



NHBRC - UNDERPINNING PANEL RATES

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<u>BILL NO 1</u> <u>PRELIMINARIES AND GENERAL</u> NOTES The agreement is to be a "Remedial work contract" that will be signed between the Employer (NHBRC) and Contractor upon acceptance to tender offer <u>Temporary works and plant</u> The contractor shall protect, uphold and maintain all public utilities and services and shall not interfere with their operation without the consent of the service authorities and the Conciliation Officer. The contractor shall notify the Conciliation Officer of any damages to such services and shall make good same at his own cost to the satisfaction of the service authorities. Fuel, power and water for commissioning of mechanical and other specialised equipment shall also include for the cost of all necessary reticulation and connection thereto The contractor shall provide noise and dust control to the approval of the Conciliation Officer The contractor shall maintain the access roads, paths, building etc, adjacent to the construction area etc, during the period of the works in a clean rubble free condition <u>Identity of employees</u> All employees of the contractor and his subcontractors shall be identifiable at all times by means of ID cards, company name and logos imprinted on overalls. Any person found on site not complying with the aforementioned conditions the contractor shall be requested by Conciliation Officer, to remove such person from site. <u>Health and safety</u> The contractor is to comply with all requirements of the Health and Safety Specification <u>Housekeeping and compliance with Conciliation Officer site rules</u>				

The contractor will be responsible for a high standard of housekeeping in his site establishment, delivery of materials and goods and removal of rubble, debris, etc., storage areas and construction working areas to the approval of the Conciliation Officer

Working hours

Should the contractor wish to work outside normal working hours or at weekends in order to maintain his building programme, he shall notify and obtain the approval of the Conciliation Officer before doing so. The cost of this overtime will be for the contractor's account

PRELIMINARIES AND GENERAL

1 Preliminaries and general % allowance (of total remedial works) %

20%

BILL NO 2

ALTERATIONS

SUPPLEMENTARY PREAMBLES

View site

Before submitting his tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained

Explosives

No explosives whatsoever may be used for demolition purposes unless otherwise stated

General

The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent

Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent

Doors, fanlights, fittings, frames, linings, etc which are to be re-used shall be thoroughly overhauled before refixing including taking off, easing and rehangng, cramping up, re-wedging as required and making good cramps, dowels, etc, and easing, oiling, adjusting and repairing ironmongery as necessary, replacing ant glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately

Prices for taking out of doors, windows, etc shall include for removal of all beads, architraves, ironmongery, etc

Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc and making good floor and wall finishes to match existing

With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc, shall be levelled and prepared for raising of brickwork

Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary

The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc)

All rates includes for carting away demolished material to a dumping site located by the contractor.

REMOVAL OF EXISTING WORK

Breaking up and removing reinforced concrete including cutting off and removing reinforcement

1	90mm Thick surface bed	m2	162,24
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Taking out and removing paving etc, setting aside for re-use and later refixing in similar position

2	Carefully remove 60mm thick paving bricks and stockpile on site for re use	m2	43,26
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3	Collect gravel pebbles, including stock pile on site and later reinstall, all as per the existing.	m2	20,00
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Taking out/off and removing sundry metalwork, setting aside for re-use and later re fixing in similar new position and make good.

4	1500 x 1650mm High Steel gate including breaking out and epoxy when re fitting etc.	No	400,00
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Hacking up/off and removing granolithic, screeds, plaster,etc from concrete or brickwork and preparing surfaces fornew screed, plaster, tile finishes, etc

5	Internal plaster from walls	m2	41,60
MAKING GOOD OF FINISHES ETC			
<u>Making good internal cement plaster</u>			
6	Walls in patches	m2	162,40
<u>Making good cement screeds</u>			
7	30mm Screed patches to floors	m2	200,10
<u>BILL No 3</u>			
<u>EARTHWORKS (PROVISIONAL)</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>User note</u>			
The following are typical examples of descriptions of "nature of ground"			
<u>Nature of ground</u>			
The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"			
The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, all of which will be deemed as "earth", but possibly interspersed with "hard rock"			
Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth"			
<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.			
<u>Filling</u>			
Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and back filling shall include for all selection and any necessary multiple handling of material			
<u>User note</u>			
When no information regarding density tests is available the following preamble in respect of testing may be inserted			
<u>Testing</u>			

Prices for filling are to include for all necessary density tests in accordance with SABS 1200D

EXCAVATION, FILLING ETC

EXCAVATIONS, ETC

Excavation in earth not exceeding 2m deep

1	Trenches	m3	90,00
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2	Underpinning in 1.5m alternating sections under existing foundations	m3	161,20
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3	Reduce levels under existing apron / gravel	m3	97,34
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Back excavation of vertical sides of excavation in earth for working space including backfilling in 150mm layers compacted to 97% Mod AASHTO density

4	Exceeding 1000mm and not exceeding 1500mm deep for underpinning (All as per Eng Detail)	m2	108,16
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Extra over all excavations for carting away

5	Surplus material from excavations and/ stock piles on site to a dumping site to be located by the contractor	m3	135,20
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Risk of collapse of excavations

