by the electrical contractor in connecting up	Item		
	Carried to Collection		R	
	Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Item No			Qty	Rate	Amount
7	Liaise with the builder during construction of recesses in concrete slabs, beams and columns to ensure they are formed in the correct positions		Item		
	<u>ISOLATION, DISCONNECTION & REMOVAL</u>				
8	Complete isolation, disconnection, removal of all existing electrical, panels, switchgear, cabling, wiring, isolators, fittings, fixtures, accessories, etc and shall include the inventory, repackaging, storage and handover to the Client. The Contractor shall prepare the infrastructure to receive the new works		Item		
	<u>SLEEVES, CABLES AND TRENCHING</u>				
	Allow to liaise with the Ethekewini Municipality to upgrade the electrical point of supply and completion of all necessary applications, forms, notices, etc to complete the works				
	<u>Split Type Prepayment Meters</u>				
9	Allowance for the eThekweni Electricity to install and commission split type prepayment meters	No	1,00		
	<u>Application Forms, etc</u>				
10	Allowance to liase with the municipality to complete all necessary applications, forms, notices, etc		Item		
Carried to Collection				R	
Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
	<u>SLEEVES</u>				
	<u>Supply and install white PVC cable sleeve pipes including joints, bends and all necessary fittings, fixtures and accessories</u>				
11	50 mm dia.(diameter) 3mm thick PVC sleeve	m	383		
12	110mm dia. 3mm thick PVC sleeve	m	86		
13	Supply and install 32mm dia. conduit for unit DB's	m	470		
14	Supply and install 25mm dia. conduit from JB to units	m	1 123		
15	Draw wires	m	10 930		
16	Manhole complete with covers as per eThekweni Municipality standard SS_MANHOLES	No	2		
	<u>LV CABLE</u>				
	<u>600/1000V grade PVC/PVC/SWA/PVC + ECC stranded copper conductor cables. Cable laid in trenching (excavations elsewhere measured)</u>				
17	50 mm ² 4C Copper 600/1000 V PVC SWA PVC cables in trenches, trunking or sleeves	m	13		
18	35 mm ² 4C Copper 600/1000 V PVC SWA PVC cables in trenches, trunking or sleeves	m	13		
19	25 mm ² 4C Copper 600/1000 V PVC SWA PVC cables in trenches, trunking or sleeves	m	119		
20	16 mm ² 4C Copper 600/1000 V PVC SWA PVC cables in trenches, trunking or sleeves	m	59		
21	10 mm ² AIRDAC complete with separate neutral and earth cable with Comms in 32mm dia. sleeves	m	1 141		
Carried to Collection				R	
Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
<u>LV CABLE TERMINATIONS</u>					
<u>Cable Terminations for LV 600/1000V grade cables and shall be complete with glands, shrouds, lugs, connections, etc</u>					
22	50 mm ² 4 Core Copper Conductor with a Pratley/CCG gland complete with long shroud and brass earth tag	No	1		
23	35 mm ² 4 Core Copper Conductor with a Pratley/CCG gland complete with long shroud and brass earth tag	No	1		
24	25 mm ² 4 Core Copper Conductor with a Pratley/CCG gland complete with long shroud and brass earth tag	No	4		
25	16 mm ² 4 Core Copper Conductor with a Pratley/CCG gland complete with long shroud and	No	5		
26	10 mm ² AIRDAC complete with separate neutral earth cable with comms	No	55		
<u>TRENCHING AND BACKFILLING</u>					
<u>Excavate for cable and sleeve trench including temporary support Of sides, keeping excavations dry, backfilling and compacting To the Engineer's specification. Trench Dimensions: 600mm deep x Trench Dimensions: 600mm deep x 400mm wide. (4 linear m = 1m3)</u>					
27	Excavating in soft material and backfilling	m3	60		
28	Excavating in intermediate material and backfilling	m3	7		
29	Excavating in hard rock and backfilling	m3	3		
30	Cable markers	No	13		
Carried to Collection				R	
Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No		Qty	Rate	Amount
31	300mm wide yellow cable warning tape placed 1500mm above the cables in excavations	m	313	
32	Excavating for cable road crossing and placing 4 x 110mm sleeves across road way	m3	5	
33	Backfilling road crossing and reinstating road surface and compaction as before	m3	5	
34	Making good and reinstate the excavated surfaces as before	m3	5	
Carried to Collection				R
Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No		Qty	Rate	Amount
<u>DISTRIBUTION BOARDS</u>				
<u>Distribution boards complete with sheetmetal tray, frames, sub-frames, busbars, legend card, circuit breakers, earth leakage unit, time switch, Dehn or approved surge arrestors, etc.incl all necessary accessories required for the installation</u>				
35	Residential unit distribution board: DB-U (CBI or other approved) as per Drawing No: B14/DONN/EE/14	No	28	
36	Electrical Pre-Payment Metering Frame: E1/E2 as per Drawing No: B14/DONN/EE/10	No	2	
37	Electrical Pre-Payment Metering Frame: E3/E4 as per Drawing No: B14/DONN/EE/11	No	2	
Carried to Collection				R
Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Item No			Qty	Rate	Amount
<u>BLOCK E: LIGHTING & SMALL POWER</u>					
<u>CONDUIT</u>					
<u>Conduit placed in position for casting into concrete or screed for building or chased into concrete or brickwork or for surface mount in ceiling void, including bending, treading, jointing, draw boxes, coupling, bends, tees and saddles and all necessary fittings, fixtures and accessories</u>					
38	20 mm dia PVC conduit in brickwork/slab or in ceiling void	m	1 420		
39	60mm deep conduit box cast in/mounted on surface	No	156		
<u>WIRING</u>					
<u>600/1000V PVC insulated copper conductors drawn into conduits and/or wiring channels</u>					
40	2.5 mm ²	m	3 080		
41	2.5 mm ²	m	540		
42	4.0 mm ²	m	1 080		
<u>LIGHT SWITCHES</u>					
<u>All light switch outlets shall be complete with recessed 100x50x50mm galvanised extension boxes, coverplates, yokes, fittings, fixtures and all necessary accessories</u>					
43	Crabtree Classic 1 lever 1 way 16 Amp switches installed in 100 x 50 box, complete with white cover plate (steel)	No	96		
Carried to Collection				R	
Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No		Qty	Rate	Amount
44	Crabtree Classic 2 lever 1 way 16 Amp installed in 100 x 50 box complete with white cover plate (steel)	No 28		
