5. Soft	Component	(Technical	Assistance)	Plan

5. Soft Component Plan

(1) Background of the Planning of the Soft Component

One of the problems which the Study Team became acutely aware of during the field survey on the 50 schools for which Japanese assistance was originally requested was the lack of a local custom of carefully using and maintaining public facilities. Under these circumstances, there is a strong likelihood that the new facilities will deteriorate or be damaged within a few years unless education on the importance of routine cleaning and maintenance is provided. In regard to the toilet buildings, proper arrangements for the removal of sludge from the pits and other necessary maintenance work must be made. Given the fact that adequate budgetary funding for the maintenance of school facilities is unavailable in Nigeria, the required maintenance is not feasible without the participation of the PTA and local community.

The planning, statistics and research section of the SUBEB is in charge of school facility maintenance while the school inspectors of each LGEA are in the best position to monitor the front-line activities of school management. Taking the opportunity provided by the Project, facilitation of the capacity development of all stakeholders and strengthening of the monitoring and supervision system for school facility management are important from the viewpoint of ensuring the continual maintenance of the new facilities constructed under the Project.

(2) Outline of the Project

The Japanese assistance for the Project will consist of the construction of 287 new classrooms, the supply of 5,740 sets of pupils' desks and chairs, 287 sets of teachers' desks and chairs and 287 sets of blackboards and noticeboards for 30 target schools and the construction of 272 cubicles at some of the target schools.

(3) Targets of the Soft Component

The actual contents of the soft component will be ① formulation of guidelines and a manual, ② demonstration of maintenance activities at a model school and ③ development of the basis for effective facility maintenance through workshops. While the soft component directly benefits pupils, it is also designed to make other stakeholders, such as community leaders, principals and teachers, all of whom are the main players in school management and maintenance, acquire a sense of ownership so that the new school facilities to be constructed under the Project will be continually maintained. The preparation of a maintenance manual as a tool for effective and efficient monitoring and guidance on school maintenance by the SUBEB and LGEA will strengthen the existing

system.

(4) Outcomes of the Soft Component

The implementation of the soft component is expected to produce the following outcomes.

- 1) Principal's, teachers and community leaders who are the main players in school management and maintenance will develop a sense of ownership which will motivate them to actively plan and participate in the maintenance of their own school facilities, including those to be constructed under the Project.
- 2) Pupils at the target schools will recognize that their classrooms, desks and chairs constitute essential educational facilities and furniture for not only themselves but also for the next generation of pupils. Based on this recognition, they will develop a custom of cleaning their own school by themselves.
- 3) There will be an improved system of monitoring and guidance on the maintenance of school facilities on the part of each SUBEB and LGEA overseeing the schools.
- 4) Techniques to treat the sludge from the toilet pits and to maintain the toilets and other school facilities will be extended to the people concerned as the work in question demands appropriate technical knowledge and skills.
- 5) The provision of a maintenance manual at each school will strengthen the maintenance system at each school. The system will also be strengthened by the distribution of the maintenance guidance manual to the SUBEBs and LGEAs.

(5) Methods to Check the Achievement Level of the Expected Outcomes

As methods to check and evaluate the achievement levels of the expected outcomes, the interview survey and questionnaire survey described below will be conducted immediately after the implementation of the soft component and also immediately after the completion of the Project.

- Questionnaire survey with pupils who will be the direct beneficiaries of the soft component
- Interview survey with principals, teachers and community leaders

(6) Activities (Inputs) Under the Soft Component

The activities described below will be conducted as components of the soft component to achieve the intended outcomes listed above.

1) Review and Modification of the Guidelines for the Implementation of the Soft Component

The guidelines in question which were originally prepared in the Phase 1 Project feature ① building maintenance activities, ② health and hygiene activities (use and cleaning of toilets, treatment of sludge and waste disposal method) and ③ collection, saving and management of the operation and maintenance charge. Although reasonable positive effects of the guidelines have been witnessed, it is true to say that the level of commitment to the guidelines has become weaker at some schools with the passing of time. The existing guidelines require review and modification to make their contents suitable for Kano State in order to rectify the present situation. These modified guidelines will form the basic framework and will require further review and modification through consultations with the relevant organizations in Kano State so that they are elaborated for continuous activities.

2) Explanation to Local Counterparts

Using the guidelines referred to in 1) above, the consultant will explain the targets, objectives, contents and schedule of the soft component of the Project to such local counterparts as the UBEC and Kanto SUBEB to ensure a precise understanding of these matters by the counterparts and also to facilitate the development of their sense of ownership regarding the maintenance activities of school facilities.

3) Establishment of Local Task Force

The appointment of facilitators to act as key persons for the implementation and extension of the soft component activities will be essential for the effective and efficient implementation of these activities. The active participation of the Kano SUBEB, which will be responsible for the monitoring of and guidance on maintenance work after the completion of the construction work, in the implementation of the soft component is the key to ensuring the continual progress of the said work. For this reason, a task force will be established around the Planning, Statistics and Research Section of the Kano SUBEB. This task force will consist of some 5 - 6 members, including the head of the Planning, Statistics and Research Section, a person responsible for facility maintenance at the Kano SUBEB, an educational statistics specialist at the Kano SUBEB, a representative of the LGEA which has jurisdiction for the model school and a school inspector.

4) Decision on the Model School and Implementation Schedule

The 30 target schools for the construction of new classrooms will be divided into

four blocks and a model school for maintenance activities will be selected in each block. Suitable schedule control will be applied to these model schools so that these schools can commence operation earlier than other schools.

5) Preparation of the Primary School Maintenance Manual

Through consultations with the task force, the principals of the model schools and community leaders, desirable ways to improve the maintenance of school facilities will be examined /analysed while stimulating their own awareness of the problems associated with maintenance. A participatory approach where the local task force modifies the manual to incorporate local ideas based on the model manual prepared by the consultant will be adopted to generate and enhance the sense of ownership among the Nigerian stakeholders. For this purpose, the consultant will provide guidance and comments, etc. throughout the draft manual preparation process of the task force. Moreover, an illustrated poster(s) will be produced to encourage understanding of the school maintenance manual and individual maintenance activities among pupils.

6) Implementation of Maintenance Activities at the Model Schools

Based on the above maintenance manual, teachers, pupils, PTA members and local community leaders will be approached/encouraged to actively implement maintenance activities to improve their own school.