6	Sides of trenches and holes not exceeding 1.5m deep	m2	19,47
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Keeping excavations free of water

7	Keeping excavations free of all water other than subterranean water	Item	540,80
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FILLING ETC

Earth filling obtained from the excavations and stabilised with 2.5% cement / soil mixture, compacted in layers of 150mm to 95% Mod AASHTO density

8	Trenches etc.	m3	95,00
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Earth Filling (G7 Material) supplied by the contractor compacted in 150mm layers to a 97% Mod AASHTO density (All as per Engineers Detail)

9	Under new paving	m3	585,00
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10	Backfilling to trenches, holes, etc	m3	585,00
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Compacting of surfaces

11	Bottom of Trenches	m2	40,00
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12	Compaction of ground surface under paving etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 97% Mod AASHTO density	m2	60,00
13	Compaction of ground surface under existing strip footings, including scarifying for a depth of 150mm, stabilize with 2% cement and compact to 95% Mod AASHTO density. (All as per Eng. Detail)	m2	64,89
14	<u>Stone filling of 19mm broken stone supplied by the contractor</u> In Sub soil drain trenches around pipes	m3	600,00
15	<u>Prescribed density tests on filling</u> Modified AASHTO Density test	No	486,72
SOIL POISONING			
16	Soil insecticide in accordance with SANS 5859 Under paving/Apron etc	m2	15,60
<u>BILL NO 4</u>			
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Cost of tests</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 architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor and to the approval of the architect. (Test cubes are measured separately)			
<u>Formwork</u>			
Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use.			
The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself			
Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described			

Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described

Formwork to sides of bases, pile caps, 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"

User Note

In order to accommodate the custom in some regions to give formwork to sides of beams, isolated beams, etc separately from formwork to the soffits thereof, the items in respect of formwork to beams, isolated beams, etc are given under the headings of "formwork to sides", "formwork to soffits" and "formwork to sides and soffits"

REINFORCED CONCRETE CAST ON/IN FORMWORK

20 Mpa/19mm Concrete

1	Concrete Slab / Apron	m3	1 946,88
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REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES

25 Mpa/19mm Concrete (Minimum 100mm Slump and Vibrate all air out)

2	Underpinning bases/strip footings in 1.5m alternating sections under existing foundations. (All as per Engineers detail)	m3	2 704,00
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TEST CUBES

3	Making and testing 150 x 150 x 150mm concrete strength test cubes (Provisional)	No	562,43
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CONCRETE SUNDRIES

Finish top surface of concrete smooth with a wood float

4	Apron	m2	27,04
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SMOOTH FORMWORK (DEGREE OF ACCURACY II)

Smooth formwork to sides

5	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	48,67
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MOVEMENT JOINTS ETC

Expansion joints with 10mm soft board between vertical concrete and brick surfaces

6	10mm Joints not exceeding 300mm high	m	70,00
	<u>Saw cut joints</u>		
7	3 x 40mm Saw cut joints in top of concrete	m	32,45
	REINFORCEMENT (PROVISIONAL)		
	<u>High tensile steel reinforcement to structural concrete work</u>		
8	12mm Diameter bars	t	17 846,40
	<u>Fabric reinforcement</u>		
9	Type Ref 614 Fabric reinforcement in concrete apron	m2	175,00
	BILL NO 5		
	PRECAST CONCRETE		
	SUPPLEMENTARY PREAMBLES		
	<u>Sizes:</u>		
	Blocks, sills, etc measured linear shall be made in suitable lengths. Large size setting out drawings shall be prepared where necessary and submitted to the architect for approval before moulds are made		
	<u>General:</u>		
	Where kerbstones, blocks, etc are laid in ground descriptions shall be deemed to include necessary excavation, filling in and ramming		
	PRECAST CONCRETE		
	<u>User note:</u>		
	The following precast concrete paving descriptions are only to be used when paving slabs etc are purpose made to detailed specifications and other than those available ex stock		
	<u>Storm water channel 250 x 610 x 90mm</u>		
1	Storm water channel laid to falls including all ground works etc.	m	350,00
6	Keeping excavations free of water	Item	540.80
	FILLING ETC		
	<u>Earth filling (G5) Material) supplied by the contractors compacted in 150mm layers to a 97% Mod AASHTO density</u>		
7	Backfilling to trenches, holes, etc	m3	405.60
	<u>Coarse river sand filling supplied by the contractor</u>		

8	Under Floors / Apron etc	m3	232.54	
	<u>Compacting of surfaces</u>			
9	Under paving/apron/surface beds	m2	20.00	
	SOIL POISONING			
	<u>Weedkiller (active ingredients metalaclor 102,8 g/l, terbitilasien 248,6 g/l and atrasien 248,6 g/l) mixed in theproportion of 100 ml weedkiller to 100 l water and applied ata rate of 10 l/m²</u>			
10	Under paving etc	m2	16.22	
	LANDSCAPING			
	<u>Grassing, ground covers, etc</u>			
11	Carefully remove "Kikuyu" and set aside for re use and later re install in similar new position including fertilizer etc.	m2	55.00	
	BILL NO 6			
	MASONRY			
	SUPPLEMENTARY PREAMBLES			
	BRICKWORK			
	<u>Sizes in descriptions</u>			
	Blocks are to be either solid or hollow modular dense concrete masonry units having a compressive strength of 7Mpa			
	Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
	<u>Hollow walls</u>			
	Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole			
	<u>User note</u>			
	The following preamble generally applies for works in hot and humid coastal areas			
	<u>Bagged and sealed walls</u>			
	Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats bitumen emulsion waterproofing coating			
	<u>Face bricks</u>			