	<u>LIGHT FITTINGS & FIXTURES</u>			
	<u>Supply and installation of luminaires including surface mounting of luminaires onto ceilings or wall surfaces</u>			
45	Type A, bulkhead light fitting complete with 2 x PL 9 warm white CFL/White trim	No 128		
46	Type B, bulkhead light fitting complete with 2 x PL 9 cool white CFL/Black trim	No 59		
	<u>SMALL POWER</u>			
	<u>SWITCHED SOCKET OUTLETS</u>			
	<u>All switched socket outlets shall be complete with recessed 100x100x50mm galvanised extension boxes, coverplates, yokes, fittings, fixtures and all necessary accessories</u>			
47	Crabtree Classic 16 A 3 pin switched outlet complete with 100x100x50 galvanised steel box installed recessed	No 28		
48	Crabtree Classic 16 A 3 pin double switched socket with 100x100x50 galvanised steel box installed recessed	No 148		
	<u>GEYSER POINT</u>			
	<u>All power point outlets shall be complete with recessed 100x100x50mm PVC extension boxes, coverplates, yokes, fittings, fixtures and all necessary accessories</u>			
49	Crabtree Classic 16 A double pole isolator mounted in 100 x 100 steel box at the geyser or other approved	No 28		
	Carried to Collection		R	
	Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Item No			Qty	Rate	Amount
50	25mm dia PVC conduit	m	280		
51	25mm dia galvanised steel flexible connections not exceeding 1000mm complete with connectors at both ends	No	28		
52	4.0 mm ²	m	560		
53	2.5 mm ²	m	280		
<u>TV INSTALLATION</u>					
<u>Supply and install a complete digital TV distribution system including all cabling, aerials/ Satellite dishes, decoders, fittings fixtures and accessories to outlet points to each flat but excluding actual televisions</u>					
54	Flush mounted 300 x 300 x 100mm draw box including all fixtures fittings and accessories	No	28		
55	32mm diameter PVC conduit Installed in brickwork	m	650		
56	100 x 100 x 50mm outlet box	No	28		
57	4 x 4 variable wall socket - outlet box installed in brickwork	No	28		
58	100 x 100mm cover plate	No	28		
59	ELSAT 80 cm Composite dish including dish kit	No	1		
60	ELSAT OVHD Digital Satellite HD Decoder	No	28		
61	ELSAT Twin LNB	No	1		
62	6 way Multiswitch	No	28		
63	Setback amplifiers	No	2		
64	4 way tap splitters	No	6		
65	96 braided distribution cable with low losses	m	910		
Carried to Collection				R	
Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No			Qty	Rate	Amount
66	Screw in type F connector plugs - 8mm	No	28		
67	Screws, plugs, cable clips, cable ties, etc. - Supply and Install		Item		
68	Satelite Dish installation and set up	No	1,00		
69	Viewing point - installation labour	No	1,00		
70	Testing and commissioning	No	1,00		
<u>EXTERIOR POWER AND LIGHTING</u>					
<u>GENERAL LIGHTING</u>					
71	20 mm dia PVC conduit in brickwork/slab or in ceiling void	m	602		
72	20 mm dia PVC conduit box cast in/mounted	m	41		
73	2.5 mm ² 1000 V Cu PVC wire pulled into conduit	m	424		
74	1.5 mm ² 1000 V Cu PVC wire pulled into conduit	m	1 122		
75	Crabtree Classic 1 lever 1 way 16 Amp installed in 100 x 50 box. Include for cover - colour white or other approved	No	1		
<u>Allow for installation of the following luminaries with lamps</u>					
76	Type J1 70W Floodlight Luminaire Range-IP65	No	5		
77	Type J2 1x70W HPS Decorative Post top sphere luminare range mounted on pole	No	16		
78	Type J2 1x70W HPS Decorative Post top sphere luminare-wall top bracket	No	2		
79	20A Photocell	No	1		
Carried to Collection				R	
Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No		Qty	Rate	Amount
	<u>LIGHT POLES</u>			
	<u>The light poles shall be a fibreglass, UV resistant, manufactured in accordance with SANS 1749. The pole shall be complete with glandplate, cable entry, access door, baseplate, miniature circuit breaker, spigots, etc and all necessary fittings fixtures and accessories</u>			
80	BekaPole: K187635: 3.5m mounting height. Colour: Black. Pole as per above specification for Light Fitting J2	No	16	
	<u>EARTHING & LIGHTNING PROTECTION SYSTEM</u>			
	<u>Installation to be done by an accredited specialist (sub)contractor</u>			
	<u>Earthing Installation</u>			
81	Allow for visiting of the site and the carrying out of the required resistivity tests and the issuing of the test results to the Engineer	Item		
82	Allow for the preparation of design workshop drawings of the earthing system and submission to the Engineer for comment	Item		
83	Extensible copper earth electrodes into ground mech driving, incl cpl driv blt	No	30	
84	70mm ² PVC insulated stranded copper conductor laid in trench	m	20	
85	Excavate in earth for earth conductor not exceeding 1m deep	m	20	
86	Backfilling and compaction of above trenching	m	20	
87	20mm diameter flush PVC conduit in the external walls from the ceiling space down to the ground	m	20	
	Carried to Collection		R	
	Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Item No			Qty	Rate	Amount
88	Sealing of joints with Denso tapes	No	10		
89	Allow for the final testing of buildings, etc on completion and issue of test certificate to Engineer		Item		
<u>Joining of various round/flat copper conductors by means of bolting, brazing or exothermic bonds</u>					
90	Brass clamps termination to copper cable and to the top of the earth electrodes	No	10		
<u>Lightning Protection System</u>					
91	Bonding of air termination conductor between, roof, gutters, etc	No	10		
92	Bi-Metallic test joint between d/c system and earth	No	10		
93	Re-inforcing brass bracket complete with galvanised steel wire, U bolt, brass terminal	No	10		
94	Lightning protection points test in enclosed 100 x 100 box and engraved cover	No	10		
95	Allow for the testing of the completed system and the issue of a prescribed test certificate		Item		
96	Updating and issue as-built drawings to the Engineer on completion		Item		
97	Allow for the required maintenance of the system for the full maintenance period including a final test reading before the end of the period		Item		
98	Add for Profit and attendance on lightning protection items work to be done by specialist contractor		Item		
Carried to Collection				R	
Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH					