7) Preparation and Implementation of Workshops

- The principals of the target schools near a model school and local community leaders will be invited to attend a workshop to be held at the model school to extend the maintenance activities at the model school to all of the target schools. These principals and local community leaders will personally study the reality of maintenance activities at the model school, undergo the relevant training and exchange opinions.
- These workshops will be organized by the Kano SUBEB and local facilitators will play an active role. A member of the task force will act as a moderator to assist the smooth progress of the workshops. The Japanese consultant will provide general supervision and guidance.
- The training menu, necessary training textbooks and tools, schedule and division of roles at the workshops will be decided in consultation with the task force.

 After the workshops, an evaluation meeting with the task force will be held and a workshop report will be prepared.

8) Preparation of Facility Maintenance Monitoring Manual for the SUBEB

- A manual will be prepared for the effective monitoring of the maintenance activities of the target schools. This work will be conducted while encouraging the self-help efforts of the Kano SUBEB.
- To start with, the consultant will review and revise the monitoring manual prepared in the Phase 1 Project.
- The consultant will discuss the revised monitoring manual with the local task force and will assist the latter to prepare the said manual on the latter's own initiative. The Japanese consultant will then evaluate the monitoring manual prepared by the task force and feed back its comments to the task force to finalise the monitoring manual.
- Each school will be requested to report the state of facility maintenance via the school inspector based on the finalised monitoring manual. The SUBEB will compile the individual reports to produce a general report and will submit this report to the JICA Nigeria Office once a year.

(7) Procurement Method for Soft Component Implementation Resources

The soft component will be implemented under the overall supervision and guidance of the Japanese consultant. Encouragement of the self-help efforts of the Kano SUBEB and LGEA will be essential to ensure smooth progress and effective as well as efficient monitoring thereafter. To be more precise, the head of the Planning, Statistics and Research Section of the Kano SUBEB, which is the counterpart for the Project, and others will be appointed as facilitators so that the contents, objectives and intended implementation method of the soft component are smoothly understood by all stakeholders, including staff members of the Kano SUBEB and LGEA, principals, teachers, community leaders, pupils and parents. A local task force will be formed with staff members of the Planning, Statistics and Research Section of the Kano SUBEB, LGEA staff member overseeing the model schools, school inspector and others (see 5.-(6)-3)).

(8) Soft Component Implementation Schedule

The soft component will prove to be more effective if it is implemented using the facilities newly constructed under the Project. For this reason, it will be implemented at a later stage of the project period.

Table 1 Technical Guidance Schedule

			FY 2	2010						FY 2	2011				
Calendar Month	10	11	12	1	2	3	4	5	6	7	8	9	10	11	Remarks
Aggregate Months	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Kano State (Four Areas)													1.	0 montl	Japanese) Local Recruit)

(9) Products of the Soft Component

The soft component of the Project is anticipated to produce the following products.

- Revised Draft Soft Component Implementation Guidelines (Consultant)
- Soft Component Implementation Guidelines (Consultant, UBEC and SUBEB)
- Facility Maintenance Manual (each school)
- Facility Maintenance Monitoring and Guidance Manual (SUBEB)

(10) Obligations of the Implementing Body in Nigeria

- The Government of Nigeria will set up a local task force to assist the implementation of the soft component. This task force will be created around the Planning, Statistics and Research Section of the Kano SUBEB which will act as the counterpart for the soft component.
- At the time of orientation and workshop, a facilitator will be assigned from among the task force members to ensure the smooth progress of these events.
- The Kano SUBEB and UBEC will be responsible for smooth communication with and guidance for the 30 target schools in Kano State.
- The Kano SUBEB will invite the 30 target schools to the orientation and workshop to be held at the model schools.
- Prior to each workshop, the task force will prepare a primary school maintenance manual in a self-help manner in consultation with the consultant.
- At a later stage of the soft component implementation period, the task force will
 prepare a facility maintenance monitoring manual in a self-help manner in
 consultation with the consultant for its use by the Kano SUBEB.
- The Kano SUBEB will monitor the facility management in the post-soft component period and will compile an annual maintenance report for its submission to the JICA Nigeria Office.

Detailed Soft Component Implementation Schedule

NI.	A mainister.												I	mpl	eme	enta	ation	Pe	riod												П
No.	Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	Preparation of the Guidelines and Manual																														
2	Consultation with the Counterpart																														
3	Selection of the Model Schools																														
4	Maintenance Activity (Block A)																														
	Maintenance Activity (Block B)																														
	Maintenance Activity (Block C)																														
	Maintenance Activity (Block D)																														
5	Workshop																														
6	Evaluation Meeting																														

6. Other Relevant Data (Soil Investigation Data)

FIGURE: 3(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: KUMBUGAWA PRY SCH.	DATE: 17/02/2010	PROJECT# 1A
ARCHITECT/ENGINEER:	LOCATION: KARAYE, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

Safe bearing capacity(QA) KN/m2	240	240	500	380	240	380	400	
Ultimate bearing capacity (QU) KN/m2	650	650	1350	1030	650	1030	1080	
Penetration Resistance (QC) KN/m2	126	126	263	200	126	200	210	
Cone penetration (ZC) (cm)	4.0	4.0	2.5	3.5	4.0	3.5	3.0	
No of Blow	5	5	5	5	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
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	EMMA
	Reported By:

FIGURE: 3(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: KUMBUGAWA PRY SCH.	DATE: 17/02/2010	PROJECT# 1B
ARCHITECT/ENGINEER:	LOCATION: KARAYE, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

DEРТН (m)	N <u>o</u> of Blow	Cone penetration (ZC) (cm)	Penetration Resistance (QC) KN/m2	Ultimate bearing capacity (QU) KN/m2	Safe bearing capacity(QA) KN/m2
0.00	5	6.0	76	390	145
0.25	2	5.0	91	470	175
0.50	5	4.5	105	540	200
0.75	5	3.5	200	1030	380
1.00	5	4.0	126	650	240
1.25	5	3.0	210	1080	400
1.50	5	3.0	210	1080	400

	received By:
	EMIMA
Remarks:	Reported By:

FIGURE: 4(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: TUDUM KAYA PRY SCH.	DATE: 17/02/2010	PROJECT# 1A
ARCHITECT/ENGINEER:	LOCATION: KARAYE, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

DEPTH	N <u>o</u> of Blow	Cone penetration (ZC)	Penetration Resistance (QC)	Ultimate bearing capacity (QU)	Safe bearing capacity(QA)
(11)		(cm)	KN/m2	KN/m2	
0.00	5	9.0	48	245	06
0.25	5	8.5	51	260	95
0.50	5	6.0	76	390	145
0.75	5	5.5	84	430	160
1.00	S.	4.5	105	540	200
1.25	2	3.0	210	1080	400
1.50	2	2.5	263	1350	200

	received By:
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	Reported Bv:

FIGURE: 4(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: TUDGIN KAYA PRY SCH.	DATE:	17/02/2010	PROJECT# 1B
ARCHITECT/ENGINEER:	LOCATION: KAR	OCATION: KARAYE, KANO STATE	REPORT #

GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.