Bricks shall be ordered timeously to obtain uniformity in size and colour

Pointing

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc

BLOCKWORK

Concrete masonry units

Blocks are to be either solid or hollow modular dense concrete masonry units having a compressive strength of 7MPa

Wall ties for blockwork

Wall ties shall be polypropylene ties complying with BS 76377. Ties for hollow walls shall be of sufficient length to allow not less than 75mm of each end to be built into the blockwork. Ties are to be spaced at intervals of not more than 1m in the horizontal direction and not more than 400mm staggered in the vertical direction except at openings, vertical joints or ends of walls where they are to be placed vertically above each other

Blockwork

Blockwork shall comply with SANS 10145 "Concrete Masonry Construction"

Surfaces to be plastered shall have joints raked out to a depth of at least 10mm to provide a key. Cavities of hollow walls shall be kept free of mortar droppings or other undesirable matter. Every second perpend of the bottom course of the external skin of hollow walls shall be left open as a weep hole

Standard complementary blocks

Descriptions of blockwork shall be deemed to include standard complementary blocks such as corner, three-quarter, half and quarter blocks required in the construction of corners, reveals, jambs, ends, etc to solid and hollow walls and for bonding as necessary

DECORATIVE BLOCKS

Blocks shall be of approved manufacture, sound, well burnt or cured and uniform and true in size, shape and colour

REPAIRING OF CRACKS

Repairs for vertical diagonal and horizontal wall cracks which are smaller than 5mm in width and where small deformation occurred (All as per Eng Detail)

1	Saw-cut neatly at least 300mm either side of crack ensuring a square cut with no further edges	m	20,00
2	Rake out crack to a depth of 30mm to form a v-groove and fill with Sikadur crack filler and smooth	m	35,00
3	Steel diamond mesh (Metal plaster lath) to walls secured with galv. nails @300mm centres (All as per Eng Detail)	m2	114,00

PAVING

SUPPLEMENTARY PREAMBLES

Paving bricks with butt joints on 25mm thick river sand bed with sand and cement mixture swept into joints and hosed down including preparation of ground or filling.

4	Re-instate paving in stretcher bond to fall.	m2	71,00
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BILL NO 7

PAINTWORK

User note

The following four items, given as examples, have been set up to comply with the Munsell system (the extra over option) as prescribed in the Standard System of Measuring Building Work and should be inserted at the end of each type of paint where applicable

Extra over paintmwork to all areas, for paintwork in colours which have a value of 7 or less based on the Munsell system m2

SUPPLEMENTARY PREAMBLES

PREPARATORY WORK TO EXISTING WORK

Previously painted plastered surfaces

Surface shall be thoroughly washed down and allowed to dry complete before any paint is applied. Blistered or peeling paint shall be complete removed and cracks shall be opened, filled with a suitable filler and finished smooth

Previously painted metal surfaces

Surface shall be thoroughly rubbed and cleaned down blistered or peeling paint shall be complete removed down bare metal

Previously painted wood surfaces

Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finish smooth

COLOURS

Unless otherwise described all paintwork shall be deemed to have a colour value in excess of 7 on the munsell system in accordance with SANS 1091

PAINTWORK ETC TO NEW WORK**ON INTERNAL FLOATED PLASTER SURFACES**

Prepare and apply one coat primer and two coats quality paint to match existing (Plascon Product)

1	On walls	m2	76,00
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PAINTWORK, ETC TO PREVIOUSLY PAINTED WORK**ON INTERNAL FLOATED PLASTER SURFACES**

Two coats interior high quality acrylic paint to match existing

2	Walls	m2	65,00
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BILL NO 8**PROVISIONAL SUM****SUPPLEMENTARY PREAMBLES**General

Work for which budgetary allowances are provided will be measured and valued in accordance with the quantity surveyors assessment and shall be deducted in whole or in part if not required without any compensation for loss or profit on the said allowance

Prime cost amounts and provisional sums are net. prime cost amounts include for delivery to site of all articles concerned

Provisional sums are for material and equipment supplied and installed complete by firm of specialist

Note: These items are to be taken into account in the pricing of Preliminaries and General as they will not attract separate Preliminaries of their own.

Profit

Where stated, the contractor may allow for profit if required

IRRIGATION SYSTEM

1	Provide the sum of Three Thousand Rand (R 3 000) for taking out the irrigation system and later refit in similar new position.	Item	3 000,00
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SUB TOTAL	ST			0
CONTINGENCY				
Allow a contingency of 10% to be used as directed by the Quantity Surveyor.	SUM	10%		
VALUE ADDED TAX				