Item No		Qty	Rate	Amount
<u>TESTING & COMMISSIONING</u>				
99	Allow for Commissioning, testing of each DB, unit, block and complete installation and issuing of all Certificates of Compliance	Item		
100	Allow for three sets of maintenance, operation manuals and handover file as specified	Item		
101	Allow for twelve months free maintenance and guarantee	Item		
102	Allow for preparation of workshop drawings and printing incl for Minisubstation	Item		
103	Allow for instructing the clients staff in the correct operation of the installation as per special project specification requirements	Item		
104	Allow for preparation of "as installed drawings" in AutoCad Format	Item		
105	Allow for supply and delivery of maintenance tools and equipment applicable to the installation	Item		
Carried to Collection			R	
Bill No. 18 Electrical Installation PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH				

Bill No. 18

Electrical Installation

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Bill No. 18

Electrical Installation

**PROPOSED COMMUNITY RESIDENTIAL UNIT
BLOCK E, AT DONNELLY ROAD, WENTWORTH**

Item No		Qty	Rate	Amount
	<u>BILL NO. 20</u> <u>PROVISIONAL AMOUNTS</u> The following Provisional Amounts are all NET amounts EXCLUSIVE of commission for the Contractor. These amounts are for work to be executed complete by Nominated/Selected Sub-Contractors. Provisional Amounts may be omitted or reduced at the Employer's sole discretion and the contractor shall not be entitled to claim for any loss by way of reductions or omissions of any discount, or percentage relating to Provisional Amounts or P.C. amounts or any loss of profit related thereto.			
	<u>BUDGETARY ALLOWANCES</u> <u>The following Budgetary Allowances are for work to be executed by the Contractor and priced at Bill rates or rates to be agreed</u>			
	<u>BUILDERS WORK IN CONNECTION WITH SPECIALIST INSTALLATIONS</u>			
1	Allow the Budgetary Amount of R 50 000.00 (Fifty Thousand Rand) for builders work in connection with specialist installations	Item		50 000,00
	Carried foward to Final Summary Bill No. 20 Provisional Amounts PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH		R	

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16	Paintwork	76	
17	External Works	92	
18	Electrical Installation	106	
19	Heat Pumps	107	
20	Provisional Amounts	108	
Carried Forward			R
PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH			

Bill No	<u>FINAL SUMMARY</u>	Page No	Amount
	Brought Forward		R
	<u>CONTINGENCY ALLOWANCE</u>		
	Provide the sum of R 350 000.00 (Three Hundred and Fifty Thousand Rand) for contingencies to be used as directed by the Principal Agent and deducted in whole or in part if not required	Item	350 000,00
	SUB-TOTAL		R
	VALUE ADDED TAX (15%)		R
	Carried to Form of Tender		R
	PROPOSED COMMUNITY RESIDENTIAL UNIT BLOCK E, AT DONNELLY ROAD, WENTWORTH		

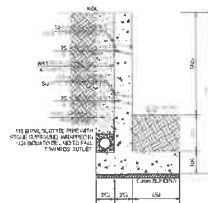
Annexure C - Drawings



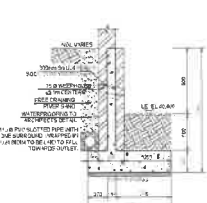
RETAINING WALL - TYPE 104
SECTION 104 - 104
SCALE 1:20



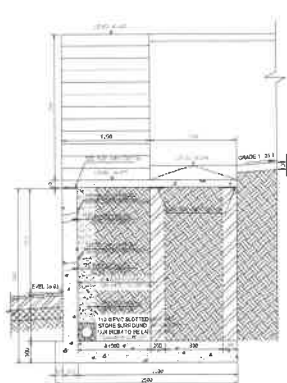
RETAINING WALL - TYPE 105
SECTION 105 - 105
SCALE 1:20



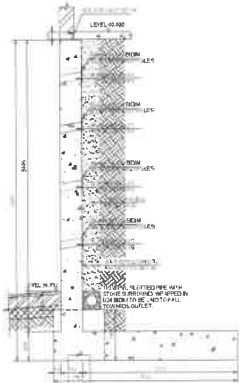
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SECTION 106 - 106
SCALE 1:20



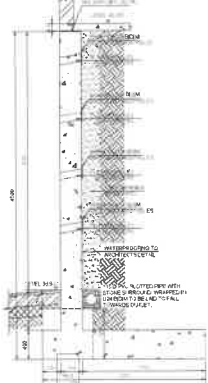
RETAINING WALL - TYPE 107
SECTION 107 - 107
SCALE 1:20



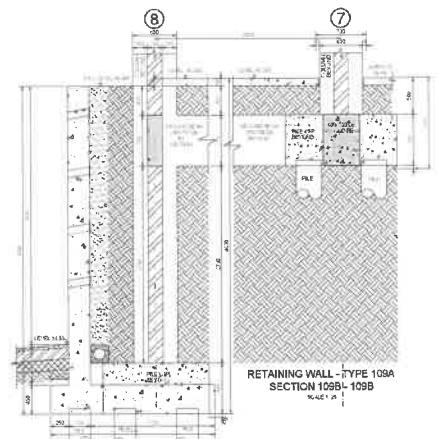
RETAINING WALL - TYPE 108
SECTION 108 - 108
SCALE 1:20