DEPTH (m)	N <u>o</u> of Blow	Cone penetration (ZC) (cm)	Penetration Resistance (QC) KN/m2	Ultimate bearing capacity (QU) KN/m2	Safe bearing capacity(QA) KN/m2
0.00	5	8.0	55	285	105
0.25	5	8.5	51	260	95
0.50	5	6.0	92	390	145
0.75	5	6.5	89	350	130
1.00	5	4.5	105	540	200
1.25	5	4.0	126	650	240
1.50	5	3.5	200	1030	380

Reported By: EMIMA		received By:
<u>6</u>		EMMA
		Reported By:

FIGURE: 5(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: YOUR Z/GAR! PRY SCH.	DATE: 17/02/2010	PROJECT# 1A
ARCHITECT/ENGINEER:	LOCATION: KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

DEPTH Ng (m) 0.00 0.25 0.50				1	
00 25 50	N <u>o</u> of Blow	Cone penetration (ZC) (Cm)	Penetration Resistance (QC) KN/m2	Ultimate bearing capacity (QU) KN/m2	Safe bearing capacity(QA) KN/m2
).25).50	5	8.0	55	285	105
.50	2	6.5	89	350	130
	5	4.5	105	540	200
.75	5	4.0	126	650	240
00:	5	3.5	200	1030	380
25	2	2.0	284	1460	540
1.50	5	1.5	337	1730	640

	received By:
	EMMA
Nellial NS.	Reported By:

FIGURE: 5(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: YOLA Z/GARI PRY SCH.	DATE: 17/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

N <u>o</u> of Blow	Cone penetration (ZC)	Penetration Resistance (QC)	Ultimate bearing capacity (QU)	Safe bearing capacity(QA) KN/m2
-	6.0	76	390	145
_	6.5	89	350	130
_	3.5	200	1030	380
	4.0	126	650	240
-	3.5	200	1030	380
	3.0	210	1080	400
	2.5	263	1350	500

	raceived Rv.
	FMMA
	Deported By:

FIGURE: 6(a)

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DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: BUREMANNA PRY SCH.	DATE: 19/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: KIRU, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

	No of Blow	Cone penetration (ZC) (cm)	Penetration Resistance (QC) KN/m2	Ultimate bearing capacity (QU) KN/m2	Safe bearing capacity(QA) KN/m2
	5	4.0	126	650	240
	5	4.0	126	650	240
	5	3.0	210	1080	400
	5	3.5	200	1030	380
+	5	3.0	210	1080	400
+	5	2.5	263	1350	500
1	J.	2.0	284	1460	540

	received By:
	By: EMMA
Remarks:	Reported By:

FIGURE: 6(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: BUREMANA PRY SCH.	DATE: 19/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: KIRU, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

DEPTH (m)	N <u>o</u> of Blow	Cone penetration (2C)	Penetration Resistance (QC)	Ultimate bearing capacity (QU)	Safe bearing capacity(QA) KN/m2
0.00	5	7.5	58	300	110
0.25	5	4.0	126	650	240
0.50	5	3.0	210	1080	400
0.75	2	3.5	200	1030	380
1.00	5	3.0	210	1080	400
1.25	5	2.0	284	1460	540
1.50	5	2.5	263	1350	500

Dynamic Cone Penetrometer is an instrument consisting of a 8kg, hammer falling 24" driving a 20mm diameter rod, 60° degree conical tip

received By:_ **EMMA** Reported By:

Remarks:

FIGURE: 7(a)

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DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: CHINKOSO TUDU PRY SCH.	DATE: 19/02/2010	PROJECT# 1A
ARCHITECT/ENGINEER:	LOCATION: MADOBI, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

		1		\neg		7	$\neg \neg$	
Safe bearing capacity(QA) KN/m2	55	70	105	130	200	240	400	
Ultimate bearing capacity (QU) KN/m2	150	190	285	350	540	650	1080	
Penetration Resistance (QC) KN/m2	29	37	55	89	105	126	210	
Cone penetration (ZC) (cm)	12.5	10.0	8.0	6.5	4.5	4.0	3.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DЕРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
Remarks:	Reported By: EMIMA

FIGURE: 7(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: CHINKOSO TUDU PRY SCH.	DATE: 19/02/2010	PROJECT# 1B
ARCHITECT/ENGINEER:	LOCATION: MADOBI, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

DEPTH		Cone penetration	Penetration Resistance	Ultimate bearing capacity	Safe bearing capacity(QA)
(m)	No of Blow	(ZC) (cm)	(QC) KN/m2	(QU) KN/m2	KN/m2
0.00	5	7.5	58	300	110
0.25	S	8.0	55	285	105
0.50	J.	8.0	55	285	105
0.75	5	6.5	89	350	130
1.00	5	5.0	91	470	175
1.25	5	3.5	200	1030	380
1.50	5	3.0	210	1080	400

	received By:
	EMMA
Remarks:	Reported Bv:

FIGURE: 8(a)

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DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: KADANA PRYSCH	DATE: 17/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: RAGO, KANO STATE	REPORT #

y(QA)								
Safe bearing capacity(QA) KN/m2	145	240	200	380	400	400	200	
Ultimate bearing capacity (QU) KN/m2	390	650	1350	1030	1080	1080	1350	
Penetration Resistance (QC) KN/m2	76	126	263	200	210	210	263	
Cone penetration (ZC) (cm)	6.0	4.0	2.5	2.0	3.0	3.0	2.5	
N <u>o</u> of Blow	5	5	5	2	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Remarks:	Reported By:

FIGURE: 8(b)

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DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: KADANA PRY SCH.	DATE:	17/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATIO	LOCATION: RAGO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.			