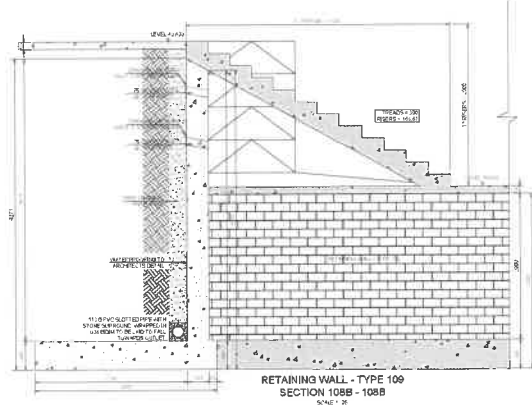
RETAINING WALL - TYPE 109
SECTION 109 - 109
SCALE 1:20



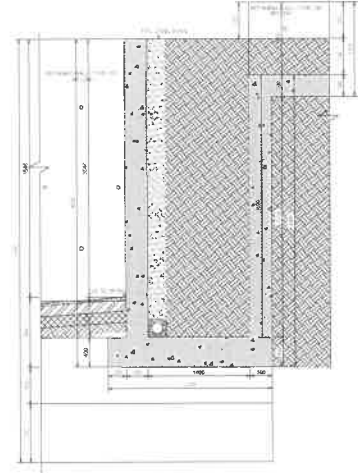
RETAINING WALL - TYPE 109A
SECTION 109A - 109A
SCALE 1:20



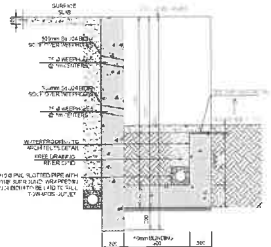
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SECTION 109A - 109A
SCALE 1:20



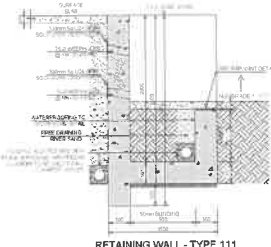
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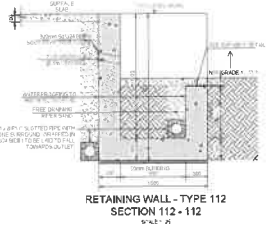
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SECTION 109C - 109C
SCALE 1:20



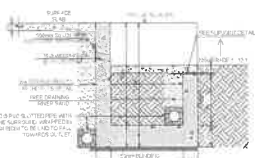
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SECTION 110 - 110
SCALE 1:20



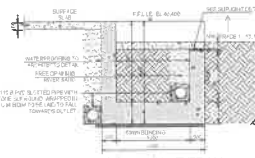
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SECTION 111 - 111
SCALE 1:20



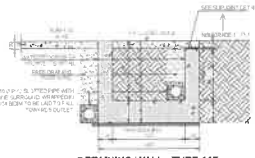
RETAINING WALL - TYPE 112
SECTION 112 - 112
SCALE 1:20



RETAINING WALL - TYPE 113
SECTION 113 - 113
SCALE 1:20



RETAINING WALL - TYPE 114
SECTION 114 - 114
SCALE 1:20

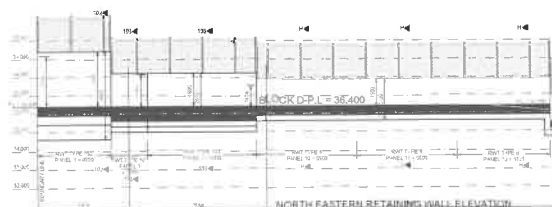
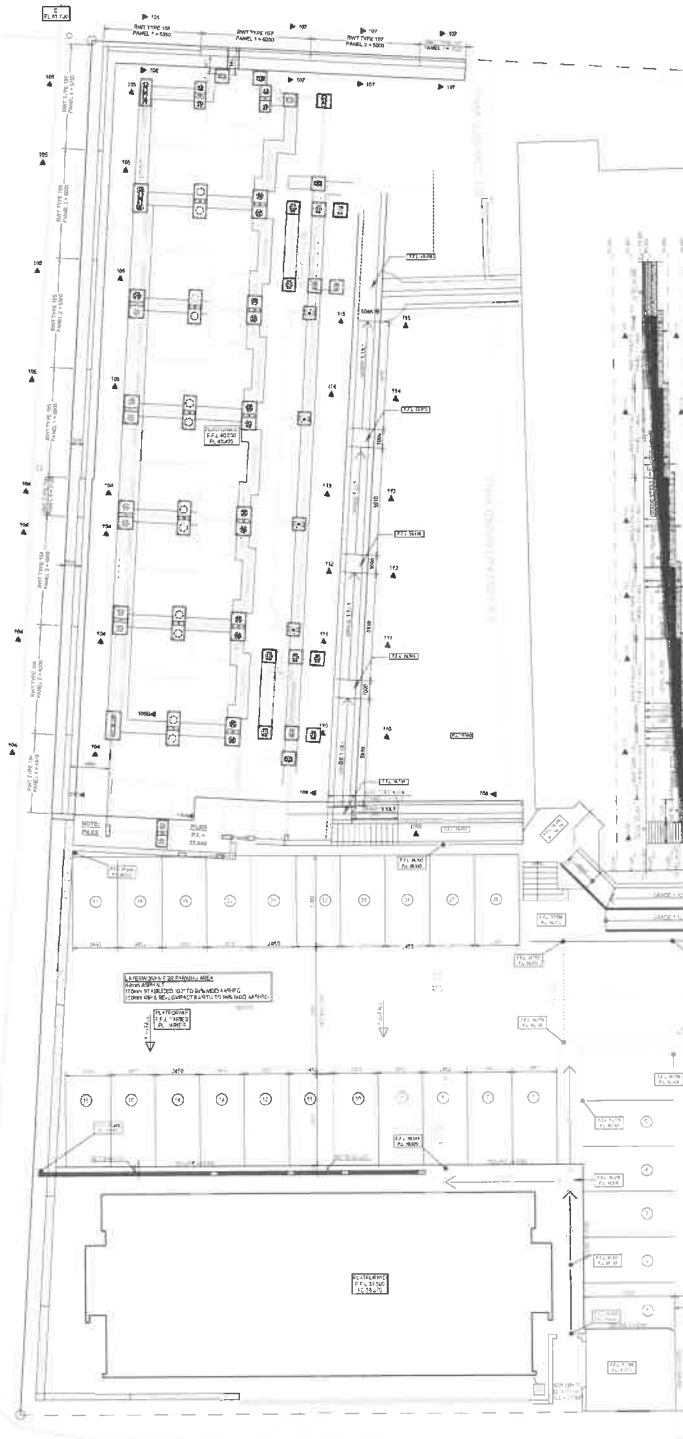
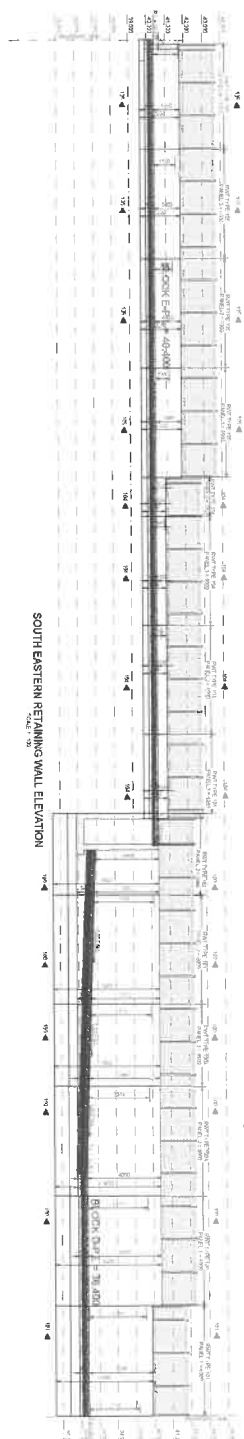
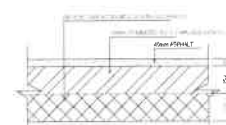
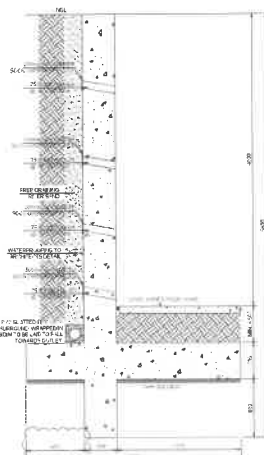
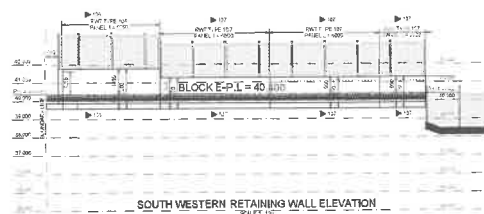


RETAINING WALL - TYPE 115
SECTION 115 - 115
SCALE 1:20

GENERAL NOTES

1. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
4. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
5. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
6. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
7. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
8. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
9. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
10. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
11. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
12. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
13. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
14. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
15. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
16. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
17. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
18. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
19. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
20. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.

01	SECTIONS REVISIONS	A.R. 26-10-21
REV.	AMENDMENTS	APP. DATE
IVE CONSULTING CONSULTING CIVIL AND STRUCTURAL ENGINEERS 10/1000 LANE, 2ND FLOOR PO BOX 1000, 2ND FLOOR WENTWORTH, NSW 2060 TEL: 02 9550 1000 WWW.IVECONSULTING.COM.AU		
PROJECT: PROPOSED SOCIAL HOUSING FOR ETHEKWINI MUNICIPALITY ON R1418 WENTWORTH AT 8 DONNELLY ROAD, WENTWORTH		
TITLE: BULK EARTHWORKS LAYOUT PHASE 2 - RETAINING WALL BASE STEEL		
DESIGNED BY:	A.S. VAMICA	DRAWING NO.
DRAWN BY:	A.K. PARASAR	SCALE
DATE:	06-10-2021	21587-EW1101



GENERAL NOTES

- [illegible]

58	LAYOUT REVISIONS	APR 28/97
59	RETAINING WALL TYPE 100A, 101 & 102 TO	APR 29/97
60	REVERT BACK TO WALL TYPE 100 SOUTH	
61	EASTERN RETAINING WALL, ELEVATION	
62	AMENDED,	
63	REVERT BACK TO REVISION 03	APR 30/97
64	RETAINING WALLS TYPE 105A TO REVERT BACK	APR 30/97
65	TO ORIGINAL DESIGN AND MAINTAIN AN OFFSET	
66	DISTANCE OF 300mm AGAIN FROM THE	
67	ROADWAY LINE	APR 30/97
68	RETAINING WALLS TYPE 103, 102/101, 102	
69	TO MAINTAIN AN OFFSET DISTANCE OF 300mm	
70	FROM THE ROADWAY LINE	APR 17/01
71	ELEVATIONS ADDED	APR 18/01
72	LAYOUT 1 & DETAIL 03 AS REVISED	APR 25/01
REV	AMENDMENT 03	APP. DAT