<u> </u>			<u> </u>					
Safe bearing capacity(QA) KN/m2	160	240	540	540	400	400	540	
Ultimate bearing capacity (QU) KN/m2	430	650	1460	1460	1080	1080	1460	
Penetration Resistance (QC) KN/m2	84	126	284	284	210	210	284	
Cone penetration (ZC) (cm)	5.5	4.0	2.0	2.0	3.0	3.0	2.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEPTH (m)	00.0	0.25	0.50	0.75	1.00	1.25	1.50	

	racaivad Rv.
	FMMA
Remarks:	Reported By:

FIGURE: 9(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: BALAN PRYSCH.	DATE: 17/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: KABO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA 11D		

			·	T			3	
Safe bearing capacity(QA) KN/m2	160	160	400	380	400	500	540	
Ultimate bearing capacity (QU) KN/m2	430	430	1080	1030	1080	1350	1460	
Penetration Resistance (QC) KN/m2	84	84	210	200	210	263	284	
Cone penetration (ZC) (cm)	5.5	5.5	3.0	3.5	3.0	2.5	2.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
nemans.	Reported By:

FIGURE: 9(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: BALAN PRY SCH.	DATE: 17/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: KABO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA 1TD		

Safe bearing capacity(QA) KN/m2	175	200	400	380	400	380	540	
Ultimate bearing capacity (QU) KN/m2	470	540	1080	1030	1080	1030	1460	
Penetration Resistance (QC) KN/m2	91	105	210	200	210	200	284	
Cone penetration (ZC) (cm)	5.0	4.5	3.0	3.5	3.0	3.5	2.0	
N <u>o</u> of Blow	5	. 5	5	5	5	5	2	
ОЕРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

Dynamic Cone Penetrometer is an instrument consisting of a 8kg, hammer falling 24" driving a 20mm diameter rod, 60° degree conical tip

received By:_ **EMMA** Reported By: Remarks:

FIGURE: 10(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: 1/GARU PRY SCH.	DATE: 17/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: GWARZO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

	,	,				,		
Safe bearing capacity(QA) KN/m2	200	240	400	380	400	500	640	
Ultimate bearing capacity (QU) KN/m2	540	650	1080	1030	1080	1350	1730	
Penetration Resistance (QC) KN/m2	105	126	210	200	210	263	337	
Cone penetration (ZC) (cm)	4.5	4.0	3.0	3.5	3.0	2.5	1.5	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Remarks:	Reported By:

FIGURE: 10(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: T/GARU PRY SCH.	DATE: 17/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: GWARZO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

p								
Safe bearing capacity(QA) KN/m2	380	400	400	380	160	200	540	
Ultimate bearing capacity (QU) KN/m2	1030	1080	1080	1030	430	1350	1460	
Penetration Resistance (QC) KN/m2	200	210	210	200	84	263	284	
Cone penetration (ZC) (cm)	3.5	3.0	3.0	3.5	5.5	2.5	2.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DЕРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	IMA received By:
Remarks:	Reported By: FMM

FIGURE: 3(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

	The state of the s	
PROJECT NAME: BICHI KANTI PRY SCH.	DATE: 16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: BICHI, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

·····					<u></u>			
Safe bearing capacity(QA) KN/m2	175	240	110	160	380	400	380	
Ultimate bearing capacity (QU) KN/m2	470	650	300	430	1030	1080	1030	
Penetration Resistance (QC) KN/m2	91	126	58	84	200	210	200	
Cone penetration (ZC) (cm)	5.0	4.0	7.5	5.5	3.5	3.0	3.5	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	-

	received By:
	EMMA
Kemarks: 	Reported By:

FIGURE: 3(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: BICH! KART! PRY SCH.	DATE: 16/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: BICHI, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

Safe bearing capacity(QA) KN/m2	95	120	130	130	200	400	540	
Ultimate bearing capacity (QU) KN/m2	260	325	350	350	540	1080	1460	
Penetration Resistance (QC) KN/m2	51	63	89	89	105	210	284	
Cone penetration (ZC) (cm)	8.5	7.0	6.5	6.5	4.5	3.0	2.5	
N <u>o</u> of Blow	5	5	5	5	5	2	5	
DEРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Remarks:	Reported Bv:

FIGURE: 4(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: BADUIME S/ MIODEL PRY SCH.	DATE: 16/02/2010	PROJECT# 1A
ARCHITECT/ENGINEER:	LOCATION: BICHI, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

· · · · · · · · · · · · · · · · · · ·			 1		r			
Safe bearing capacity(QA) KN/m2	06	65	95	110	175	200	400	
Ultimate bearing capacity (QU) KN/m2	245	175	260	300	470	540	1080	
Penetration Resistance (QC) KN/m2	48	34	51	58	91	105	210	
Cone penetration (ZC) (cm)	0.6	11.0	8.5	7.5	5.0	4.5	3.0	
N <u>o</u> of Blow	5	2	2	2	2	2	5	
DEРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

Reported Bv: EMMA				received By:
Reported Bv:				EMMA
	Kemarks:			Reported By:

FIGURE: 4(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: BADUME S/MODEL PRY SCH,	DATE: 16/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: BICHI, KANO STATE	REPORT #

		r					,	
Safe bearing capacity(QA) KN/m2	175	160	145	70	110	160	380	
Ultimate bearing capacity (QU) KN/m2	470	430	390	190	300	430	1030	
Penetration Resistance (QC) KN/m2	91	84	9/	37	58	84	200	
Cone penetration (ZC) (cm)	5.0	5.5	6.0	10.0	7.5	5.5	3.5	
N <u>o</u> of Blow	5	2	5	5	5	5	5	
DEРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

		received Bv.
		FMMA
Kemarks:		Reported Rv.

FIGURE: 5(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: DANBATTA RANTI PRY SCH.	DATE:	16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATIO	OCATION: DAMBATA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.			

Safe bearing capacity(QA) KN/m2	145	400	160	70	110	200	240	
Ultimate bearing capacity (QU) KN/m2	390	1080	430	190	300	540	650	
Penetration Resistance (QC) KN/m2	76	210	84	37	58	105	126	
Cone penetration (ZC) (cm)	6.0	3.0	5.5	10.0	7.5	4.5	4.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Neillai NS.	Reported By:

FIGURE: 5(b)

Restauran

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: DANBATTA NAMT! PRY SCH.	DATE:	16/02/2010	PROJECT# 1B
ARCHITECT/ENGINEER:	LOCATIO	CATION: DAMBATA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.			

city(QA)								
Safe bearing capacity(QA) KN/m2	70	50	95	175	240	200	400	
Ultimate bearing capacity (QU) KN/m2	190	135	260	470	650	540	1080	
Penetration Resistance (QC) KN/m2	37	26	51	91	126	105	210	
Cone penetration (ZC) (cm)	10.0	14.0	8.5	5.5	4.0	4.5	3.0	
N <u>o</u> of Blow	5	5	5	2	5	5	5	
DEPTH (m)	00:00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Neillains.	Reported By:

FIGURE: 6(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: TUPANSE PRYSCH.	DATE: 16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: D/ TOFA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

Ñ	N <u>o</u> of Blow	Cone penetration (ZC)	Penetration Resistance (QC)	Ultimate bearing capacity (QU)	Safe bearing capacity(QA) KN/m2
	5	5.5	84	430	160
	5	4.0	126	650	240
ŀ	5	4.0	126	650	240
	5	4.0	126	650	240
	5	4.5	105	540	200
	5	3.0	210	1080	400
	5	2.0	284	1460	540

	received By:
	EMMA
nellial ns.	Reported By:

FIGURE: 6(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: TUMPAR PRYSCH.	DATE: 16/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: D/ TOFA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

			-	- 1				
Safe bearing capacity(QA) KN/m2	175	175	240	500	540	500	540	
Ultimate bearing capacity (QU) KN/m2	470	470	650	1350	1460	1350	1460	
Penetration Resistance (QC) KN/m2	91	91	126	263	284	263	284	
Cone penetration (ZC) (cm)	5.0	5.0	4.0	2.5	2.0	2.5	2.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
KS:	Reported By: EMIMA
Kemarks:	Report

FIGURE: 7(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

- 1	OATE. 17/03/2010	DD01ECT # 1
PROJECT NAME: ARE SEE	UAIE: 1//02/2010	די ד
ARCHITECT/ENGINEER:	LOCATION: D/ TOFA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

Safe bearing capacity(QA) KN/m2	160	145	160	200	240	380	400	
Ultimate bearing capacity (QU) KN/m2	430	390	430	540	650	1030	1080	
Penetration Resistance (QC) KN/m2	84	92	84	105	126	200	210	
Cone penetration (ZC) (cm)	5.5	6.0	5.5	4.5	4.0	3.5	3.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Kemarks:	Reported By:

FIGURE: 7(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: JALLI PRY 501.	DATE: 17/02/2010	PROJECT# 1B
ARCHITECT/ENGINEER:	LOCATION: D/ TOFA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

								_
Safe bearing capacity(QA) KN/m2	120	160	160	175	240	400	500	
Ultimate bearing capacity (QU) KN/m2	325	430	430	470	650	1080	1350	
Penetration Resistance (QC) KN/m2	63	84	84	91	126	210	263	
Cone penetration (ZC) (cm)	7.0	5.5	5.5	5.0	4.0	3.0	2.5	
N <u>o</u> of Blow	S	5	5	5	5	5	5	
DEРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	ΑA
	EMMA
Remarks:	Reported By:

FIGURE: 8(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: KWA PRY SCH.	DATE: 16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: D/TOFA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

Safe bearing capacity(QA) KN/m2	200	240	175	400	500	540	540	
Ultimate bearing capacity (QU) KN/m2	540	650	470	1080	1350	1460	1460	
Penetration Resistance (QC) KN/m2	105	126	91	210	263	284	284	
Cone penetration (ZC) (cm)	4.5	4.0	5.0	3.0	2.5	2.0	2.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
helilalks.	Reported By:

FIGURE: 8(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: KWA PRY SCH. DA	DATE: 16/02/2010	PROJECT# 1B
ARCHITECT/ENGINEER:	LOCATION: D/TOFA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

Safe bearing capacity(QA) KN/m2	80	105	145	130	200	400	500	
Ultimate bearing capacity (QU) KN/m2	220	285	390	350	540	1080	1350	
Penetration Resistance (QC) KN/m2	43	55	76	89	105	210	263	
Cone penetration (ZC) (cm)	9.5	8.0	6.0	6.5	4.5	3.0	2.5	
N <u>o</u> of Blow	5	2	5	2	5	2	2	
DЕРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

Kemarks:	Bonorted By:
	received Bv:

FIGURE: 9(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

	THE PROPERTY OF THE PROPERTY O	
PROJECT NAME: NATSUGUNNE PRY SCH.	DATE: 17/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: FAGGE, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

ity(QA)							
Safe bearing capacity(QA) KN/m2	120	45	70	80	06	130	175
Ultimate bearing capacity (QU) KN/m2	325	120	190	220	245	350	470
Penetration Resistance (QC) KN/m2	63	23	37	43	48	89	91
Cone penetration (ZC) (cm)	7.0	15.0	10.0	9.5	9.0	6.5	5.0
N <u>o</u> of Blow	D.	5	5	5	5	5	5
DEРТН (m)	00.0	0.25	0:50	0.75	1.00	1.25	1.50

		received By:
		IMA
		EMMA
Kemarks:	The section of the se	Reported By:

FIGURE: 9(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: NATSUGURNNE PRY SCH.	DATE: 17/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: FAGGE, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

Safe bearing capacity(QA) KN/m2	130	65	95	130	175	175	240	
Ultimate bearing capacity (QU) KN/m2	350	175	260	350	470	470	650	
Penetration Resistance (QC) KN/m2	89	34	51	89	91	91	126	
Cone penetration (ZC) (cm)	6.5	11.0	8.5	6.5	5.0	5.0	4.0	
N <u>o</u> of Blow	5	2	5	5	5		5	
DЕРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

FIGURE: 10(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: LAWB SCIENCE PRY SCH.	DATE: 16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: TOFFA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

ſ 								
Safe bearing capacity(QA) KN/m2	400	240	400	670	540	540	640	
Ultimate bearing capacity (QU) KN/m2	1080	650	1080	1810	1460	1460	1730	
Penetration Resistance (QC) KN/m2	210	126	210	352	284	284	337	
Cone penetration (ZC) (cm)	3.0	4.0	3.0	1.0	2.0	2.0	1.5	
N <u>o</u> of Blow	2	5	5	5	5	5	5	
DEРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Remarks:	Reported By:

FIGURE: 10(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

	^	
PROJECT NAME: LAWB SCIENCE PRY SCH.	DATE: 16/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: TOFFA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

Safe bearing capacity(QA) KN/m2	240	160	400	400	540	200	670	
Ultimate bearing capacity (QU) KN/m2	650	430	1080	1080	1460	1350	1810	
Penetration Resistance (QC) KN/m2	126	84	210	210	284	263	352	
Cone penetration (ZC) (cm)	4.0	5.5	3.0	3.0	2.0	2.5	1.0	
N <u>o</u> of Blow	5	5	S.	5	2	5	5	
DЕРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Kemarks:	Reported Bv:

FIGURE: 3(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: AMARYAWA PRY SCH.	DATE: 16/02/2010	/2010	PROJECT# 1A
ARCHITECT/ENGINEER:	LOCATION: GAYA, KANO STATE	A, KANO STATE	REPORT #
CENERAL CONTRACTOR TAMOVIC NIGERIA LTD			

Safe bearing capacity(QA) KN/m2	240	145	175	380	400	500	540	
Ultimate bearing capacity (QU) KN/m2	650	390	470	1030	1080	1350	1460	
Penetration Resistance (QC) KN/m2	126	76	91	200	210	263	284	
Cone penetration (ZC) (cm)	4.0	6.0	5.0	3.5	3.0	2.5	2.0	
No of Blow	5) L	2		S.	
DEPTH (m)	00.0	0.25	0.50	0.75	100	1.25	1.50	

	received By:
	EMMA
	Reported By:

FIGURE: 3(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

DROIECT NAME: AMARYANA PRY SCH.	DATE: 16/02/2010	PROJECT # 1B
		1 1 2 1 2 1
ADCHITECT/ENGINEER.	LOCATION: GAYA, KANO STATE	XFYCX: #
ANCIE ECT/ ENGINEERS		
GENERAL CONTRACTOR TAMOVIC NIGERIA LTD.		