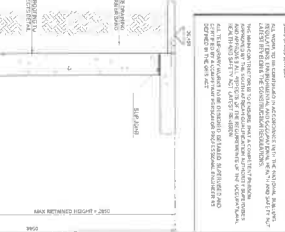
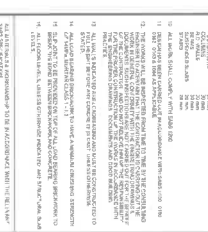
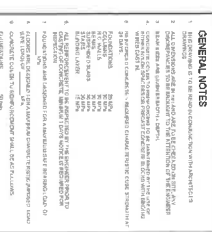
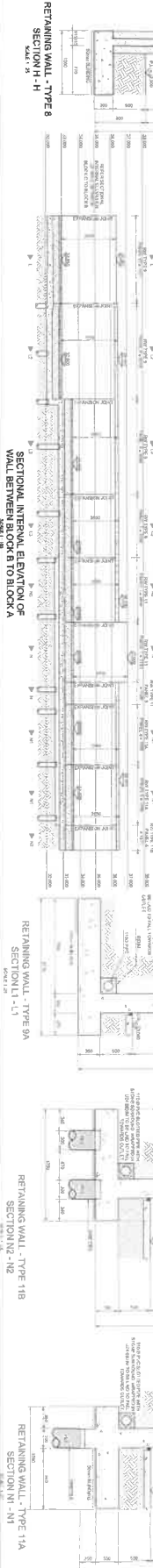
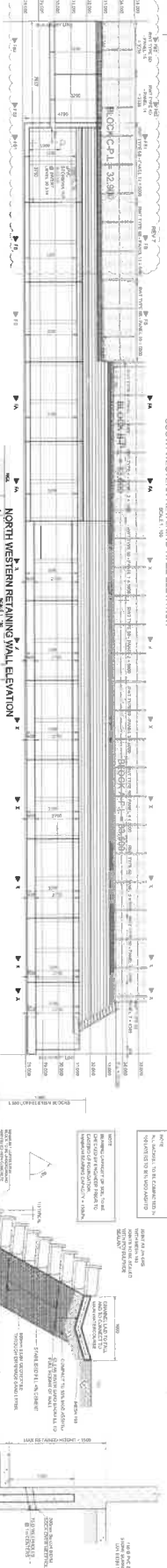
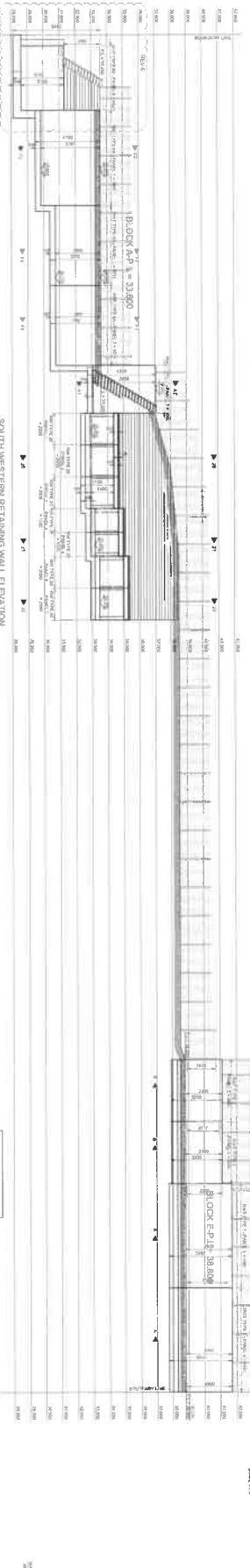
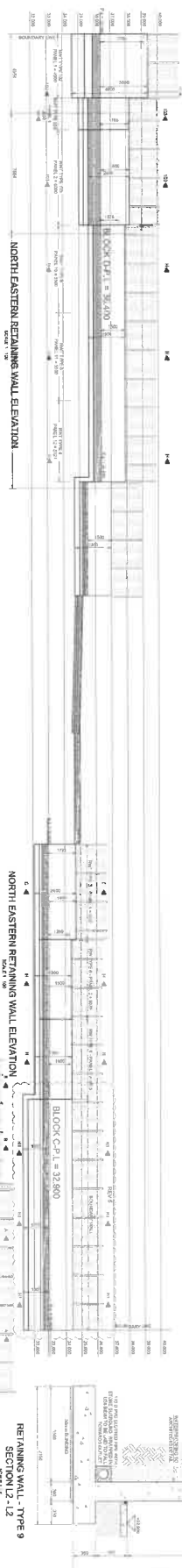
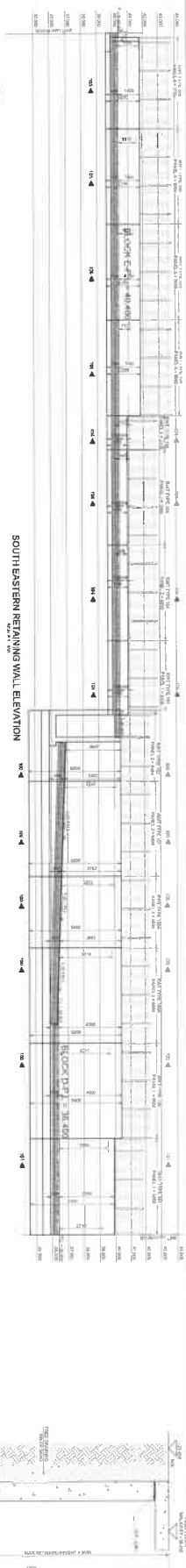
PROJECT

PROPOSED SOCIAL HOUSING FOR
ETHEKWINI MUNICIPALITY ON R/1419
WENTWORTH AT 8 DONNELLY ROAD,
WENTWORTH

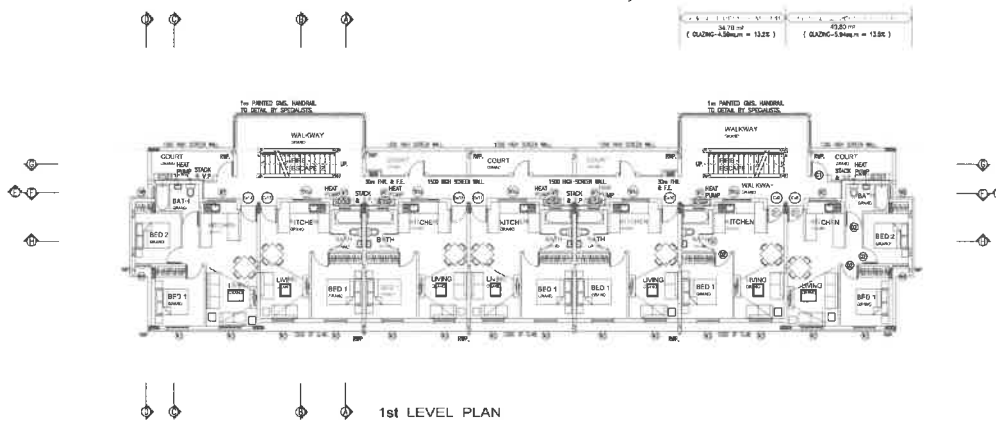
TITLE

**BULK EARTHWORKS LAYOUT PHASE 2 -
RETAINING WALL BASE STEEL**

DESIGNED BY	A. S. VAWDA	DRAWING No.	21587-EW100
DRAWN BY	A. RAMPARSHAD		
DATE	SCALE:		
20-10-2022	AS SHOWN		



TITLE		ETHERKWIN MUNICIPALITY ON R7-419 WENTWORTH AT 8 DONNELLY ROAD, WENTWORTH	
RETAINING WALL ELEVATIONS			
CONSTRUCTION	A. S. KAYDA	DRAWING NO.	21587-ENW2
DESIGNED BY	A. GOVORUCHIN	CHECKED BY	7
DATE	SCALE	DATE	SCALE
8/14/2021	AS SHOWN		



Abstract The purpose of this study was to determine the effect of a 12-week training program on the heart rate (HR) and blood pressure (BP) of sedentary, middle-aged men. The subjects were divided into two groups: a control group and a training group. The control group consisted of 10 men who did not exercise, and the training group consisted of 10 men who exercised for 12 weeks. The HR and BP were measured at baseline and at the end of the 12-week period. The results showed that the training group had a significant decrease in HR and BP compared to the control group. The HR decreased from 72 to 68 beats per minute, and the BP decreased from 120/80 to 110/70 mmHg. The control group showed no significant change in HR and BP. These results suggest that a 12-week training program can effectively reduce HR and BP in sedentary, middle-aged men.

REVISIONS

PROPOSED SOCIAL HOUSING

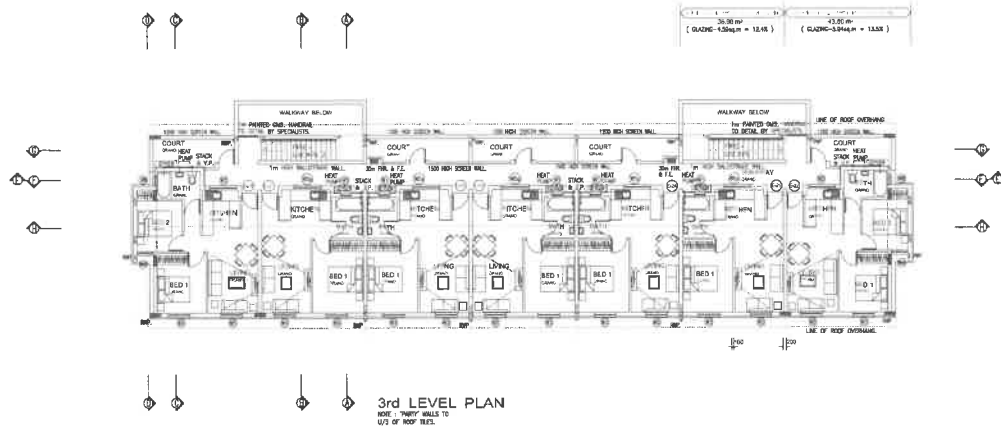
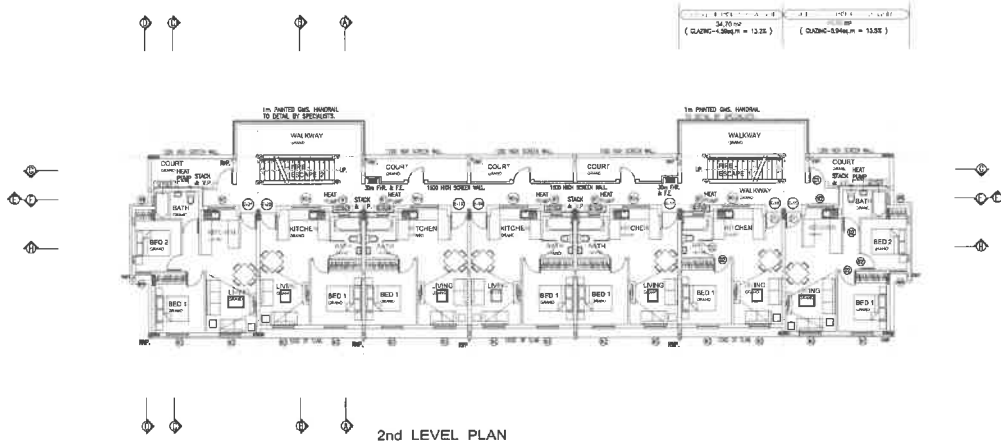
for : ETHEKWINI MUNICIPALITY
on : REM OF ERF 1419, WENTWORTH
DURBAN.
at : 8 CONNELLY ROAD, WENTWORTH
DURBAN.

[illegible]