					T					Τ	T		
Cafe hearing	capacity(QA)	540	110	110	1/5	200	201	400	200	COL	nne		
	Ultimate bearing capacity (QU) KN/m2	1460	000	OOC	470	E 40	240	1080	1350		1350		
	Penetration Resistance (QC) KN/m2	284	(1	28	91		105	210	690	607	263		
	Cone penetration (ZC) (cm)	2.0	2:2	7.5	5.0		4.5	3.0	L	5.5	2.5		
	No of Blow	u	2	'n	r)	- L	ď		2	5		
	DEPTH (m)	000	0.00	0.25	0.50	0.00	0.75	1 00	7.6	1.25	150	2011	

	received By:
ks:	Reported By:EMMA
Remarks:	Repor

FIGURE: 4(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: NUDABO PRY SCH.	DATE: 16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: WUDIL, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

DEРТН (m)	N <u>o</u> of Blow	Cone penetration (ZC) (cm)	Penetration Resistance (QC) KN/m2	Ultimate bearing capacity (QU) KN/m2	Safe bearing capacity(QA) KN/m2
0.00	5	5.0	91	470	175
0.25	5	5.5	84	430	160
0.50	5	6.5	89	350	130
0.75	5	5.0	91	470	175
1.00	5	4.5	105	540	200
1.25	5	3.0	210	1080	400
1.50	5	3.0	210	1080	400

	received By:
	EMMA
emarks:	Reported By:

FIGURE: 4(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: INDABO PRY SCH.	DATE: 16/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER;	LOCATION: WUDIL KANO STATE	REPORT #
		# 130
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

				1	_		-	_
Safe bearing capacity(QA) KN/m2	95	120	160	240	200	400	540	
Ultimate bearing capacity (QU) KN/m2	260	325	430	650	540	1080	1460	
Penetration Resistance (QC) KN/m2				126			284	
Cone penetration (ZC) (cm)	8.5	7.0	5.5	4.0	4.5	3.0	2.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DЕРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Remarks:	Reported By:

FIGURE: 5(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: KWANKWASO PRY SCH.	DATE: 19/02/2010	,2010	PROJECT# 1A
ARCHITECT/ENGINEER:	LOCATION: MAD	LOCATION: MADOBI, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.			

Safe bearing capacity(QA) KN/m2	95	120	110	30	175	380	380	
Safe bearing KN		1	-		7	CO	m	
Ultimate bearing capacity (QU) KN/m2	260	325	300	350	470	1030	1030	
Penetration Resistance (QC) KN/m2	51	63	58	89	91	200	200	
Cone penetration (ZC) (cm)	8.5	7.0	7.5	6.5	5.0	3.5	3.5	
No of Blow	2	5	2	2	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received by:
	FMMA
Remarks:	Reported Ry.

FIGURE: 5(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: KWANKWASO PRY SCH.	DATE: 19/02/2010	PROJECT # 1B
A DOLLITICAL / PAIO INICID.	I OCATION: MADOR! KAND STATE	REPORT #
ARCHII ECI/ENGINEER:	בונינים סאוראו יוסטקרואי אוסוו ליסט	
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

	\neg		Т	\neg			Т	
Safe bearing capacity(QA) KN/m2	70	65	110	130	175	240	400	
Ultimate bearing capacity (QU) KN/m2	190	175	300	350	470	650	1080	
Penetration Resistance (QC) KN/m2	37	34	58	89	91	126	210	
Cone penetration (ZC) (cm)	10.0	11.0	7.5	6.5	5.0	4.0	3.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	recei
	FNAMA
Remarks:	Soproso D

FIGURE: 6(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: ZAKTRALYANNA PRYSCH.	DATE:	16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATIC	OCATION: GABASAWA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.			

г			1		1	1	1	
Safe bearing capacity(QA) KN/m2	200	175	240	640	640	540	670	
Ultimate bearing capacity (QU) KN/m2	540	470	650	1730	1730	1460	1810	
Penetration Resistance (QC) KN/m2	105	91	126	337	337	284	352	
Cone penetration (ZC) (cm)	4.5	5.0	4.0	1.5	1.5	2.0	1.0	
N <u>o</u> of Blow	5	5	5	5	5	ம	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Vellidi NS.	Reported By:

FIGURE: 6(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: ZAKIKA! YAMINA PRY SCH.	DATE: 16/02/2010	PROJECT # 1B	18
ARCHITECT/ENGINEER:	LOCATION: GABASAWA, KANO STATE	STATE REPORT #	
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.			

Safe bearing capacity(QA) KN/m2	400	500	640	670	720	670	720	
Ultimate bearing capacity (QU) KN/m2	1080	1350	1730	1810	1945	1810	1945	
Penetration Resistance (QC) KN/m2	210	263	337	352	378	352	378	
Cone penetration (ZC) (cm)	3.5	2.5	1.5	1.0	0.5	1.0	0.5	
No of Blow	5	2	5	5	5	2	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
	Reported By:

FIGURE: 7(a)

3

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: ZANGO PRY SCH.	DATE: 16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: GEZAWA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

ity Safe bearing capacity(QA) KN/m2	200	200	380	400	540	640	670	
Ultimate bearing capacity (QU) KN/m2	540	540	1030	1080	1460	1730	1810	
Penetration Resistance (QC) KN/m2	105	105	200	210	284	337	352	
Cone penetration (ZC) (cm)	4.5	4.5	3.5	3.0	2.0	1.5	1.0	
N <u>o</u> of Blow	5	5	2	5	5	5	5	
DEРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Remarks:	Reported By:

FIGURE: 7(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

		DOOLICT # 45
PROJECT NAME: ZANGO TRY SCA.	DAIE: 15/UZ/ZUIU	PRUJECI # 15
ARCHITECT/ENGINEER:	LOCATION: GEZAWA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

DEPTH (m)	No of Blow	Cone penetration (ZC) (cm)	Penetration Resistance (QC) KN/m2	Ultimate bearing capacity (QU) KN/m2	Safe bearing capacity(QA) KN/m2
0.00	5	3.5	200	1030	380
0.25	5	3.5	200	1030	380
0.50	5	1.0	352	1810	670
0.75	5	1.0	352	1810	670
1.00	5	0.5	378	1945	720
1.25	S	0.5	378	1945	720
1.50	5	0.5	378	1945	720

	received By:
	EMMA
Neiliai NS.	Reported By:

FIGURE: 8(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: DANNIADANHO PRY SCH.	DATE:	E: 16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATIC	OCATION: GEZAWA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.			