	DATE	DRAWN
	SCALE	TITLE
	DRAWING NO.	REVISION
	CONNECTION	



SITE PLAN - BLOCK E



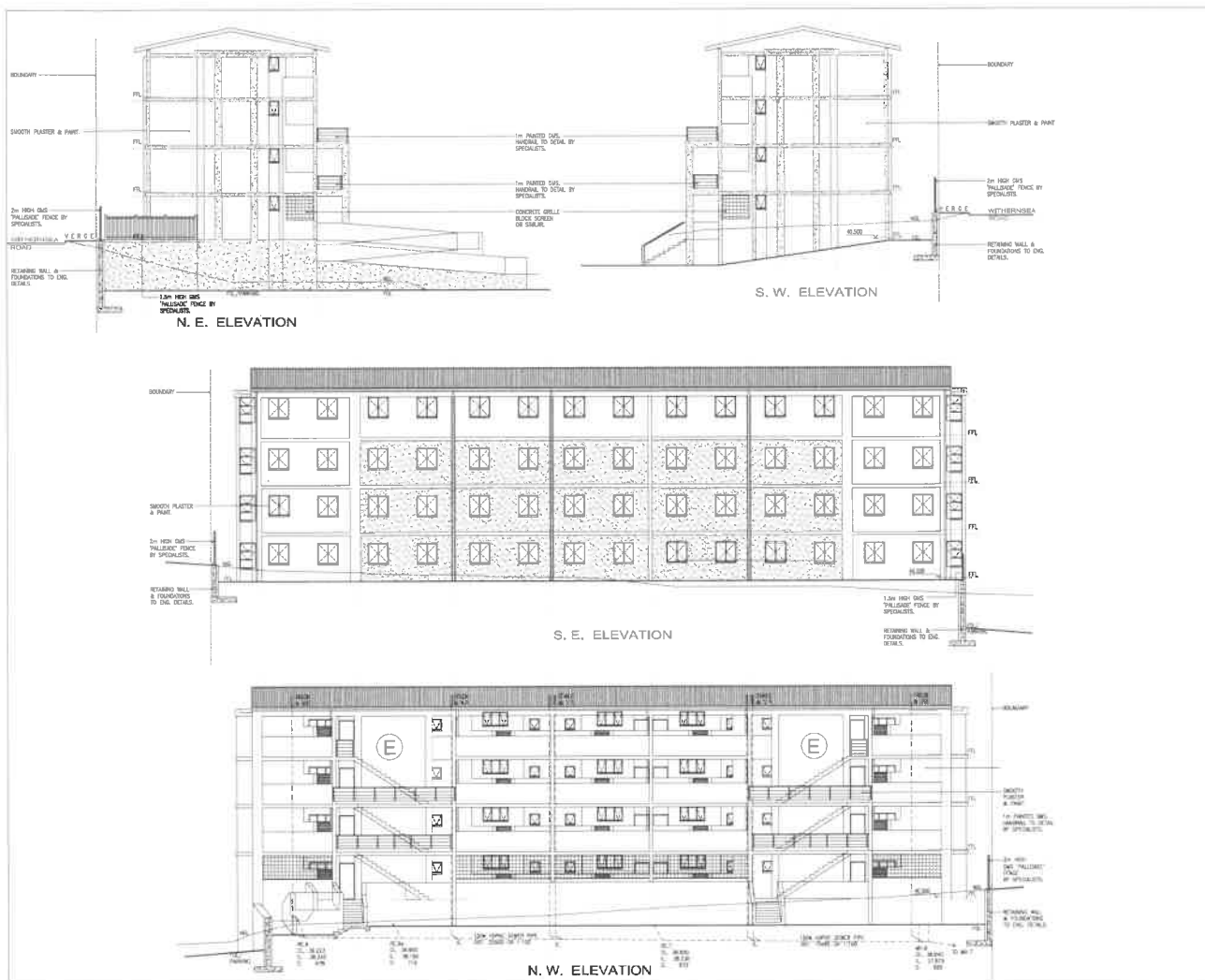
REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/10/2020	AS PER THE ARCHITECTURAL DRAWINGS, HAVE NO CHANGES TO THE PLAN, BUT HAVE CHANGED THE SCALE OF THE PLAN TO 1:500.	ARCHITECT

PROPOSED SOCIAL HOUSING
for:
ETHERWINE MUNICIPALITY
on:
REM OF ERP 1415, WENTWORTH
DURBAN.
at:
8 DONNELLY ROAD, WENTWORTH,
DURBAN.

OWNER: _____
ARCHITECT: _____
ENGINEER: _____

DATE: 10/10/2020
SCALE: 1:500
DRAWN BY: [Signature]
CHECKED BY: [Signature]

PLANS - BLOCK E



REVISIONS

NO.	DATE	DESCRIPTION	BY	CHKD	APP'D
1	10/10/2018	AS PER THE ORIGINAL DRAWINGS.			
2	10/10/2018	FOR THE OWNER'S REVIEW.			
3	10/10/2018	FOR THE OWNER'S REVIEW.			

PROPOSED SOCIAL HOUSING

FOR :

ST. HELENS MUNICIPALITY

OF :

REM OF RFP 1419, WENTWORTH

DURBAN.

AT :

2 DONNELLY ROAD, WENTWORTH, DURBAN.

Drawn by :

Checked by :

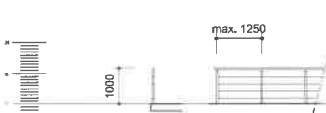
Project No. :

Scale :

Sheet No. :

Down 200

ELEVATIONS - BLOCK E

	
BALUSTRADE	HANDRAIL
FRAME CONSTRUCTION GATE CONSTRUCTION FINISH	50mm dia. GALVANISED MILD STEEL TUBING HANDRAIL TIG WELDED ONTO PLATES WITH S/S PINS EPOXY GROUTED AT MAX. 1200mm CRS.

GATES / RAILS

W1		W2		W3		W4	
0.35m ² 		1.35m ² 		1.44m ² 		1.35m ² 	
No. REQD.	1	1		1		1	
LOCATION	BATH	KITCHEN		LIVING RM.		BEDROOM 2	
GLAZING	6.5mm obscure laminated safety glass.	4mm clear annealed glass		4mm clear annealed glass		4mm clear annealed glass	

[illegible][illegible]

PROPOSED SOCIAL HOUSING
for : ETHEKWINI MUNICIPALITY
on : REM OF ERF 1419, WENTWORTH,
DURBAN.
at : 8 DONNELLY ROAD, WENTWORTH,
DURBAN.

OWNER	5	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
ARCHITECT	4	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
ENGINEER	7	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

DATE: 01/01/2010	DRAWN: M. J. J. J.
SCALE: 1:1	DESIGNED: M. J. J. J.
DRAWING NO. DONN H102	REVISION.



EBRAHIM KAZEE ARCHITECTS
 C: 083 375 5544
 F: 031 275 5290
 F: 085 600 9766
 E: ekazee@ekazee.com
 A: SUITE 0, 4 THE CRESCENT
 A: WESTWAY OFFICE PARK, 5610
 A: P.O. BOX 87887, HOUGHTON, 2198

WINDOW