							γ	
Safe bearing capacity(QA) KN/m2	175	380	500	380	640	670	670	
Ultimate bearing capacity (QU) KN/m2	470	1030	1350	1030	1730	1810	1810	
Penetration Resistance (QC) KN/m2	91	200	263	200	337	352	352	
Cone penetration (ZC) (cm)	5.0	3.5	2.5	3.5	1.5	1.0	1.0	
No of Blow	5	5	5	5	5	5.	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

Dynamic Cone Penetrometer is an instrument consisting of a 8kg, hammer falling 24" driving a 20mm diameter rod, 60° degree conical tip

Remarks:	

received By:_

Reported By:_

FIGURE: 8(b)

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DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: DANMADANHO PRY SCH.	DATE: 16/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: GEZAWA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

S S	N <u>o</u> of Blow	Cone penetration (ZC) (cm)	Penetration Resistance (QC) KN/m2	Ultimate bearing capacity (QU) KN/m2	Safe bearing capacity(QA) KN/m2
	5	7.0	63	325	120
	5	5.5	84	430	160
	5	1.5	337	1730	640
	5	2.0	284	1460	540
	5	2.5	263	1350	500
İ	5	2.5	263	1350	200
	5	2.5	263	1350	500
ŀ					

	received By:
	EMMA
Kemarks:	Reported Bv:

FIGURE: 9(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: KUNBOTSO PRY SCH.	DATE:	19/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATIO	OCATION: KUMBOTSO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD			

Safe bearing capacity(QA) KN/m2	45	55	105	200	240	380	500	
Ultimate bearing capacity (QU) KN/m2	120	150	285	540	650	1030	1350	
Penetration Resistance (QC) KN/m2	23	29	55	105	126	200	263	
Cone penetration (ZC) (cm)	15.0	12.5	8.0	4.5	4.0	3.5	2.5	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
ДЕРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received Bv.
	FNANA
Remarks:	

FIGURE: 9(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: KUMBOTSO PRY SCH.	DATE: 19	19/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION:	LOCATION: KUMBOTSO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.			

Safe bearing capacity(QA) KN/m2	0	65	80	105	130	200	380	
Ultimate bearing capacity (QU) KN/m2	0	175	220	285	350	540	1030	
Penetration Resistance (QC) KN/m2	0	34	43	55	89	105	200	
Cone penetration (ZC) (cm)	25.0	11.0	9.5	8.0	6.5	4.5	3.5	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
Kemarks:	Reported By: EMIMA

FIGURE: 10(a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

		The state of the s
PROJECT NAME: ALKALAWA PRY SCH.	DATE: 19/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: KURA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

DEPTH (m)	N <u>o</u> of Blow	Cone penetration (ZC) (cm)	Penetration Resistance (QC) KN/m2	Ultimate bearing capacity (QU) KN/m2	Safe bearing capacity(QA) KN/m2
0.00	5	12.5	29	150	55
0.25	S	11.0	34	175	65
0.50	5	8.5	51	260	95
0.75	5	8.0	55	285	105
1.00	2	5.5	84	430	160
1.25	5	3.5	200	1030	380
1.50	5	3.5	200	1030	380

	received By:
Kemarks:	Reported By: EMMA

FIGURE: 10(b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

DBOIECT NAME. A KA GALA DEV CT	DATE: 19/02/2010	PROJECT # 1B
TNOICE INDINE. ABELONG TO THE CONTROL OF THE CONTRO		
ARCHITECT/ENGINEER:	LOCATION: KURA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

			_					_
Safe bearing capacity(QA) KN/m2	0	65	95	120	160	380	400	
Ultimate bearing capacity (QU) KN/m2	0	175	260	325	430	1030	1080	
Penetration Resistance (QC) KN/m2	0	34	51	63	84	200	210	
Cone penetration (ZC) (cm)	20.0	11.0	8.5	7.0	5.5	3.5	3.0	
No of Blow	5	5	5	2	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	MA
:s:	Reported By: EMMA
Remarks:	Report

FIGURE: 3 (a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: FASS! A. SAYAYSAYA PRY SCH.	DATE: 16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: KIBIYE, KANO STATE	REPORT #
GENIERAL CONTRACTOR TAMOVIC NIGERIA LTD		

Safe bearing capacity(QA) KN/m2	200	240	400	640	540	640	670	
Ultimate bearing capacity (QU) KN/m2	540	650	1080	1730	1460	1730	1810	
Penetration Resistance (QC) KN/m2	105	126	210	337	284	337	352	
Cone penetration (ZC) (cm)	4.5	4.0	3.0	1.5	2.0	1.5	1.0	
N <u>o</u> of Blow	2	2	5	5	5	2	2	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Remarks:	Reported By:

FIGURE: 3 (b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: FASSI A, SAYAVSAYA PRY SCH.	DATE: 16/02/2010	2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: KIBIYA, KANO STATE	۵, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.			

Safe bearing capacity(QA) KN/m2	160	240	400	500	500	670	029	
Ultimate bearing capacity (QU) KN/m2	430	650	1080	1350	1350	1810	1810	
Penetration Resistance (QC) KN/m2	84	126	210	263	263	352	352	
Cone penetration (ZC) (cm)	5.5	4.0	3.0	2.5	2.5	1.0	1.0	
N <u>o</u> of Blow	5	r.	5	20	5	2	2	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received Bv:
	FMMA
{emarks:	Reported Rv.

FIGURE: 4 (a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: RANG DAWAK! PRY SCH.	DATE: 16/02/2010	PROJECT# 1A
ARCHITECT/ENGINEER:	LOCATION: RANO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

Safe bearing capacity(QA) KN/m2	160	120	380	380	540	640	540	
Ultimate bearing capacity (QU) KN/m2	430	325	1030	1030	1460	1730	1460	
Penetration Resistance (QC) KN/m2	84	63	200	200	284	337	284	
Cone penetration (ZC) (cm)	5.5	7.0	3.5	3.5	2.0	1.5	2.0	
Ng of Blow	5	5	5	5	5	5	5	
DEРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

		received By:
		Reported By: EMMA
reiliai Ks.	7.0.1	Repo

FIGURE: 4 (b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: RAND DAWAKI PRY SCH.	DATE: 16/02/2010	PROJECT# 1B
ARCHITECT/ENGINEER:	LOCATION: RANO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

(X								
Safe bearing capacity(QA) KN/m2	200	540	540	640	540	400	400	
Ultimate bearing capacity (QU) KN/m2	1350	1460	1460	1730	1460	1080	1080	
Penetration Resistance (QC) KN/m2	263	284	284	337	284	210	210	
Cone penetration (ZC) (cm)	2.5	2.0	2.0	1.5	2.0	3.0	3.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
emarks:	Reported By:

FIGURE: 5 (a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: RURUM SCIENCE PRY SCFL	DATE: 16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: RANO., KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

			·	_				
Safe bearing capacity(QA) KN/m2	200	400	640	95	175	200	240	
Ultimate bearing capacity (QU) KN/m2	540	1080	1730	260	470	540	650	
Penetration Resistance (QC) KN/m2	105	210	337	51	91	105	126	
Cone penetration (ZC) (cm)	4.5	3.0	1.5	8.5	5.0	4.5	4.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DЕРТН (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Remarks:	Reported By:

FIGURE: 5 (b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: RURUM SCIENCE PRY SCH.	DATE: 16/02/2010	PROJECT# 1B
ARCHITECT/ENGINEER:	LOCATION: RANO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

apacity(QA) n2	10		0)		0	0	
Safe bearing capacity(QA) KN/m2	14.	110	12(160	200	400	500	
Ultimate bearing capacity (QU) KN/m2	390	300	325	430	540	1080	1350	
Penetration Resistance (QC) KN/m2	76	58	63	84	105	210	263	
Cone penetration (ZC) (cm)	6.0	7.5	7.0	5.5	4.5	3.0	2.5	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Kemarks:	Reported By:

FIGURE: 6 (a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: HUWAN KANYA PRY SCH.	DATE: 16/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: RANO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

DEPTH (m)	N <u>o</u> of Blow	Cone penetration (ZC) (cm)	Penetration Resistance (QC) KN/m2	Ultimate bearing capacity (QU) KN/m2	Safe bearing capacity(QA) KN/m2
00.0	ιΩ	6.5	89	350	130
0.25	5	7.0		325	120
0.50	5	3.0	210	1080	400
0.75	5	1.5	337	1730	640
1.00	5	2.0	284	1460	540
1.25	5	1.5	337	1730	640
1.50	5	1.5	337	1730	640

	received By:
	EMMA
Remarks:	Reported By:

FIGURE: 6 (b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: RUWAN KANYA PRY SCH.	DATE: 16/02/2010	PROJECT # 1B
ARCHITECT/ENGINEER:	LOCATION: RANO, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

Safe bearing capacity(QA) KN/m2	70	95	105	540	400	640	640	
Ultimate bearing capacity (QU) KN/m2	190	760	285	1460	1080	1730	1730	
Penetration Resistance (QC) KN/m2	37	51	55	284	210	337	337	
Cone penetration (ZC) (cm)	10.0	8.5	8.0	2.0	3.0	1.5	1.5	
N <u>o</u> of Blow	5	2	5	5	2	2	5	
DEРТН (m)	00.0	0.25	0.50	0.75	1.00	1.25	1.50	

		D.:
		7 20 20 20 20 20 20 20 20 20 20 20 20 20
Remarks:		
	E	

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DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: DOGUNDA PRY SCH.	DATE: 19/02/2010	PROJECT# 1A
ARCHITECT/ENGINEER:	LOCATION: DOGUWA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

[-				Γ	_	F
Safe bearing capacity(QA) KN/m2	65	08	120	175	200	400	500	
Ultimate bearing capacity (QU) KN/m2	175	220	325	470	540	1080	1350	
Penetration Resistance (QC) KN/m2	34	43	63	91	105	210	263	
Cone penetration (ZC) (cm)	11.0	9.5	7.0	5.0	4.5	3.0	2.5	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Remarks:	Reported By: EMMA

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: DOGUWA PRY SCH.	DATE: 19/02/2010	PROJECT # 18
ARCHITECT/ENGINEER:	LOCATION: DOGUWA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

Safe bearing capacity(QA) KN/m2	95	08	110	175	200	240	240	
Ultimate bearing capacity (QU) KN/m2	260	220	300	470	540	650	650	
Penetration Resistance (QC) KN/m2	51	43	58	91	105	126	126	
Cone penetration (ZC) (cm)	8.5	9.5	7.5	5.0	4.5	4.0	4.0	
N <u>o</u> of Blow	5	5	5	5	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

	received By:
	EMMA
Remarks:	Reported By:

FIGURE: 8 (a)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: TAGWAYE PRY SCH.	DATE: 19/02/2010	PROJECT # 1A
ARCHITECT/ENGINEER:	LOCATION: DOGUWA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

(Q,A)								
Safe bearing capacity(QA) KN/m2	80	105	105	175	160	200	400	
Ultimate bearing capacity (QU) KN/m2	220	285	285	470	430	540	1080	
Penetration Resistance (QC) KN/m2	43	. 55	55	91	84	105	210	
Cone penetration (ZC) (cm)	9.5	8.0	8.0	5.0	5.5	4.5	3.0	
N <u>o</u> of Blow	5	2	5	5	5	5	5	
DEPTH (m)	0.00	0.25	0.50	0.75	1.00	1.25	1.50	

		received Bv:
		EMMA
Kemarks:		Reported Bv:

FIGURE: 8 (b)

DYNAMIC CONE PENETROMETER FOUNDATION REPORT

PROJECT NAME: TAGWAYE PRY SCH.	DATE: 19/02/2010	PROJECT# 1B
ARCHITECT/ENGINEER:	LOCATION: DOGUWA, KANO STATE	REPORT #
GENERAL CONTRACTOR: TAMOVIC NIGERIA LTD.		

No of Blow	Cone penetration (ZC)	Penetration Resistance (QC)	Ultimate bearing capacity (QU)	Safe bearing capacity(QA) KN/m2
	(ma)	KN/m2	KN/mZ	
	8.0	55	285	105
	8.0	55	285	105
	7.0	63	325	120
	5.0	91	470	175
	4.5	105	540	200
	3.0	210	1080	400
	3.0	210	1080	400
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Dynamic Cone Penetrometer is an instrument consisting of a 8kg, hammer falling 24" driving a 20mm diameter rod, 60° degree conical tip

		received By:
		EMMA
		Reported By:

Remarks: