Bo Da (Myanmar) Fashion Company Limited

Environmental Management Plan

Manufacturing of Garment on (CMP basic)

Prepared by

MYANWEI CONSULTING GROUP

Myanwei Consulting Co., Ltd.

25-Sep-19

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Date: 25/09/2019

Attention: Dear Director

Environmental Conservation Department

Subject: Environmental Management Plan (EMP) Report in respect of the Manufacturing of garment on CMP basis by Bo Da (Myanmar) Fashion Co., Ltd.

EMP report describes the environmental condition of a project, including significant impact, formulation of mitigation measures and preparation of institutional requirements and environmental monitoring.

Myanwei Consulting Company Limited has prepared this report with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking into account of the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

We strongly commit that this report was prepared in compliance with Myanmar Environmental Laws and Regulations.

BO DA (MYANMAR) FASHION COMPANY LIMITED

Plot No. 239, Myay Taing Block No-25, Shwe Lin Ban Industrial Zone, Hlaing Thar Yar Township, Yangon , Myanmar,

E-mail;bodafahion19@gmail.com, Phone- 09 978319999

Date: 25/09/2019

Dear: Director

Environmental Conservation Department

Nay Pyi Taw

Subject: Environmental Management Plan (EMP) Report in respect of the Manufacturing of Garment.

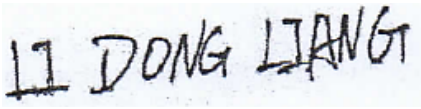
We refer to the captioned EMP report, which has been prepared by Myanwei Consulting Co., Ltd. (Third Party Consultant) in compliance with EIA procedure (2015) and other related laws/rules.

We believe, to the best of our knowledge at the time of writing, that;

- The EMP report is accurate and complete
- The EMP report has been prepared in strict compliance with all applicable laws, rules, regulations and procedures in force.

Bo Da (Myanmar) Fashion Co., Ltd will always comply fully with all commitment and obligations in the EMP report.

We acknowledge and understand that



Mr. Li DongLiang

Director

Bo Da (Myanmar) Fashion Co., Ltd.

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Abbreviation

1. CEMP = Construction Environmental Management Plan
2. CMP = Contract Manufacturing Process
3. CSR = Corporate Social Responsibility
4. ECC = Environmental Compliance Certificate
5. ECD = Environmental Conservation Department
6. EIA = Environmental Impact Assessment
7. EMoP = Environmental Monitoring Plan
8. EMP = Environmental Management Plan
9. GIIP = Good International Industry Practices
10. HSE = Health, Safety and Environment
11. IEE = Initial Environmental Examination
12. IFC = International Finance Corporation
13. NEQG = National Environmental Quality (Emission) Guidelines
14. MIC = Myanmar Investment Commission
15. MOECAF = Ministry of Environmental Conservation and Forestry
16. MONREC = Ministry of Natural Resources and Environmental Conservation
17. OEMP = Operation Environmental Management Plan
18. OSHA = Occupational Safety and Health Administration
19. PPE = Personal Protective Equipment
20. WHO = Word Health Organization
21. YCDC = Yangon City Development Committee
22. YESB = Yangon City Electricity Supply Board

အစီရင်ခံစာအကျဉ်းချုပ်

နိဒါန်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်ရေရည်ဖွံ့ဖြိုးတိုးတက်ဖို့မှု သေချာဖို့အပ်ပါသည်။ ဒါဟာ ပတ်ဝန်းကျင်ကို ဆိုးရွားစွာထိခိုက်နိုင်ပါသည်။ အဆိုပြုလုပ်ငန်းသည် CMP စနစ်ဖြင့် အဝတ်အထည်အမျိုးမျိုး ချုပ်လုပ်ခြင်းလုပ်ငန်းအတွက် ရင်နှီးမြှုပ်နှံသော ကုမ္ပဏီဖြစ်ပါသည်။ ရင်းနှီးမြှုပ်နှံမှုလိုင်စင်ကို ၂၀၁၉ခုနှစ်၊ မတ်လ၊ ၁၄ ရက်နေ့တွင် (ထောက်ခံချက်အမှတ် ၁၇၅/၂၀၁၉)ဖြင့် ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှုကော်မတီမှ ရရှိပြီးဖြစ်ပါသည်။ လုပ်ငန်းလည်ပတ်ရန်အတွက် မြန်မာနိုင်ငံသယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ၏ အတည်ပြုချက်ရယူရန် လိုအပ်ကြောင်း ကော်မရှင်မှ မှာကြားခဲ့ပါသည်။

ထို့ကြောင့် မြန်မာနိုင်ငံ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂)အရ၊ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) ပြုလုပ်ရန်လိုအပ်ကြောင်း ၂၀၁၉ ခုနှစ်၊ ဇူလိုင်၊ ၁၂ ရက်နေ့တွင် (စာအမှတ်၊ ရက-၁/၃/၄ (အီးအိုင်အေ) (၆၂၁/၂၀၁၉) ဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန ရန်ကုန်တိုင်းဒေသကြီးမှ သဘောထားမှတ်ချက် ရရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် EMP အစီအရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော Myanwei Consulting Co., Ltd.မှ တာဝန်ယူရေးဆွဲခဲ့ပါသည်။

EMP အစီအစဉ်တွင် Bo Da (Myanmar) Fashion Co., Ltd. ၏ CMP စနစ်ဖြင့် အဝတ်အထည်အမျိုးမျိုး ထုတ်လုပ်ခြင်းစီမံကိန်းအတွက် Myanwei Consulting Co., Ltd.မှ ရေးသားပြုစုထားသော ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာဖြစ်သည်။ အဆိုပါ လေ့လာဆန်းစစ်ခြင်း၏ ရည်ရွယ်ချက်များမှာ-

- ✓ သဘာဝပတ်ဝန်းကျင်နှင့် လူမှုစီးပွားပတ်ဝန်းကျင်အပေါ် စီမံကိန်းဆောင်ရွက်ချက်များကြောင့် ထိခိုက်မှုများကိုလေ့လာရန်။
- ✓ ထိုထိခိုက်မှုများကို လျော့ချနိုင်ရန် လျော့နည်းစေမည့်နည်းလမ်းများကို ဖော်ပြရန်။
- ✓ စီမံကိန်းအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ပြင်ဆင်ရန်နှင့် အကောင်အထည်ဖော်ရန်။
- ✓ စီမံကိန်းအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာ လုပ်ဆောင်ရာတွင် လုံလောက်မှုရှိစေရန်။
- ✓ ဒေသခံများ၏ လူမှုရေးသက်သာချောင်ချိမှုများ တိုးမြှင့်ရန်နှင့် ဒေသတွင်း ဖွံ့ဖြိုးတိုးတက်မှုများအတွက် မရှိမဖြစ်အရေးပါသော လူမှုစီးပွားတာဝန်ယူမှုအစီအစဉ်အား အကောင်အထည်ဖော်ရန်တို့ဖြစ်ပါတယ်။

အဆိုပြုထားသော စီမံကိန်း၏ ရည်ရွယ်ချက်သည် CMP စနစ် (ဖြတ်-လုပ်-ထုတ်) စနစ်ကို အသုံးပြု၍ အဝတ်အထည်အမျိုးမျိုးကို ထုတ်လုပ်ပီး နိုင်ငံခြားသို့ ၁၀၀ % တင်ပို့ရန်ဖြစ်ပါသည်။

ဥပဒေနှင် မူဝါဒဆိုင်ရာ အချက်အလက်များ

EMP ရေးဆွဲရခြင်း၏ရည်ရွယ်ချက်မှာ နိုင်ငံတော်နှင့် နိုင်ငံတကာမှ ချမှတ်ထားသော ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးအစီအစဉ်များ၊ စည်းမျဉ်းစည်းကမ်းများ၊ ဥပဒေနှင့် နည်းဥပဒေများကို လိုက်နာပြီး ပတ်ဝန်းကျင်နှင့်လိုက်ရောညီထွေရှိသော ထိခိုက်မှုလျော့ချရေး အစီအစဉ်များပြုလုပ်ရန်ဖြစ်ပါသည်။ ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာရေးသားပြုစုသူများ၏ ကျွမ်းကျင်မှုနယ်ပယ်ဆိုင်ရာ ဖော်ပြချက်များကို ရေးသားဖော်ပြထားပါသည်။ ဥပဒေနှင့် နည်းဥပဒေ အခန်းတွင် MONREC မှ ထုတ်ပြန်ထားသည့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများ၊ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များအပြင် စက်ရုံနှင့်ဆက်စပ်သက်ဆိုင်နေပြီး လိုက်နာရမည့် ဥပဒေနှင့် နည်းဥပဒေများ၊ ဒေသတွင်း သို့မဟုတ် အပြည်ပြည်ဆိုင်ရာ သဘာဝပတ်ဝန်းကျင်နှင့် လူမှုပတ်ဝန်းကျင်ဆိုင်ရာ မူဝါဒများ၊ ဆက်စပ်နေသည့် နိုင်ငံတကာသဘောတူချက်များကို အကျဉ်းချုပ်ရေးသားဖော်ပြထားပါသည်။ စက်ရုံအတွင်းလိုက်နာ ဆောင်ရွက်ရမည့် စည်းမျဉ်းစည်းကမ်းများ၊ လုပ်ငန်းခွင် အန္တရာယ်ကင်းရှင်းရေးနှင့် ကျန်းမာရေးဆိုင်ရာ အခြေခံစည်းမျဉ်းစည်း ကမ်းများလည်း ထည့်သွင်းဖော်ပြထားပါသည်။ Bo Da (Myanmar) Fashion Company Limited ၏ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ ကတိကဝတ်များအပြင် ပတ်ဝန်းကျင်ထိခိုက်မှုလျော့ချရေး မူဝါဒများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။

1. The Constitution Law, 2008
2. The Environmental Conversation Law, 2012
3. The Environmental Conversation Rule, 2014
4. Environmental Impact Assessment Procedure, 2015
5. National Environmental Quality (Emission) Guideline, 2015
6. National Myanmar Environmental Policy, 2019
7. Foreign Investment Law, 2012
8. Foreign Investment Rule, 2013
9. Myanmar Investment Rule, 2017
10. Myanmar Insurance Law, 1993
11. Payment of Wages Law, 2016
12. The Payment of Wages Act, 1936
13. Yangon City Development Committee Law, 2018
14. The Amended Law for Factories Act, 1951 (2016)

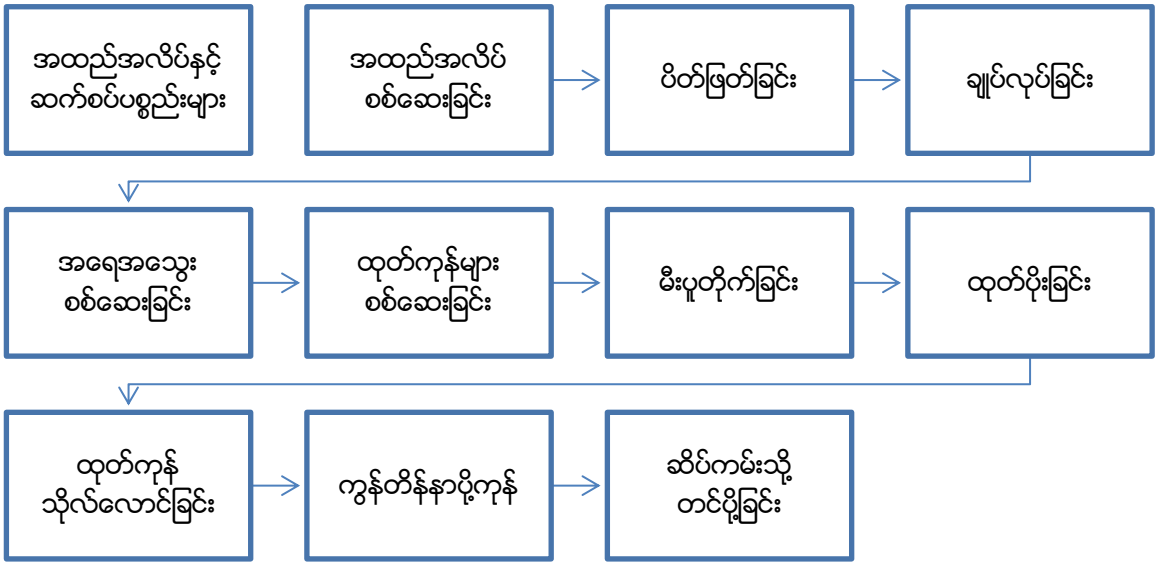
15. The Private Industrial Enterprise Law
16. The Export and Import Law, 2012
17. The Prevention of Hazard from Chemical and Related Substances Law, 2013
18. The Underground Water Act
19. Myanmar Fire Brigade Law, 2015
20. Fire Safety Procedure
21. The Electricity Law, 2014
22. Boiler Law, 2015
23. Labor Dispute Settlement Law, 2012
24. The Law Amending the Settlement of Labor Dispute Law, 2019
25. The Social Security Law, 2012
26. The Employment and Skill Development, 2013
27. The Worker's Compensation Act, 1923
28. The Leave and Holidays Act (1951, partially reused in 2014)
29. The Minimum Wage Law, 2013
30. Public Health Law, 1972
31. Prevention and Control of Communicable Disease Law (1995 Amendment in 2011)
32. Occupational Safety and Health Law, 2019
33. The Law on Standardization
34. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ဝတ္ထုပစ္စည်းများဆိုင်ရာ ဥပဒေ၊ (2018)
35. The Motor Vehicles Law, 2015
36. The Conversation of Water Resources and River Law, 2006
37. The Commercial Tax Law (1990 Amended 2014)

စီမံကိန်းဆိုင်ရာအချက်အလက်

အဆိုပြုထားသော စီမံကိန်း	အဂတ်အထည်အမျိုးမျိုးချုပ်လုပ်ခြင်း

ရင်းနှီးမြှုပ်နှံမှုပုံစံ	၁၀၀ % နိုင်ငံခြားသားရင်းနှီးမြှုပ်နှံမှု
ကုမ္ပဏီအမည်	Bo Da (Myanmar) Fashion Company Limited
အဆိုပြုရင်းနှီးမြှုပ်နှံမှုကာလ	နှစ် ၃၀
စုစုပေါင်းမြေကွပ်ဧရိယာ	၁.၆၁၀ ဧက (၆၅၁၅.၄၃၉ စတုရန်းမီတာ)
မြေနေရာပုံစံ	စက်မှုဇုန်မြေ
တည်ဆောက်မှုကာလ	၁ နှစ်
စီမံကိန်း တည်နေရာ	မြေကွက်အမှတ် ၂၃၉၊ မြေတိုင်းရပ်ကွက်အမှတ် ၂၅၊ ရွှေလင်ပန်းစက်မှုမြို့၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး
ဆက်သွယ်ရန် ဖုန်းနံပါတ်	၀၉-၉၇၃၇၄၄၇၈၉ (HR Manager)

အဆိုပြုလုပ်ငန်းအတွက် တည်နေရာနှင့် စက်ရုံအတွင်းပါရှိသည့် အဆောင်များ၊ စားသောက်ဆောင်၊ စတို၊ ပြုပြင်ထိမ်းသေးရေးအခန်း၊ မီးဖိုချောင် အစရှိသည်တို့ကိုသီးခြားဖော်ပြထားပါသည်။ထို့အပြင် ထုတ်လုပ်မှုနည်းလမ်းများ၊ လိုအပ်သည့်ကုန်ကြမ်းများ၊ နှစ်စဉ်ထွက်ကုန်များ နှင့် စက်ပစ္စည်းများအား ဖော်ပြထားပါသည်။ အဆိုပြုလုပ်ငန်းအတွက်လိုအပ်သည် စွမ်းအင်နှင့် အသုံးပြုသည့်ပမာဏများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။ ကျန်လုပ်ငန်းသုံးယာဉ်နှင့် ရုံးသုံးပစ္စည်းများကို ပြည်တွင်းမှ ဝယ်ယူအသုံးပြုပါသည်။ ကုန်ထုတ်လုပ်ခြင်းလုပ်ငန်းမှာ automatic machine နှင့် လူစွမ်းအားကို အသုံးပြုသော လုပ်ငန်းမျိုးဖြစ်ပါသည်။ ထုတ်လုပ်ပုံအဆင့်ဆင့်ကို အောက်ဖော်ပြပါ ပုံပြဇယားဖြင့် ဖော်ပြထားပါသည်။



လုပ်ငန်းမှ ပထမနှစ်မှ ၁၀ နှစ်အတွင်း အထည်ရေ (၁,၀၀၁,၂၅၀) မှ (၁,၀၅၁,၃၁၃)အထိ တိုးမြှင့်ထုတ်လုပ်သွားမည်ဖြစ်သည်။ နိုင်ငံခြားသားလုပ်သား (၁၆)ဦး နှင့် နိုင်ငံသား (ပြည်တွင်း)လုပ်သား (၈၀၀) ဦးဖြင့် ဆောင်ရွက်သွားမည်ဖြစ်သည်။

အနီးပတ်ဝန်းကျင် အခြေအနေ

ကနဦးစစ်တမ်းကောက်ယူခြင်းနှင့် ဒေသဆိုင်ရာမှအချက်အလက်များရယူခြင်းသည် အလွန်အရေးကြီးပါသည်။ ပတ်ဂန်းကျင်အရည်အသွေး တိုင်းတာခြင်းကဲ့သို့သော ကနဦးစစ်တမ်းကောက်ယူခြင်းသည် ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှု အစီရင်ခံစာတွင် အရေးပါသောအခန်းအဖြစ် တည်ရှိနေသည်။ ထို့အတွက် စီမံကိန်းဒေသသို့ ကွင်းဆင်းလေ့လာမှုများကို ၂၇ ရက်၊ မေလ၊ ၂၀၁၉ တွင်လက်တွေ့ကွင်းဆင်းလေ့လာခဲ့ပီးလိုအပ်သည့် လေအရည်အသွေး၊ ဆူညံမှု၊ အလင်း၊ အပူချိန်နှင့် စိုထိုင်းမှု အစရှိသည့် အချက်အလက်များကို ရယူခဲ့ပါသည်။ ကွင်းဆင်းလေ့လာထားသည် အချက်အလက်များကို သက်ဆိုင်ရာခေါင်းစဉ်အလိုက် အမျိုးသားပတ်ဂန်းကျင်ဆိုင်ရာ အရည်အသွး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များနှင့် နှိုင်းယှဉ်၍ ဖော်ပြထားပါသည်။ ထိုနည်းတူ လျော့ချရမည့်နည်းလမ်းများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။ စီမံကိန်းတည်ရှိရာဒေသရှိ ရာသီဥတု၊ မိုးရေချိန်၊ လူမှုစီးပွားရေးဆိုင်ရာအချက်အလက်များကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။

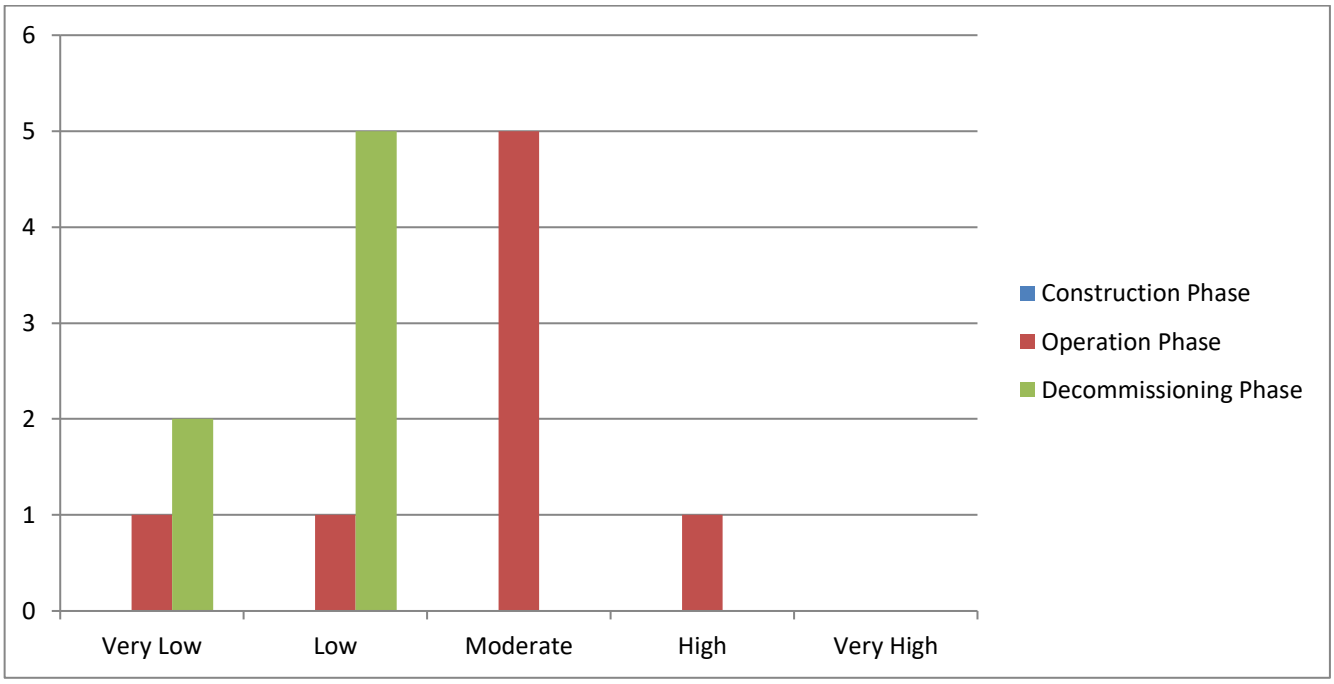
ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့် လျော့ချရေး အစီအစဉ်

စီမံကိန်းဆောင်ရွက်ချက်များကြောင့် ပတ်ဂန်းကျင်ဆိုင်ရာအရင်းအမြစ်များ၊ ဂေဟဆိုင်ရာ အရင်းအမြစ်များ၊ လူ့စွမ်းအားအရင်းအမြစ်များနှင့် စွန့်ပစ်ပစ္စည်းများစွန့်ပစ်ခြင်း စသည့်ဖြစ်လာနိုင်သည့်ထိခိုက်မှုများကို ခွဲခြားသတ်မှတ်ပြီး ၎င်းတို့၏ ရလဒ်များကို ထိခိုက်မှုဆန်းစစ်သည့် နည်းလမ်းများကို အသုံးပြု၍ သတ်မှတ်ခဲ့ပါသည်။ စီမံကိန်းအား ထိခိုက်မှုများကို အပိုင်းသုံးပိုင်းခွဲ၍ သတ်မှတ်ထားသည်။ အမျိုးအစားမှာ တည်ဆောက်သည့်ကာလ၊ လုပ်ငန်းလည်ပတ်သည့်ကာလ နှင့် လုပ်ငန်းဖျက်သိမ်းသည့်ကာလများ ဖြစ်ပါသည်။ ပတ်ဂန်းကျင်ထိခိုက်မှု လျော့ပါးစေရေး နည်းလမ်းများကိုလဲထည့်သွင်းဖော်ပြထားပါသည်။

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
တည်ဆောက်ရေးကာလ။ ။ပတ်ဝန်းကျင်ထိခိုက်မှုလေ့လာချိန်တွင် စက်ရုံတည်ဆောက်ပြီး လုပ်ငန်းလည်ပတ်နေချိန်ဖြစ်သော်ကြောင့် ဤကာလကိုထည့်သွင်း မဆင်းစားတော့ပါ။			
လုပ်ငန်းလည်ပတ်ခြင်းကာလ			
လေထုညစ်ညမ်းမှု	• သယ်ယူပို့ဆောင်ရေးသုံး မော်တော်ယာဉ်တို့ကြောင့် ဖုန်မှုန့်နှင့် ဖန်လုံအိမ်ဓါတ်ငွေ့ထွက်ခြင်း • လုပ်ငန်းခွင်အတွင်းဖုန်မှုထွက်ခြင်း	အသင့်တင့်	• ဘွိုင်လာနှင့်မီးစက် တို့တွင် မီးခိုးခေါင်းတိုင် တပ်ဆင်ခြင်းဖြင့် အခိုးအ ငွေ့ကြောင့် ပတ်ဝန်းကျင် ထိခိုက်မှုကို လျော့ချခြင်း၊ • စက်ရုံအတွင်းနှင့် အနီး အနားတွင် သစ်ပင်ပန်းမံ စိုက်ပျိုးခြင်းဖြင့် carbon

	• မီးဖိုနှင့် ရေနွေးငွေ့ဘွိုင်လာတို့မှ မီးခိုးထွက်ခြင်း • အရေးပေါ် သုံးမီးစက်မှာ စွန့်ထုတ်အခိုးအငွေ့ ထွက်ခြင်း		ထွက်ရှိမှုကို လျော့ချပေးခြင်း၊ • NOx ထွက်ရှိမှုနည်းသော နည်းပညာမြင့် စက်ပစ္စည်း များသုံးခြင်း၊ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
ရေ	• မိလ္လာစွန့်ထုတ်ရေ • စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း	အနည်းငယ်	• လက်ရှိရေဆိုးစွန့်ပစ်မှုပုံစံဖြစ်သော မိလ္လာစနစ်ကို ပုံမှန်စစ်ဆေးပေးခြင်း၊ • မိလ္လာကန်နှင့် မိလ္လာ စနစ်ကို လူဦးရေနှင့် သင့်တင့်သည့် ပမာဏ ရှိရန် စီစဉ်ထားခြင်း၊ • ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း။ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
မြေဆီလွှာညစ်ညမ်းမှု	• မတော်တစ စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း	အလွန်နည်း	• စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင် ထိန်းသိမ်းပေးခြင်း။ • မတော်တစမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
ဆူညံသံ	• ဘွိုင်လာ၊ မီးစက်၊ လေမှုတ်စက် နှင့် မော်တော် ယာဉ် အသုံးပြု မှုကြောင့် ပတ်ဝန်းကျင် ဆူညံမှု	အသင့်တင့်	• ဆူညံသံထွက်သောနေရာများကို အကာအကွယ် ဖြင့်ထားရှိခြင်း • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ပေးခြင်း
မီးဘေးအန္တရာယ်	• ကုန်ကြမ်းသိုလှောင်မှု နှင့် လျပ်စစ်သုံးစွဲ ပေါ်လျော့မှု	မြင့်	• ကုန်ကြမ်းများအား သီးသန့်ထားရှိခြင်း • လျပ်စစ်သုံးစွဲမှုများအား စနစ်တကျ အသုံးပြုစေခြင်း
စွန့်ပစ်အမှိုက်	• ထုတ်လုပ်ရာတွင် ကျန်ရှိသော ပိတ်စ အပိုင်းအစများ။ မီးဖိုချောင်နှင့် ရုံးတွင်းစွန့်ပစ်ပစ္စည်းများ	အသင့်တင့်	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း
စွန့်ပစ်အရည်	• နေအိမ်၊ စားသောက်ဆောင် တို့မှစွန့်ထုပ်ရေ။ မိလ္လာကန်စနစ်	အသင့်တင့်	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း
အန္တရာယ်ရှိအမှိုက်	• စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိမ်းသိမ်းမှုက ထွက်ရှိသည့်အမှိုက်များ	အလွန်နည်း	• စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း
လူမှုစီးပွားဘဝ	• ဒေသခံပြည်သူများအတွက် အလုပ်အကိုင်အခွင့်အလမ်းများ		

	ရရှိစေခြင်း		
လုပ်ငန်းပိတ်သိမ်းခြင်းကာလ			
လေထုညစ်ညမ်းမှု	• အဆောက်အဦးများ ဖြိုချမှုများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• NOx ထွက်ရှိမှုနည်းသော နည်းပညာမြင့် စက်ပစ္စည်း များသုံးခြင်း၊ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
ရေ	• ဖြိုချပစ္စည်းများနှင့် မိလ္လာဖျက်ဆီးမှုများ	အနည်းငယ်	• ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း။ • စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
မြေဆီလွှာညစ်ညမ်းမှု	• အဆောက်အဦးနှင့် ဆက်စပ်ပစ္စည်းများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• မတော်တစမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
အမှိုက်စွန့်ပစ်မှု	• အဆောက်အဦးများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အလွန်နည်း	• စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန်နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း
အန္တရာယ်ရှိအမှိုက်	• စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိမ်းသိမ်းမှုက ထွက်ရှိသည့်အမှိုက်များ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အလွန်နည်း	• စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း
မတော်တဆ ထိခိုက်မှုများ	• အဆောက်အဦးများ ဖြိုချမှုများ • ဖြိုချပစ္စည်းများ သယ်ယူမှုများ	အနည်းငယ်	• မတော်တစမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
လူမှုစီးပွားဘဝ	• ဒေသခံပြည်သူများအတွက်အလုပ်အကိုင် ခေတ္တရရှိခြင်း		



ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ်

အဆိုပြုလုပ်ငန်း၏ ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အတွက် Plan-Do-Check-Act (P D C A) စက်ဝိုင်းဖြင့် အစီစဉ်တကျ ပြုလုပ်သွားမည်ဖြစ်ပါသည်။ အစီအစဉ်တွင် စက်ရုံကြောင့် ဖြစ်ပေါ်စေနိုင်သော ပတ်ဝန်းကျင်နှင့် လူမှုဘဝအပေါ် ဆိုးကျိုးသက်ရောက်မှုများကို လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစရှိသည့် အစီအစဉ်များ ပါဝင်ပါသည်။ ၄င်း EMP အစီအစဉ်များကို အကောင်အထည်ဖော်ရန်အတွက် သည် စက်ရုံတွင် ကျန်းမားရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ အဖွဲ့အစည်းတစ်ခုထားရှိပြီး လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို အကောင်အထည်ဖော်သွားမည်ဖြစ်ပါသည်။ အဆိုပါစက်ရုံ၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ရေရှည်ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်သော ပတ်ဝန်းကျင် အဖြစ် အကောင်အထည်ဖော်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို လျော့နည်းစေရန် စီမံခန့်ခွဲမှုအစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုရမည့်အစီအစဉ်များကို အောက်ပါအတိုင်းပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအရာတစ်ခုချင်းစီအလိုက် ခွဲခြားမှု ပြုလုပ်ထားပါသည်။

၁။ လေထုညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- စက်ရုံတွင် ကာဗွန် နှင့် လေထုညစ်ညမ်းမှု လျော့ချရန် သစ်ပင်ပန်းပင်များ စိုက်ပျိုးထားရှိခြင်း၊
- စက်ရုံအတွင်း မည်သည့် စွန့်ပစ်အမှိုက်များကို မီးရှို့ဖျက်စီးခြင်းအား မပြုလုပ်စေခြင်း၊
- အမှုန်များသောနေရာများတွင် လုပ်ငန်းလုပ်ဆောင်ရမည့် လုပ်သားများကို မျက်နှာအုပ် (Mask) များတပ်ဆင်စေခြင်း။

၂။ ဆူညံမှုထိန်းခြင်းဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- မီးစက်အသုံးပြုမှုအတွက် အသံလုံခန်းများဆောက်လုပ်ထားရှိခြင်း၊
- လုပ်ငန်းသုံးပြုသည့်ယာဉ်များကို သတ်မှတ်အရှိန်ထက် ကျော်လွန်၍ မမောင်းနှင်စေခြင်း
- လုပ်ငန်းခွင်အတွင်း လုပ်သားများအတွက် တစ်ကိုယ်ရေသုံး ကာကွယ်ရေးပစ္စည်း (PPE) များလုံလောက်စွာ ထားရှိပေးခြင်း
- လုပ်သားများကို PPE အသုံးပြုမှုနှင့် ပက်သက်၍ သင်တန်းများပို့ချပေးခြင်းနှင့် ဆူညံသံများသော နေရာတွင် အလုပ်လုပ်စဉ်တွင် PPE များကိုသေချာစွာ အသုံးပြုစေခြင်း;

၃။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- စက်ရုံအတွင်း မည်သည့်စွန့်ပစ်ပစ္စည်းများကို့မြစ်၊ ချောင်း၊ အင်းအိုင် အတွင်းသို့ မစွန့်ပစ်ရ၊
- စွန့်ပစ်ပစ္စည်းများအား ပြန်လည်အသုံးပြုရန်နှင့် အန္တရာယ်ရှိစွန့်ပစ်ပစ္စည်းအဖြစ် ခွဲခြားစွန့်ပစ်စေခြင်း၊
- အစိုင်အခဲစွန့်ပစ်ပစ်စွည်းများ (အဂတ်အစဖြတ်စ၊ ညှပ်စ) အား ပြည်တွင်းဝယ်ယူသူများထံ ပြန်လည်ရောင်းချစေခြင်း၊
- အိမ်သုံးစွန့်ပစ်အမှိုက်နှင့် လုပ်သားစွန့်ပစ် အမှိုက်များကို YCDC နှင့် နေ့စဉ် စွန့်ပစ်ခြင်း
- အမှိုက်စွန့်ပစ်ခြင်းနှင့် ပတ်သက်၍ သင်တန်းပို့ချပေးခြင်း

၄။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

- စက်ရုံ၏ မိလ္လာစနစ်နှင့် ရေစီးကြောင်းများ နှင့် အနီးပန်းကျင်ရှိ ရေမြောင်းစနစ်များကို ရေလုံစေခြင်းနှင့် လုံလောက်သော အရွယ်အစား ထားရှိစေခြင်း
- မိလ္လာလိုအပ်ချက်များကို ပုံမှန်စစ်ဆေးပေးခြင်းနှင့် ပြုပြင်ထိန်းသိမ်းခြင်း

၅။ အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်

- မီးသတ်ကိရိယာများနှင့် မီးသတ်နည်းစနစ်များကို လုပ်ငန်းဆောင်ရွက်သည့်နေရာတိုင်းတွင် ထားရှိပေးခြင်းနှင့် သိရှိစေခြင်း
- မီးဘေးကာကွယ်ရေး လမ်းကြောင်းမြေပုံ အသေးစိတ်ကို ပြုလုပ်ထားရှိရန်နှင့် လုပ်သားများကို အသိပေးထားခြင်း
- လုပ်သားများကို ငလျင်လှုပ် လျှင် လုပ်ဆောင်ရမည့် အချက်များကို အသိပေးထားခြင်း
- စက်ရုံ၏ ဆေးဘက်ဆိုင်ရာ အဖွဲ့အစည်းမှ ရှေးဦးသူနာပြုစုနည်းများ အတွက် ပြင်ဆင်ထားရှိခြင်း
- မီးသတ်တပ်ဖွဲ့ ၊ ကယ်ဆယ်ရေးအဖွဲ့များ ဖြင့် လုံခြုံရေးကော်မတီ ဖွဲ့စည်းခြင်း၊ ကော်မတီမှ လုံခြုံရေး စီမံခန့်ခွဲရေး နှင့် ပတ်သက်သည်များ ဆွေးနွေးရန် လစဉ် အစည်းအဝေးများ ပြုလုပ်စေခြင်း

၆။ စွမ်းအင်စီမံခန့်ခွဲမှုအစီအစဉ်

- အပူအအေးထိန်းညှိပေးသည့် ကရိယာများတပ်ဆင်စေခြင်း
- စွမ်းအင်လျော့ချသည့် မီးလုံး၊ မီးချောင်းများတပ်ဆင်စေခြင်း
- စွမ်းအင်လျော့ချသည့်ကရိယာများ တပ်ဆင်ခြင်း
- အသုံးမပြုသည့်အချိန်တွင် စက်ပစ္စည်းများအား ပိတ်ထားခြင်း

၇။ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်

၈။ လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan

၉။ စွမ်းအင်မြှင့်တင်ခြင်းနှင့် လေ့ကျင့်ရေးအစီအစဉ်

၁၀။ မကြေနပ်မှု ဖြေရှင်းခြင်း နည်းလမ်း

အဆိုပြုလုပ်ငန်း၏ လူထုအကျိုးတူပူးပေါင်းပါဝင်မှုများအဖြစ် အကျိုးအမြတ်၏ ၂% ကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်ပယ်ဖွံ့ဖြိုးတိုးတက်ရေးများတွင် ထည့်ဝင်လှူတန်းသွားမည်ဖြစ်ပါသည်။ အဆိုပြုလုပ်ငန်း၏ ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုရေးလုပ်ဆောင်ရမည့် လုပ်ငန်းစဉ်များနှင့် ဖြေရှင်းရမည့်နည်းလမ်းများကိုလဲ ထည့်သွင်းဖော်ပြထားပါသည်။

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း အစီအစဉ်ကို ၁၀ ရက်၊ စက်တင်ဘာလ၊ ၂၀၁၉ ခုနှစ်တွင် လှိုင်သာယာမြို့နယ်၊ Sky Hotelတွင် ပြုလုပ်ခဲ့ပါသည်။ တွေ့ဆုံပွဲ အစည်းဝေးတွင် သက်ဆိုင်ရာ အစိုးရအဖွဲ့ရုံး၏ တာဝန်ရှိပုဂ္ဂိုလ်များ၊ စက်မှုဇုန်စီမံခန့်ခွဲမှုကော်မတီ၏ တာဝန်ရှိပုဂ္ဂိုလ်များမှ လိုအပ်သည်များကို အကြံပေးခြင်း၊ စီမံကိန်း၏ အစီရင်ခံစာတွင် လိုအပ်သည်များကို ဖြည့်စွက်ပေးရန် အကြံပြုချက်များပေးခဲ့ပါသည်။ ပြုလုပ်ခဲ့သည့် အစီအစဉ်အကျဉ်းကိုပါ ထည့်သွင်းဖော်ပြထားပါသည်။

နိဂုံး

နိဂုံးချုပ်အားဖြင့် ယခုစီမံကိန်းသည် ဆောက်လုပ်ရေးကာလ၊ လုပ်ငန်းလည်ပတ်သည့်ကာလနှင့် လုပ်ငန်းဖျက်သိမ်းသည့် ကာလသုံးခုလုံးတွင် ဒေသခံပြည်သူများကိုအလုပ်အကိုင် အခွင့်အလမ်းများ ဖန်တီးပေးနိုင်သည်။ ကာလသုံးခုလုံးတွင် ဖြစ်ပေါ်လာနိုင်သော ထိခိုက်မှုများကို လျော့ချနိုင်မည့် နည်းလမ်းများနှင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား အကောင်အထည်ဖော်ခြင်းဖြင့် လျော့ချနိုင်သည်။ ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှု အစီအစဉ်အား စီမံကိန်း၏ ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေးကို စောင့်ကြပ်ကြည့်ရှုရန် မဖြစ်မနေ အကောင်အထည်ဖော်ပေးရမည်။ စီမံကိန်းကောင်အထည်ဖော်သူသည် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ ယခုအစီရင်ခံစာအား စစ်ဆေးပီးနောက် ပြန်လည်ပေးပို့လာသော သဘောထားမှတ်ချက်နှင့် အကြံပြုချက်များကိုလိုက်နာရမည်။ ထို့ပြင် စီမံကိန်းအကောင်အထည်ဖော်သူသည်

မြန်မာနိုင်ငံ၏ ပတ်ဝန်းကျင်နှင့် သက်ဆိုင်သောမူဂါဒများ၊ ဥပဒေများ၊ နည်းဥပဒေများ၊ သတ်မှတ်ချက်များကို လိုက်နာရန်လိုအပ်ပါသည်။

EXECUTIVE SUMMARY

Introduction

Environment Management Plan is required for ensuring sustainable development. It should not affect the surrounding environment adversely. The management plan presented in this chapter needs to be implemented by the proposed expansion of Bo Da (Myanmar) Fashion Company Limited. The Environment Management Plan (EMP) aims at controlling pollution at source with available and affordable technology followed by treatment measures. Waste minimization and waste recycling measures are emphasized. In addition to the Industry specific control measures, the proposed industry should adopt following guidelines.

The project is new investment for manufacturing of High Quality Garment by Contract Manufacturing Process (CMP) basic company from China. The project is issued by the Yangon Region Investment Committee (YRIC) on 14 March 2019 with the Endorsement No. (YGN-175/2019). YRIC notified for the environmental approval and comments of the Ministry of the Natural Resources and Environmental Conservation (MONREC) on the proposed project and had approved the proposal for investment in Manufacturing of Garment on CMP basis under the name of Bo Da (Myanmar) Fashion Company Limited as a solely owned foreign investment from the China.

According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No. Yaka- 1/3/4 (EIA) (621/2019) on 12 April 2019. Therefore, Bo Da (Myanmar) Fashion Company Limited commissioned Myanwei Consulting Company Limited for EMP report study. The specific objectives of this study are

- ✓ Identify the major impacts that are may arise from the activities of the proposed project on natural environmental and socio-economic environment of the project area
- ✓ Describe the mitigation measures to minimize these impacts
- ✓ Prepare and implement Environmental Management Plan for the project
- ✓ Make sure that EMP is developed sufficiently and sound for the proposed project and
- ✓ Corporate Social Responsibility Plan (CSR Plan) plays an essential part for the improvement of the social welfare of community as well as development of the region.

The proposed project aims to manufacturing sort of garment under CMP system and 100% export to foreign country.

The main purpose of this EMP report is to obey the rule and regulation of Local and International Environmental Protection programs and harmonize with the environmental and also describes the responsible person and his responsibility.

Policy, Legal and Institutional Framework

National Laws and Regulations, international guidelines are referred for Environmental Management Plan of the proposed project.

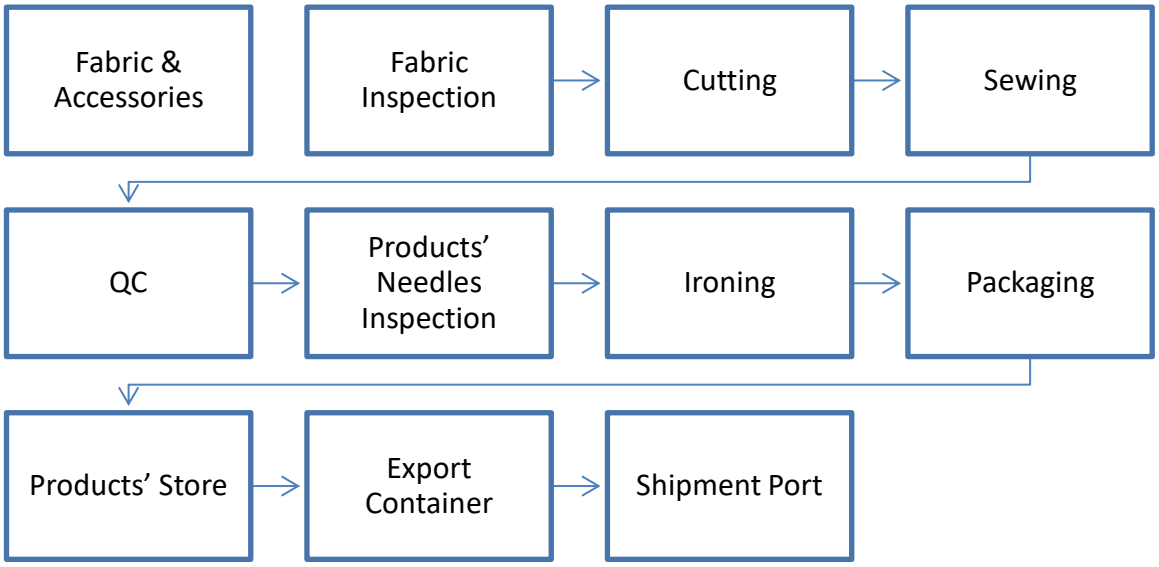
1. The Constitution Law, 2008
2. The Environmental Conversation Law, 2012
3. The Environmental Conversation Rule, 2014
4. Environmental Impact Assessment Procedure, 2015
5. National Environmental Quality (Emission) Guideline, 2015
6. National Myanmar Environmental Policy, 2019
7. Foreign Investment Law, 2012
8. Foreign Investment Rule, 2013
9. Myanmar Investment Rule, 2017
10. Myanmar Insurance Law, 1993
11. Payment of Wages Law, 2016
12. The Payment of Wages Act, 1936
13. Yangon City Development Committee Law, 2018
14. The Amended Law for Factories Act, 1951 (2016)
15. The Private Industrial Enterprise Law
16. The Export and Import Law, 2012
17. The Prevention of Hazard from Chemical and Related Substances Law, 2013
18. The Underground Water Act
19. Myanmar Fire Brigade Law, 2015
20. Fire Safety Procedure
21. The Electricity Law, 2014
22. Boiler Law, 2015
23. Labor Dispute Settlement Law, 2012
24. The Law Amending the Settlement of Labor Dispute Law, 2019
25. The Social Security Law, 2012

26. The Employment and Skill Development, 2013
27. The Worker's Compensation Act, 1923
28. The Leave and Holidays Act (1951, partially reused in 2014)
29. The Minimum Wage Law, 2013
30. Public Health Law, 1972
31. Prevention and Control of Communicable Disease Law (1995 Amendment in 2011)
32. Occupational Safety and Health Law, 2019
33. The Law on Standardization
34. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ဝတ္ထုပစ္စည်းများဆိုင်ရာ ဥပဒေ၊ (2018)
35. The Motor Vehicles Law, 2015
36. The Conversation of Water Resources and River Law, 2006
37. The Commercial Tax Law (1990 Amended 2014)

Project Description

Type of Proposed Business	Manufacturing the various sort of garment
Type of investment	100% Foreign Investment
Name of Company	Bo Da (Myanmar) Fashion Company Limited
Land lease year	30 years
Total land area	1.610 acres (6515.439 sq meter)
Type of land	Industrial Land
Construction Period	1 year
Address of Proposed Project	Plot No. 239, Myay Taing Block No. 25, Shwe Lin Ban Industrial Myo, Hlaing Thar Yar Township, Yangon Region
Contact Person	Daw Tin Moe Aye (HR Manager) 09-960515014

The proposed project is located at Yangon region. The total area of project site is 1.610 acre (6515.439 square meters). Main structure is designed into production area for one building. Transformer room, generator room and water treatment plant are separated by main factory building structure. The factory layout plan which is also can be seen in this report. The main product of the Bo Da (Myanmar) Fashion Company Limited factory is garment product. The Utilities for proposed factory include electrical power, fuel oil for emergency used generator and water for domestic use. Electric power is used for the purpose of to provide lighting.



Production Process of Bo Da Garment Factory

Production rate of Bo Da (Myanmar) Fashion factory is produced between first year of operation and ten years operation as 1,001,250 to 1,051,313 pieces annually. It is require of work force (16) foreigners technician and (800) local employees for first year operation to 10 years operation.

Brief Description of Surrounding Environment

Primary data and secondary data collections are very imported to assess environmental impacts. Primary data collections (environmental quality measurements and monitoring) play an important role for conducting EMP. Therefore. Myanwei Consulting Company Limited conducted air quality, temperature and humidity, noise level measurement and light pollution measurement on 27 May, 2019 and compared with the National Environmental Quality (Emission) Guidelines and also described how to reduce the impact and how to maintain the pollutions. Also described the weather conditions, rainfalls and socio-economic component of the proposed project.

Potential Environmental Impact and Mitigation Measure

Possible effects, such as impacts on environmental resources, ecological resources, human and waste disposal due to construction, operation and decommissioning processes. Potential impacts for the proposed projects are normally differentiated into three main categories, viz, Construction phase, Operation phase and Decommissioning phase.

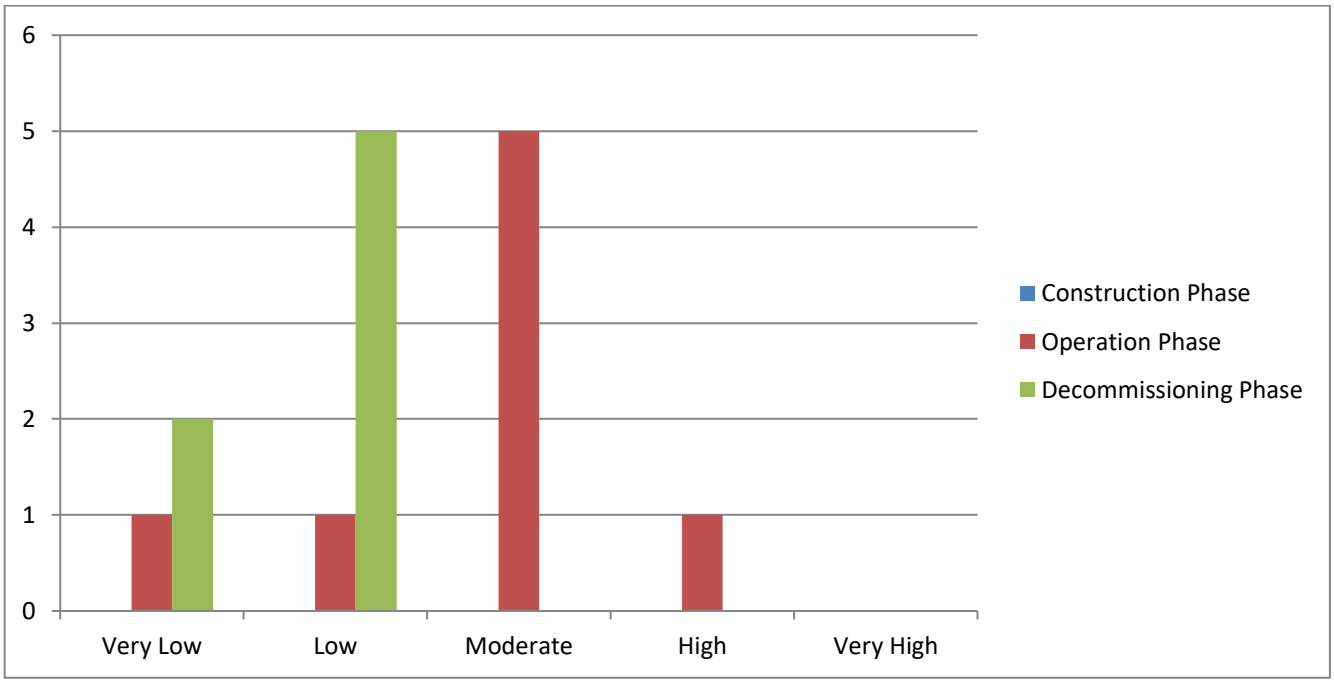
The relative importance of each impact is assessed based on the understanding that general mitigation measures will be integrated into the baseline project. Therefore, when the general mitigation measures reduce impacts to the point of rendering them negligible they are excluded from further analysis. Once the significance of the impact is established as more than negligible, it is described and additional, specific mitigation measures may be proposed to allow optimal integration of the project into the environment.

Evaluation and Perdition of Significant Impacts

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Construction Phase; It is not assessed in this phase, because of construction is already completed during EMP preparation.							
Operation Phase							
Air pollution	• Dust and GHGs emission from vehicles used for transporting raw materials and final products • Particulate matters emission from the activities of production process • Emission of smoke from steam boiler (rice briquettes) and kitchen • Emission from emergency diesel generator	3	4	2	4	36	Moderate
Water pollution	• Sewage disposed of from the toilets • Oil spill and grease leaks from transporting vehicles and machinery equipment used in operation phase	2	4	2	3	24	Low
Soil Contamination	• Accidental spillage of oil used by vehicles operating	1	4	1	2	12	
Noise Pollution	• Generating noise from the production machinery • Noise from the generating of the emergency generators	3	4	1	4	32	Moderate
Fire Hazard	• Poor electrical installations • waste disposed area • Raw materials storage	3	5	2	4	48	High
Solid waste	• residual pieces of fabric scraps from the production lines • Waste from packaging materials • Waste from kitchen, dormitory and office.	3	4	1	4	32	Moderate
Liquid waste	• Septic system and sewage. • Domestic liquid waste disposal from office, kitchen and dormitory.	2	4	2	4	32	Moderate
Hazardous waste	• Engine oil leaks, spills at diesel storage and during fuel refueling. • Used oil and lubricant discharged from the maintenance of vehicles and machines.	2	4	1	2	14	Very Low
Occupational Health and Safety (Accidents, Injuries)	• Accidental cases cause by operating machines. • Electricity and emergency diesel generators. • Unloading, mixing, cutting, pressing and packaging activities. • Accidental cases of thermic fluid heater	3	4	1	4	32	Moderate
Social-economic	• Job opportunities for local people	-	-	-	-	-	Positive

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Condition							Impact
Decommissioning Phase							
Air pollution	• Decommissioning of buildings and related materials • Transportation of demolished materials	3	1	1	4	20	Low
Water pollution	• Sewage form decommissioning workers • Demolition machinery equipment	3	1	1	3	15	Low
Soil Contamination	• Decommissioning of buildings and related materials • Transportation of demolished materials	3	1	1	3	15	Low
Noise Pollution	• Decommission activities • Transportation of demolished materials	3	1	1	3	15	Low
Waste disposal	• Sewage system • Demolished debris such as bricks, concrete materials	2	1	1	3	12	Very Low
Hazardous waste	• Used lubricants from decommissioning vehicles and machines	2	1	1	3	12	Very Low
Occupational Health and Safety (Accidents, Injuries)	• Decommissioning activities • Transportation of demolished materials	3	1	2	3	18	Low
Social-economic Condition	• Temporary job opportunities for local people	-	-	-	-	-	Positive Impact

According to the result of analysis, it can be concluded that most of the project activities have low significance on environment, in all phases. Project activities that can produce solid waste and liquid waste are moderate significance. Moreover, project activities that emit dust and GHGs and accidental cases are moderately significant. Fire hazard potential of the proposed project and noise pollution are highly significant. But this can be prevented or mitigated by using the following mitigation measures. The following figure shows the impact significance of the proposed project.



Impact significance of the proposed factory project

Environment Management Program

The proposed project of environmental management plan, which need to made the PDCA plan especially Plan-Do-Check-Act cycle. In that plan, it includes not only reducing to the environmental and social-economic impact but also includes the environmental management plan and the monitoring plan. In this EMP to implement the health, safety and occupational for the industry, they need to create a team and to must be implemented that. The EMP for Bo Da (Myanmar) Fashion Company Limited has been prepared to address potential issues based upon discussion with factory management, workers, local community's view, stakeholder consultation and from the site visit of experts. The EMP is additional to and compliments the factory's safety management system. The following environmental issues that require environmental management plans based upon the potential impacts of activities by for Bo Da (Myanmar) Fashion factory are as follows:

1. **Air pollution/Dust Management plan**

- The factory must be plant in its premises which reduce the carbon emission by the factory and minimize the air pollution
- Periodic maintenance of generator is conducted
- Prohibiting the burning of waste materials at the project site
- Providing mask to the employees who work in any dusty area
- Installation the windscreens to breakup the wind flow

2. **Noise Management Plan**

- Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment
- Impose speed limit to track and vehicles at the transportation route.

- Emergency use of diesel generator must be ensured by soundproof
- Noise level monitoring programs must be designed and conducted by trained specialist at production area

3. Solid Waste Management Plan

- The factory does not dispose the any sort of solid wastes on the factory premises or not dump in the surface water like a local pond, canal or river, etc.
- The solid wastes are stored properly and separately in a certain location in proper manner such as cloth scrap waste need to collect at one place and poly/carton waste should collect at another place. Metal/Hazardous material waste such as fudge electric bulbs and empty chemical container is stored another in separate place of storage area.
- Recycle wastes like cloth scrap, carton box, plastic sheet, etc. are hand over to local buyer for reuse and waste-tracking record shall be kept every day.
- The metal or glass waste of electric bulb is taken by the suppliers to recycle them.
- The daily domestic waste of worker hand-over to YCDC waste collector to collect every day
- Daily wastes are stored clearly labeled containers and in such a manner that all related personnel are provided proper training about the relevant issues.

4. Wastewater Management Plan

- Ensure that drainage lines and sewage system of factory and the nearest public drainage are watertight and sufficient capacity
- Regular check and maintain sewerage facility.
- Clean the factory drainage to avoid odor emission and to avoid the block of water flow
- Regularly monitor and check the discharge temperature from boiler wastewater before directly discharge into factory‘s final drainage

5. Emergency Respone and Disaster Management Plan

- The factory management has taken proper measures to handle any emergency situation like fire, earthquake, flood and storm
- Provision and inspection of firefighting equipment and fire hydrant system in all the sections
- A detail evaluation plan (fire exist, emergency exit door, etc.) is established and communicated with workers
- Periodic inspection of safety relief valve provided with pressure vessels and equipment, preventive maintenance; aware the workers about electric shock by necessary training.
- Regular fire drill operation is conducted
- Workers are informed about what to do in earthquake like stay in a safe place such as under table of desk, not to try move outside during earthquake, workers who will be outside during earthquake shall remain stay out of the building, trees, lump post, etc. Other relevant safety instruction of emergency situation it informed to workers by training

- Workers are aware of dangers from physical hazards such as obstacles covered by floodwater (storm debris, drainage opening, ground erosion) and from displaced reptiles (Snake) or other animals.
- A medical team has been prepared for primary treatment (First Aid)
- Prepare an emergency contact directory consisting contact numbers of nearest fire service, local police station, hospitals, etc. and display it in a place that everybody can see it easy.
- Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management
- Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety

6. Energy Management Plan

- Installation of timers and thermostats to control heating and cooling
- Energy saving light installed in different area of the factory for saving energy
- Used of energy saving devices must be installed
- Ensure that good housekeeping measures such as turning off equipment and lights when not in use

7. Environmental Monitoring and Reporting

8. Corporate Social Reponsible (CSR) Plan

9. Capacity Building and training Plan

10. Grievance Redress Mechanism

Public Consulting

Public participation can be considered as the required element of the EMP process. In this study various stakeholder‘s participation were made. On 10, September 2019, a public consultation and disclosure ceremony was held at meeting room of Sky Hotel, Hlaing Tharyar Township, Yangon..

Conclusion & Recommendation

In Conclusion, the environmental management practices, procedures and responsibilities are defined here in to get full compliance with the existing environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar. All the feed backs, desired and needs of local public recorded in public consultation meetings are well addressed and incorporated in formulation of EMP. It has been figured out that, the proposed garment factory is going to generate local employment opportunities and enhance capabilities and working skills of employees. Consequently, their socio-economic standard is expected to be improved and undertaking corporate social responsibilities (CSR) as recommended. The study further concluded that positive impacts will be of immense benefit to the local community and national development as well.

This is recommended that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory
- Solid wastes and liquid wastes need to dispose according to YCDC rules and regulation
- Workers should be provided proper training and it should be ensured that workers use PPE during factory operation area.
- Daily, monthly and annual action plan shall be formulated based on this EMP and practiced at operation level.
- Keep full records of environmental management activities and present to annual independent third party environment audit.
- Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

Finally, the proponent should follow the comments and suggestions made by ECD after reviewing this EMP report. Once concerned authorities approve EMP, effective implementation of EMP by the project proponent is essential. The proponent should abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

1. INTRODUCTION

Environment Management Plan is required for ensuring sustainable development. It should not affect the surrounding environment adversely. The management plan presented in this chapter needs to be implemented by the proposed expansion of Bo Da (Myanmar) Fashion Company Limited. The Environment Management Plan (EMP) aims at controlling pollution at source with available and affordable technology followed by treatment measures. Waste minimization and waste recycling measures are emphasized. In addition to the Industry specific control measures, the proposed industry should adopt following guidelines.

- ✓ Identify the major impacts that are may arise from the activities of the proposed project on natural environmental and socio-economic environment of the project area
- ✓ Describe the mitigation measures to minimize these impacts
- ✓ Prepare and implement Environmental Management Plan for the project
- ✓ Make sure that EMP is developed sufficiently and sound for the proposed project and
- ✓ Corporate Social Responsibility Plan (CSR) plays an essential part for the improvement of the social welfare of community as well as development of the region.

1.1. PROJECT BACKGROUND

The project is new investment for manufacturing of High Quality Clothes Product by Using High Quality Garment on Contract Manufacturing Process (CMP) basic company from China. The Yangon Region Investment Committee (YRIC) issues the project on 14 March 2019 with the Endorsement No. (YGN-175/2019). YRIC notified for the environmental approval and comments of the Ministry of the Natural Resources and Environmental Conservation (MONREC) on the proposed project and had approved the proposal for investment in manufacturing of Garment on Cutting, Making and Packaging (CMP) basis under the name of Bo Da (Myanmar) Fashion Company Limited.

According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), said project requires an Environmental Management Plan (EMP) to meet the environmental assessment requirements of Notification No. Yaka- 1/3/4 (EIA) (621/2019) on 12 April 2019. Therefore, Bo Da (Myanmar) Fashion Company Limited commissioned Myanwei Consulting Company Limited (Myanwei) for EMP report study.

1.2. PROJECT PROPONENT PROFILE

This is the information of project proponent from the MIC's registration that is describing in below Table 1-1 and Table 1-2.

Table 1-1 Information of Investor

Investor Name:	Mr. Li Dong Liang
ID No. :	E15064791

Citizenship:	Chinese
Address of Registration office:	Plot No. 239, Myay Taing Block No. 25, Shwe Lin Ban Industrial Myo, Hlaing Thar Yar Township, Yangon Region.

1.2.1. Investment Plan and Salient Features of the Project

The estimated authorized capital investment is 0.637 Million US Dollar (Table 1-2). Organization chart of Bo Da (Myanmar) Fashion Company Limited is presented in Figure 1-1.

Table 1-2 Salient features of the project

Type of Proposed Business	Manufacturing of Garment on CMP Basis
Type of investment	100% foreign investment
Type of Share	Ordinary Share
Type of land	Industrial Land
Total land area	1.610 acres (6515.439 sq m)
Total building area	Two Building (44,800 sq ft) Production building (1,200 sq ft) Dormitory
Land lease year	30 years
Construction period	1 years
Operation starting date	30 years investment permit
Address	Plot No. 239, Myay Taing Block No. 25, Shwe Lin Ban Industrial Myo, Hlaing Thar Yar Township, Yangon Region
Contact person	Daw Tin Moe Aye, HR Manager 09960515014

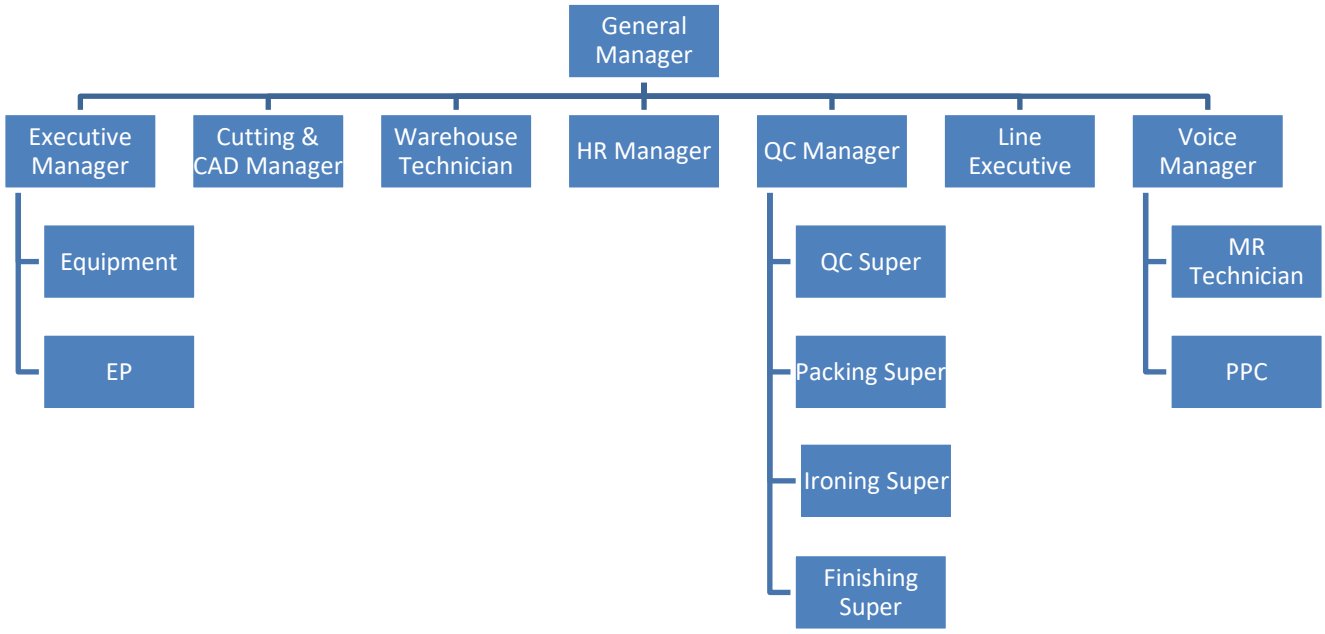


Figure 1-1 Organization chart of Bo Da (Myanmar) Fashion Company Limited

1.3. ENVIRONMENTAL CONSULT PROFILE

Myanwei Consulting Company Limited prepares the EMP for the proposed project. The field studies were carried out by Myanwei having experiences in conducting environmental assessments for various types of projects in Myanmar. The Myanwei team conducted field survey, assessment activities, and prepared the report. A reconnaissance study was performed on the proposed project site and baseline environmental data were also collected from possible sources using the appropriate measuring devices. Data interpretation and analysis were made based on those collected data for the present and potential future conditions. Suitable measures were proposed for the impacts to be mitigated to reduce to acceptable ones. The environmental study was carried out by the study team and the following is a summary of team member's responsibilities during the study period.

Table 1-3 Member of EMP Study Team

Member List	Responsibility
Dr. Hein Lynn Aung (Director) M.B, B.S (Yangon), Master of Management from Australia	Health Impact Assessment, Mitigation and Monitoring Report Reviewing
Mr. Lin Htet Sein (Environmental Consultant) MSc (Regional Geology) BSc (Hons) Geology	Base Line data collecting management, Project description, legal assessment, impact assessment, mitigation measure, monitoring plan, report preparation and reviewing
Mr. Nyein Chan Siat Linn Myo (Fire Safety Manager) BSc Physics DMEI (Diploma in Mechanical Engineering) (UK) (INTI)	Industrial management assessment, fire safety training and management study
Mr. Sai Poeng Saing Kham (Member) B.A History	Report writing, secondary data study
Ms. Nan Htet Myintzu BSc (Hons) Geology	Report writing, secondary data study
Mr. Sai Thiha Maung BSc Geology	Baseline data monitoring, site surveying, Communication with stakeholder in project area
Mr. Kyaw Win Han (Member) B.E. Chemical Engineering B. Tech Chemical Engineering	Baseline data monitoring, site surveying Communication with stakeholder in project area
Mr. Aung Kyaw Moe (Member) B.E. Chemical Engineering B. Tech Chemical Engineering	Report writing, secondary data study

Mr. Saw Yan Naung (Member) B.E. Chemical Engineering B. Tech Chemical Engineering	Baseline data monitoring, site surveying, Communication with stakeholder in project area
Mr. Moe Kyaw (Member) B.E. Chemical Engineering B. Tech Chemical Engineering	Baseline data monitoring, site surveying, Communication with stakeholder in project area

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2. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

This section provides a brief summary of relevant national environmental legislations established by the MONREC and overview of current local and international environmental and social policies including related international or regional convention for the proposed project.

2.1. MYANMAR REGULATORY FRAMWORK

Myanmar has 24 ministries under the Office of the President as of May 2016. The leading ministries in-charge of environmental and social considerations is the Environmental Conservation Department (ECD) of the MONREC that was reorganized Ministry of Environmental Conservation and Forestry (MOECAF) in April 2016.

2.1.1. Laws and Regulations Related to Environmental and Social Considerations

Requirements related to environmental (and social) impact management for development projects are described in Table 2-1.

Table 2-1 List of Myanmar's Law relating to environmental management

Law and Regulation	Description
National Environmental Policy of Myanmar, (Notification No. 26/94 dated 5 December 1994)	To achieve harmony and balance between socioeconomic, natural resources and environment through the integration of environmental considerations into the development process enhancing the quality of the life of all its citizens.
Constitution 2008	
Section 37, (a)	The Union is the ultimate owner of all lands and all-natural resources above and below the ground, above and beneath the water and in atmosphere in the Union.
Section 37, (b)	The Union shall permit citizens rights of private property, right of inheritance, right of private initiative and patent in accord with the laws.
Section 372	The Union guarantees the right to ownership, the use of property and the right to private invention and patent in the conducting of business if it is not contrary to the provisions of this Constitution and the existing laws.
Section 45	The Union shall protect and conserve natural environment.
Section 390, (a),(b),(c),(d)	Every citizen has the duty to assist the Union in preserving and safeguarding the cultural heritage, conserving the environment, striving for the development of human resources, and protecting and preserving the public property.
Environmental Conservation Law, 30 March 2012	
Objectives	to contract a healthy and clean environmental and to conserve natural and cultural heritage for the benefit of present and future generations; to maintain the sustainable development through effective management of natural resources and to enable to promote international, regional and bilateral cooperation in the matters of environmental conversation.
Section 3	c) to enable to emerge a healthy and clean environment and to enable to conserve natural and cultural heritage for the benefit of present and future generations; (d) to reclaim ecosystems as may be possible which are starting to degenerate and disappear;

	(e) to enable to manage and implement for decrease and loss of natural resources and for enabling the sustainable use beneficially;
Provisions of Duties and Powers relating to the Environmental Conservation of the Ministry: Section 7	(a) To specify categories and classes of hazardous wastes generated from the production and use of chemicals or other hazardous substances in carrying out industry, agriculture, mineral production, sanitation and other activities; (b) To prescribe categories of hazardous substances that may affect significantly at present or in the long run on the environment; (c) To promote and carry out the establishment of necessary factories and stations for the treatment of solid wastes, effluents and emissions which contain toxic and hazardous substances; (j) To prescribe the terms and conditions relating to effluent treatment in industrial estates and other necessary places and buildings and emissions of machines, vehicles and mechanisms; (m) To lay down and carry out a system of EIA and SIA as to whether or not a project or activity to be undertaken by any Government department, organization or person may cause a significant impact on the environment; (o) To manage to cause the polluter to compensate for environmental impact, cause to contribute fund by the organizations which obtain benefit from the natural environmental service system, cause to contribute a part of the benefit from the businesses which explore, trade and use the natural resources in environmental conservation works.
Chapter VI Environmental Quality Standards: Section10	The Ministry may, with the approval of the Union Government and the Committee, stipulate the following environmental quality standards: (a) suitable surface water quality standards in the usage in rivers, streams, canals, springs, marshes, swamps, lakes, reservoirs and other inland water sources of the public; (b) water quality standards for coastal and estuarine areas; (c) underground water quality standards; (d) atmospheric quality standards; (e) noise and vibration standards; (f) emissions standards; (g) effluent standards; (h) solid wastes standards; (i) other environmental quality standards stipulated by the Union Government.
Section 14	A person causing a point source of pollution shall treat, emit, discharge and deposit the substances which cause pollution in the environment in accord with stipulated environmental quality standards.
Section 15	The owner or occupier of any business, material or place which causes a point source of pollution shall install or use an on-site facility or controlling equipment in order to monitor, control, manage, reduce or eliminate environmental pollution. If it is impracticable, it shall be arranged to dispose the wastes in accord with environmentally sound methods.
Section 16	A person or organization operating business in the industrial estate or business in the SEZ or category of business stipulated by the Ministry: (a) is responsible to carry out by contributing the stipulated cash or kind in the relevant combined scheme for the environmental conservation including the management and treatment of waste; (b) shall contribute the stipulated users‘ charge s or management fees for the environmental conservation according to the relevant industrial estate,

	SEZ and business organization; (c) shall comply with the directives issued for environmental conservation according to the relevant industrial estate, SEZ or business.
Section 24	The project proponent has to allow relevant governmental organization or department to inspect whether performing is conformity with the terms and condition include in prior permission, stipulated by the ministry, or not.
Section 25	The project proponent has to comply with the terms and conditions include in prior permission.
Section 29	The project proponent has to abide by the stipulations included in the rules, regulations, by-law, order, notification and procedure, which are issued by said law.
Environmental Conservation Rules, 2014	
Rules 58	The Ministry shall form the EIA Report Review Body with the experts from the relevant Government departments, organizations.
Rules 59	The Ministry may assign duty to the Department to scrutinize the report of EIA prepared and submitted by any organization or person relating to EIA and report through the EIA Report Review Body.
Rules 61	The Ministry may approve and reply on the EIA report o IEE or EMP with the guidance of the Committee.
Sub-rule (a) of rule 68	The project proponent has to avoid emit, discharge or dispose the materials which can pollute to environment, or hazardous waste or hazardous material prescribed by notification in the place where directly or indirectly injure to public.
Sub-rule (b) of rule 68	The project proponent has to avoid performing to damage to ecosystem and the environment generated by said ecosystem.
Environmental Impact Assessment Procedure (December 2015)	
Objectives	The project proponent has to be liable for all adverse impacts caused by doing or emitting of project owner or contractor, sub-contractor, officer, employee, representative or consultant who is appointed or hired to perform on behalf of project owner, under sub-paragraph (a) of paragraph 102. The project proponent has to support, after consulting with effected persons by project, relevant government organization, government department and other related persons, to resettlement and rehabilitation for livelihood until the effected persons by the project receiving the stable socio-economy which is not lower than the status in pre-project, under sub-paragraph (b) of paragraph 102 The project proponent has to fully implement all commitments of project and conditions included in EMP. Moreover the project proponent has to be liable for contractor and sub-contractor who perform on behalf of him/her have to fully abide by the relevant laws, rules, this procedure, EMP and all conditions, under paragraph 103. The project proponent has to be liable and fully & effectively implement all requirements included in ECC, relevant laws and rules, this procedure and standards under rule 104. The project proponent has to inform the completed information, after specifying the adverse impacts caused by the project, from time to time, under paragraph 105. The project proponent has to continuously monitor all adverse impacts in the pre-construction phrase, construction phrase, operation phrase, suspension phrase, closure phrase and post-closure phrase, moreover has to implement the EMP with abiding the all conditions included in ECC, relevant laws & rules and this procedure, under paragraph 106.

	The project proponent has to submit, as soon as possible, the failures of his or her responsibility, other implementation, ECC or EMP. If dangerous impact caused by this failure or failure should be known by the Ministry the project proponent has to submit within 24 hours and other than this situation has to submit within 7 days from knowing it, under paragraph 107. The project proponent has to submit the monitoring report dually or prescribed time by Ministry in line with the schedule of EMP, under paragraph 108. The project proponent has to prepare the monitoring report in accord with the rule 109. The project proponent has to show this monitoring report in public place such as library, hall and website and office of project for the purpose to know this report by public within 10 days from the date which the report is submitted to the Ministry. Moreover, has to give the copy of this report, by email or other way which way agreed with the asked person, to any asked person or organization, under paragraph 110. The project proponent has to allow inspector to enter and inspect in working time and if it is needed by Ministry has to allow inspector to enter and inspect in the office and work-place of project and other work-place related to this project in any time, under paragraph 113. The project proponent has to allow inspector to immediately enter and inspect in any time if it is emergency or failure to implement the requirements related to social or environment or caused to it, under paragraph 115. The project proponent has to allow inspector to inspect the contractor and sub-contractor who implement on behalf of project, under paragraph 117.
Screening: Section 23	a) The project proponent shall submit the Project Proposal to the Ministry for Screening. b) The Ministry will send the Project Proposal to the Environmental Conservation Department to determine the need for environmental assessment. c) Following the preliminary Screening and verification that the Project Proposal contains all required documents and related materials, subject to Articles 8, 9, 10, 11, 26 and 27 the Department shall make a determination in accordance with Annex 1 _ Categorization of Economic Activities for Assessment Purposes‘, taking into account Article 25 and the additional factors listed in Article 28 in order to designate the Project as one of the following, and then submit it to the Ministry: i) An EIA Type Project, or ii) An IEE Type Project, or iii) A Non IEE or EIA Type, and therefore not required to
National Environmental Quality (Emission) Guidelines (NEQG) (December 2015)	
Objectives	To provide the basis for regulation and control of noise and vibration , air emissions, and liquid discharges from various sources in order to prevent pollution for purposes of protection of human and ecosystem health.
National Environmental Policy of Myanmar (2019)	

National Environmental Policy Vision & mission	Vision A clean environment, with healthy and functioning ecosystem, that ensures includes development and wellbeing for all people in Myanmar. Mission To establish national environmental policy principle for guiding environmental protection and sustainable development and for mainstreaming environmental consideration into all polices, laws, regulation, plans, strategic, programmes and projects in Myanmar.
Foreign Investment Law, 2012	
Section 8	(a) To support the primary objectives of the national economic development plan, and for businesses that cannot yet be run by the State and citizens or businesses that have insufficient funds and technology. (b) Development of employment activities (l) Protection and conservation of the environment. (q) Appearing the required modern services for the Union and citizens.
Section 17	(a) To abide by the existing laws of the Republic of the Union of Myanmar. (b) To carry out the business by forming a company under the existing laws of Myanmar by the investor. (h) To carry out not to cause environmental pollution or damage in accord with existing laws in respect of investment business. (k) To carry out the systematic transfer of high technology relating to the business which are carried out by the investor to the relevant enterprises, departments or organizations in accord with the contract.
Foreign Investment Rule, 2013	
Rule 54	The promoter or investor shall: (a) comply with Environmental Protection Law in dealing with environmental protection matters related to the business; (b) shall carry out socially responsible investment in the interest of the Union and its people; (c) shall co-operate with authorities for occasional or mandatory inspection; (d) shall exercise due diligence to be in conformity and harmony with norms and standards prescribed by relevant Union Ministry in conducting construction of factories, workshops, buildings, and other activities; (e) shall enforce Safety and Health
Myanmar Investment Rules, 2017	
Rule 202	The project proponent has to comply with the conditions of the permit issued by the MIC and applicable laws when making the investment
Rule 203	The project proponent has to fully assist while negotiating with the authority for settling the grievance of the local community which has been affected due to investment
Rule 206.	The project proponent has to submit the passport, expert evidence or document of degree and profile to the MIC office for approval if decide to appoint a foreigner as senior management, technician expert or consultant according to subsection (a) of section 51 of Myanmar Investment Law
Myanmar Insurance Law (1993)	Section 15 - If the project proponent uses the owned vehicles the project owner has to ensure the insurance for the injured person. Section 16 - The project proponent has to ensure insurance to compensate for general damages because the project may cause damages to the environment and injury to the public.

Payment of Wages Law (2016)	
Section 3 & 4	The project proponent has to pay the wages in accord with section 3 and 4 of said law,
Section 5	The project proponent has to submit with the agreements of employees & reasonable ground to the department if it is difficult to pay because of force majeure included in a natural disaster
Section 7-13	The project proponent has to abide by the provisions of section 7 to 13 in the chapter (3) in respect of deduction from wages.
Section 14	The project proponent has to pay the overtime fees, prescribed by law, to the employees who work over working hours
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Section 14	The project proponent has to pay the overtime fees, prescribed by law, to the employees who work over working hours
Yangon City Development Committee Law (2018)	
Section (317)	The proponent shall not block the natural river channel, change the course, and disrupt the water channel, filling with soil within the city boundaries without the consent of the Committee
Section (318)	The project proponent shall not construct buildings, factories, and industries without sewage, toilet, septic tanks, and wastewater treatment system
Section (322)	The project proponent is not allowed to make activities that will produce noise pollution, water pollution, air pollution, and soil pollution to impact the environment within the city's boundaries
The Amended Law for Factories Act, 1951 (2016)	
Hygiene in Working Environment: Section 3	Mentions responsibilities of employer and manager regarding waste disposal, ventilation, extreme temperature, dust and gas generation, minimum space for each worker, lighting, portable drinking water and toilets for employees.
Safety in Working Environment: Section 4	States responsibilities of employer and manager concerning with machine guarding, personal protective equipment, housekeeping, aisles and exits, chemical storage and fire protection system to avoid accident.
The Private Industrial Enterprise Law, 1990	
Basic Principles: Section 3	Private Industrial Enterprises shall be conducted in accordance with the following basic principles:- (a) to enhance the higher proportion of the manufacturing value added in the gross national product and value of services, and to increase the production of the respective economic enterprises which are related to the industrial enterprise; (b) to acquire modern technical know-how for raising the

	efficiency of industrial enterprises and to establish the sale of finished goods produced by the industrial enterprise not only in the local market, but also in the foreign market; (d) to cause narrowing down of the gap between rural development and urban development by causing the development and improvement of industrial enterprises; (e) to cause opening up of more employment opportunities; (f) to cause avoidance of or reduction of the use of technical know-how which cause environmental pollution; (g) to cause the use of energy in the most economical manner.
The Export and Import Law (2012)	
Objectives	The objectives of this law are as follows: a) To enable to implement the economic principles of the State successfully. b) To enable to lay down the policies relating to export and import that supports the development of the State. c) To cause the policies relating to export and import of the State and activities are to be in conformity with the international trade standards. d) To cause to be streamlined and speedy in carrying out the matters relating to export and import.
Prohibitions: Section 5	No persons shall export or import restricted, prohibited and banned goods.
Prohibitions: Section 6	Without obtaining license, no person shall export or import the specified goods which are to obtain permission.
Prohibitions: Section 5	A person who obtained any license shall not violate the conditions contained in the license.
The Prevention of Hazard from Chemical and Related Substances Law, 2013	
This law was enacted with the objectives of : a. To protect from being damaged the natural environment resources and being hazardous any living beings by chemical and related substances; b. To supervise systematically in performing the chemical and related substances business with permission for being safety; c. To perform the system of obtaining information and to perform widely educative and research for using the chemical and related substance systematically; d. To perform the sustainable development for the occupational safety, health and environmental conservation. Regarding the chemical management and storage, currently, regulations governing chemicals management are divided between various Acts, mostly dating from colonial times; hence the legislation is in many respects related to the British framework. The Factory Act and the Public Health Act contain the provisions for chemicals management and storage. Some chemicals are likely to require permits.	
Underground Water Act	
The underground water act enacted on the date of 21st June in 1930 whereas it is expedient to conserve and protect underground sources of water supply in the Union of Burma. This act prohibits sinking of a tube for the purpose of obtaining underground water except under and in accordance with the terms of a license granted by the water officer. Township Officer or sub-divisional officer had power to close a license tube after exercising jurisdiction over the local area concerned and the expense of such closure shall be recoverable from the owner of the tube as if it were an arrear of land-revenue.	
Myanmar Fire Brigade Law (2015)	
The Pyidaungsu Hluttaw enacted this law by Law No.11/2015 on the date of 17th March, 2015 with the following objectives : (a) to take precautionary and preventive measures and loss of state own property, private property, cultural	

heritage and the live and property of public due to fire and other natural disasters (b) to organize fire brigade systemically and to train the fire brigade (c) to prevent from fire and to conduct release work when fire disaster, natural disaster, epidemic disease or any kind of certain danger occurs (d) to educate ,organize and inside extensively so as to achieve public corporation (e) to participate if in need for national security, peace for the citizens and law and order	
Section-8 Fire Safety Procedures	
Rule17	The relevant Government Department or organization shall, for the purpose of precaution and prevention obtain the approval of the Fire force Department before granting permission for the following cases: a. Constructing three-storied and above buildings market and condominium buildings , b. Operating hotel , motel, guest house enterprise c. Constructing factory, workshop ,storage facilities and warehouse d. Operating business expose to fire hazard by using in inflammable materials or explosive materials e. Producing and selling fire-extinguishing apparatuses f. Doing transport business ,public utility vehicles train, airplane, helicopter ,vessel, ship, tonkin tug
Rule18	The relevant government department or organization shall obtain the opinion of the Fire Services Department for the purpose of fire precaution and prevention, when laying down plans for construction for town, village and downtown or village development plans
Boiler Law (2015)	
Chapter (2) Objective	The objectives of this law are as follows: (a) To obtain boilers in compliance with Myanmar Standards or International Standards (b) To prevent the country and citizens from hazards caused by boiler accidents (c) To use boilers in compliance with Myanmar Standards or International Standards within the country (d) To develop boiler technology and to produce experts capable of manufacturing, handling, repair, and maintenance of boilers (e) To optimize the use of boilers through effective utilization of fuel energy (f) To reduce the environmental, social and health impacts through long-lasting use of boilers.
Chapter (3) 4. With the permission of the Ministry, the inspector general can:	Notify the inspection methods and instructions according to the national or international standards for safe operations of boilers in line with this law, procedures and instructions Only the results obtained from the prescribed boiler standards and inspection methods will be approved.
Chapter (4). Boiler Registration	5. Anybody who would like to use a boiler in any kind of business should be registered. 6. Boiler should be manufactured according to Myanmar Standards or International Standards. 7. Those who would like to apply for boiler registration according to Section 5 should apply to the inspector with the application, documents and vouchers related to boiler 8. If the application regarding registration of boiler according to Section 7, the Registration Officer should conduct necessary inspection and submit results of the findings to the Inspector General. 9. The Inspector General should assess and inspect the submission of the Registration Officer according to Section 8 and could allow or reject for registration of

	the boiler. 10. The Inspector General shall define boiler size according to heated surface area in accordance with adopted procedures.
Chapter (13) Prohibitions	59. According to Section 21, nobody must alter, change, deface, deform or make embossed registration unnoticeable illegitimately. 60. Nobody is allowed to repair a boiler without boiler repair certificate. 61. Nobody is allowed to maintain a boiler without boiler maintenance certificate. 62. Nobody must alter safety relief valve in order to exceed the allowable pressure due to his consent or direction given by the owner. 63. Nobody must manufacture boilers against Section 25, Subsection 25 (a) and (b) enacted.
The Electricity Law (2014)	
In 2014, the new Electricity Law, a comprehensive piece of legislation covering licensing, a new regulatory commission, standards, inspection, tariff, and restrictions, replaced the Electricity Law of 1984. The Electricity Law divides projects into “small” (up to 10 MW), “medium” (between 10 MW to 30 MW) and large (upwards of 30 MW); the states and regions can issue permits for small and medium power plants. In case these plants are not connected to the national grid, the Union Government Ministry is not the primary authority involved. The authorities have a legal right to use land for the purpose of power plants under the Electricity Law, and have the right to expand and maintain their facilities. The law also provides that the authorities can build transmission lines in accordance with existing laws.	
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
The Pyidaungsu Hluttaw hereby enacts this Law for safeguarding the right of workers or having good relationship between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly.	
The Social Security Law (2012)	
The Social Security Law, enacted in 2012, was amended the Social Security Act in 1954. It stipulates the formation and implementation of social security systems.	
Section 53(a)	The employers and workers shall co-ordinate with the Social Security Board or insurance agency in respect of keeping plans for safety and health in order to prevent employment injury, contracting disease and decease owing to occupation and in addition to safety and educational work of the workers and accident at the establishment;
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
This law was enacted for safeguarding the right of workers or having good relationship between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. It stipulates that employer in which more than 30 workers are employed shall form the workplace coordinating committee consisting of the representatives of workers and the representatives of employer.	
Section 23	A party, employer or worker, may complain individual dispute relating to his grievance to the Conciliation Body and if he is not satisfied with the conciliation of such body in accord with stipulated manners, may apply to the competent court in person or by the legal representative.
Section 24	The relevant Conciliation Body shall, in respect of the collective dispute known or received by the complaint of either party, employer or worker, in respect of the dispute; information sent by the Minister or the Region or State Government or any other means, carry out as follows: (a) conciliating so as to be settled within three days, not including the official holidays, from the day of knowing or receipt of such dispute; (b) concluding mutual agreement if the settlement is reached in conciliating under sub-section (a), before the Conciliation Body.
Section 25	The Conciliation Body shall refer the collective dispute which does not

	reach settlement to the relevant Arbitration Body and inform the persons relating to the dispute.
Section 38	No employer shall fail to negotiate and coordinate in respect of the complaint within the prescribed period without sufficient cause.
Section 39	No employer shall alter the conditions of service relating to workers concerned in such dispute at the consecutive period before commencing the dispute within the period under investigation of the dispute before the Arbitration Body or Tribunal, to affect the interest of such workers immediately.
Section 40	The project proponent has to not close the work without negotiation, discussion on dispute in accord with this law, decision by Tribunal
Section 51	The project proponent has to pay the compensation decided by Tribunal f violates any act or any emission to omission to damage the interest of labour by reducing of product without efficient cause.
Section 46	Any employer who violates any prohibition contained in sections 38 and 39 shall, on conviction, be punished with a fine for a minimum of one-lakh kyats.
The employment and skill development (2013)	
This law was enacted for safeguarding the right of workers or having skillful of workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. Employer shall conduct occupational training to enhance the skills of workers.	
Section 5	The project proponent has to appoint employees with the contract in line with the provision of section 5 of said law.
Section 14	Employer shall conduct occupational training to enhance the skills of workers who are to be employed as well as workers who are presently employed in accordance with the requirements of the enterprise and the policy of the Skills Development Agency.
The Worker's Compensation Act, 1923	It stipulates that employer is required to make payments to employees who become injured or who die in any accidents arising during and in consequence of their employment. Such compensation also must be made for diseases which arise as a direct consequence of employment, such as carpal tunnel syndrome.
The Payment of Wages Act, 1936	The Payment of Wage Act defines the payment obligation to the workers employed in the factories or railway administration. It stipulates the method of payment stating that the payment should be made in cash on a regular payday, and allows legal action against delayed payment or un-agreeable deduction.
The Leave and Holidays Act (1951, partially revised in 2014)	This act has been used as the basic framework for leaves and holidays for workers with minor amendment in 2006 and 2014. This defines the public holidays that every employee shall be granted with full payment. It also defines the rules of leaves for workers including medical leave, earned leave and maternity leave.
The Minimum Wage Law (2013)	The minimum wage law, passed in March 2013, was replaced the 1949 Minimum Wage Act. The law provides a framework for minimum wage determination: the presidential office establishing a tripartite minimum wage committee shall decide minimum wage with industrial variation based on a survey on living costs of workers possibly every two years. This also stipulates equal payment.
Public Health Law (1972)	**Chapter 2; Prevention of Public Health**
Objectives	To ensure the public health include not only employees but also resident people and cooperation with the authorized person or organization of health

	department. This law focuses as follows The project owner has to cooperate with the authorized person or organization in line with the section 3 and 5 of said law. The project proponent has to abide by any instruction or stipulation for public health under the section 3 of said law. The project proponent has to allow any inspection, anytime, anywhere if it is needed under the section 5 of said law.
Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)	
Chapter 2 Prevention	4. When a Principal Epidemic Disease of a Notifiable Disease occurs; Immunization and other necessary measures shall be undertaken by the Department of Health, in order to control the spread thereof; The public shall abide by measures undertaken by the Department of Health under sub-section (a).
Chapter 4 Environmental Sanitation	For prevention of the outbreak of Communicable Disease and effective control of Communicable Disease when it occurs, the public shall under the supervision and guidance of the Health Officer of the relevant area, undertake the responsibility of carrying out the following environmental sanitation measures;- Indoor, outdoor sanitation or inside the fence outside the fence sanitation; Well, ponds and drainage sanitation; Proper disposal o refuse and destruction thereof by fire; Construction and use of sanitary latrines; Other necessary environmental sanitation measures.
Occupational Safety and Health Law (2019)	
Purpose:	To effectively implement measures related to safety and health in every industry and to set occupational safety and health standards;
Section-26 Sub-section (e)	The project proponent has to provide adequate and relevant personal protective equipment to workers free of charge and make them wear it during work so as not to expose workers to any serious occupational diseases or hazards.
Section-26 Sub-section (1)	The project proponent has to arrange and display occupational safety and health instructions, warning signs, notices, posters, and signboards.
Section-30 Sub-section (a)	The worker shall wear or use at all times any protective clothes, equipment and tools provided by the employer for the purpose of safety and health.
Section-30 Sub-section (d)	The worker shall proper and systematic use any equipment and tools, machines, any parts of the machines, vehicles, electricity and other substances being used at the workplace.
Section-30 Sub-section (e)	The worker shall take reasonable care for the safety and health of himself/ herself and of other persons who may be affected by his/ her acts or omissions at work.
The law on Standardization	
Objectives	The Objectives of this Law are as follows: to enable to determine Myanmar Standard to enable to support export promotion by enhancing quality of production organizations and their product, production processes and services to enable to protect the consumers and user by guaranteeing imports and products are not lower than prescribed standard, and safe from health hazards to enable to support protection of environment related to products,

	production process and services from impact, and conservation of natural resources to enable to protect manufacturing, distributing and importing the disqualified goods which do not meet the prescribed standard and those which are not safe and endangered to the environment to support on establishing the ASEAN Free Trade Area and to enable to reduce technical barriers to trade to facilitate technological transfer and innovation by using the standards for the development of national economic and social activities in accordance with the national development programme.
Chapter 7 Taking Action by Committee No. 19	The committee may, if it is found out that holder of certificate of certification violates any term or condition contained in the relevant recommendation, pass any of the following administrative order: warning suspending the certificate of certification for limited period cancelling the certificate of certificaion
လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတတ်သော ဂတ္ထုပစ္စည်းများဆိုင်ရာဥပဒေ (၂၀၁၈)	
ရည်ရွယ်ချက်	လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတတ်သော ဂတ္ထုပစ္စည်းများကို စနစ်တကျပြုလုပ်ခြင်း၊ တင်သွင်းခြင်း၊ သယ်ယူခြင်း၊ သိုလှောင်ခြင်းနှင်း သုံးစွဲခြင်းတို့ပြုနိုင်ရန်၊ ယမ်းဘီလူးနှင့် ဆက်စပ်သုံးပစ္စည်းများ အသုံးပြုသည့် လုပ်ငန်းခွင်ဘေးအန္တရာယ် ကင်းရှင်း၍ လုံခြုံမှုရှိစေရန်၊ လုပ်ငန်းခွင်သုံး ပေါက်ကွဲစေတတ်သော ဂတ္ထုပစ္စည်းများ ပြုလုပ်သုံးစွဲမှုများကို စနစ်တကျ ကြီးကြပ်နိုင်ရန်။
အခန်း ၇ တားမြစ်ချက်များ အမှတ် ၁၈	လိုင်စင်ရရှိသူနှင့် ခွင့်ပြုချက်ရရှိသူ မည်သူမျှ စစ်ဆေးရေးအရာရှိချုပ် သို့မဟုတ် စစ်ဆေးရေးအရာရှိ၏ စစ်ဆေးခြင်းကို ခံယူရန် ငြင်းပယ်ခြင်းမပြုရ။
အမှတ် ၁၉ (ခ)	ပုဒ်မ ၈ အရ ကာကွယ်ရေးဌာနကောင်စီ အမှုဆောင်အဖွဲ့၏ အတည်ပြုချက်မရရှိဘဲ လုပ်ငန်းခွင် ပေါက်ကွဲစေတတ်သော ဂတ္ထုပစ္စည်းများကို ဖျက်ဆီးခြင်းမပြုရ။
အမှတ် ၁၉ (ဂ)	ဤဥပဒေအရ ထုတ်ပြန်သည့် နည်းဥပဒေ၊ စည်းမျဉ်း၊ စည်းကမ်း၊ အမိန့်ကြော်ငြာစာ၊ အမိန့်နှင့် ညွှန်ကြားချက်များနှင့်အညီ ဆောင်ရွက်ရန် ပျက်ကွက်ခြင်း မရှိစေရ။
The Motor Vehicles Law (2015)	
Objectives	When the constructions periods and if it is needed in operation and production period for all vehicles • The project proponent has to promise to abide by the nearly all provisions of said law and rules, especially the provisions related to air pollution, noise pollution and life safety.
The Conservation of Water Resources and Rivers Law (2006)	
Aims	The aims of this Law are as follows: (a) to conserve and protect the water resources and rivers system for beneficial utilization by the public; (b) to smooth and safety waterways navigation along rivers and creeks; (c) to contribute to the development of State economy through improving water resources and river system;

	(d) to protect environmental impact.
Chapter 5 Prohibitions No. 8	No person shall: (a) carry out any act or channel shifting with the aim to ruin the water resources and rivers and creeks. (b) cause the wastage of water resources wilfully.
No. 10	No person shall anchor the vessels where vessels are prohibited from anchoring in the rivers and creeks.
No.11 (a)	No person shall: dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk.
No. 12	No person shall carry out growing of garden, digging, filling, silt trapping, closing pond, dyke building or erecting spur in the river-creek boundary, bank boundary and waterfront boundary without the permission of the relevant government department and organization.
No. 15	No person shall carry out the construction of switchback, dockyard, wet dockyard, water-tight dockyard, building of jetty, pier, landing stage or vessel landing by drainage in the river-creek boundary, bank boundary and waterfront boundary without the permission of the Directorate.
The Commercial Tax Law (1990) Amended 2014	
Chapter 5 Registration and Intimation of Commencement of Enterprise 11 (b)	Any Person who commences operation of a goods production enterprise or service enterprise shall furnish letter of intimidation on the commencement of the operation as such to the relevant Township Revenue Officer as stipulated by regulations.
Chapter 6 Monthly Payment of Tax and Sending of Three-Monthly Return 12 (a)	Any person who has taxable proceed of sale or receipt from service within a year, shall pay due monthly tax within ten days after the end of the relevant month. Moreover, a three-monthly return shall be furnished to the relevant Township Revenue Officer within one month after the end of relevant three-month.
12 (b)	The Township Revenue Officer may intimate any person to pay due monthly tax and send three-monthly return if there is cause to consider that he has taxable proceed of sale or receipt from service within a year.
12 (c)	If it is failed to pay tax under sub-section (a) or (b), or if there is cause to consider that the tax paid is less than the tax payable, the Township Revenue Officer may, based on the information received, estimate and claim the tax payable or the additional tax payable.
12 (d)	The tax paid under sub-section (a), (b) or (c) shall be set-off from the tax due in the assessment.

2.2. NATIONAL ENVIRONMENTAL QUALITY (EMISSION) GUILDLINES

As specified in the EIA Procedure, all projects are obliged to use, comply with and refer to applicable national guidelines or standards or international standards adopted by the Ministry. As specified in the EIA Procedure, following project approval a project shall commence implementation strictly in accordance with the project EMP and any additional requirements set out in the project ECC, which will encompass conditions relating to emissions. While these Guidelines generally apply to all

projects subject to the EIA Procedure, it is the prerogative of the Ministry to decide how the Guidelines should be applied to existing projects as referred to in the EIA Procedure.

According to the Environmental Conservation Law, MOECAF shall set standards of environmental qualities as agreed by the Union Government and the Environmental Conservation Committee to provide the basis for regulation and control of noise and vibration, air emissions and liquid discharges from various sources in order to prevent pollution for purposes of protection of human and ecosystem health.

2.2.1. General Guidelines

General guidelines of related environmental impact guideline for proposed project are -

2.2.1.1. Air emission

Projects with significant sources of air emissions, and potential for significant impacts to ambient air quality, should prevent or minimize impacts by ensuring that: (i) emissions do not result in concentrations that reach or exceed national ambient quality guidelines and standards, or in their absence current World Health Organization (WHO) Air Quality Guidelines1 for the most common pollutants as summarized below; and (ii) emissions do not contribute a significant portion to the attainment of relevant ambient air quality guidelines or standards (i.e. not exceeding 25 percent of the applicable air quality standards) to allow additional, future sustainable development in the same air shed. Industry-specific guidelines summarized hereinafter shall be applied by all projects to ensure that air emissions conform to good industry practice. Reference should be made to WHO's Air Quality Guidelines for Europe2 for air pollutants not included in the following Table 2-2.

Table 2-2 WHO's Air Quality Guideline

Parameter	Averaging Period	Guideline Value
Nitrogen Dioxide	1-year 1-hour	40 200
Ozone	8-hour	100
Particulate Matter PM10[a]	1-year 24-hour	10 50
Particulate Matter PM2.5[b]	1-year 24-hour	10 25
Sulfur dioxide	24-hour 10-minute	20 500

[a] Particulate matter 10 micrometers or less in diameter

[b] Particulate matter 2.5 micrometers or less in diameter

2.2.1.2. Wastewater

Industry-specific guidelines apply during the operations phase of projects and cover direct or indirect discharge of wastewater to the environment. They are also applicable to industrial discharges to sanitary (domestic) sewers that discharge to the environment without any treatment. Wastewater generated from project operations includes process wastewater, wastewater from utility operations, runoff from process and storage areas, and miscellaneous activities including wastewater from laboratories, and equipment maintenance shops. Projects with the potential to generate process

wastewater, sanitary sewage, or storm water should incorporate the necessary precautions to avoid, minimize, and control adverse impacts to human health, safety or the environment. Industry-specific guidelines summarized hereinafter shall be applied by all projects, where applicable, to ensure that effluent emissions conform to good industry practice.

For project types where industry-specific guidelines are not set out in these Guidelines, the following general guideline values, or as stipulated on a case-by-case basis, apply during project operations.

Table 2-3 Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges (general application)[1]

Parameter	Unit	Guideline Values
5-day Biochemical oxygen demand	mg/l	50
Ammonia	mg/l	10
Arsenic	mg/l	0.1
Cadmium	mg/l	0.1
Chemical oxygen demand	mg/l	250
Chlorine (total residual)	mg/l	0.2
Chromium (hexavalent)	mg/l	0.1
Chromium (total)	mg/l	0.5
Copper	mg/l	0.5
Cyanide (free)	mg/l	0.1
Cyanide (total)	mg/l	1
Fluoride	mg/l	20
Heavy metals (total)	mg/l	10
Iron	mg/l	3.5
Lead	mg/l	0.1
Mercury	mg/l	0.01
Nickel	mg/l	0.5
Oil and grease	mg/l	10
pH	S.U.[a]	6-9
Phenols	mg/l	0.5
Selenium	mg/l	0.1
Silver	mg/l	0.5
Sulphide	mg/l	1
Temperature increase	°C	<3[b]

Pollution prevention and abatement handbook. 1998. Toward cleaner production. World Bank Group in collaboration with United Nations Environment Programme and the United Nations Industrial Development Organization.

Total coliform bacteria	100 ml	400
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

b At the edge of a scientifically established mixing zone which takes into account ambient water quality, receiving water use, potential receptors and assimilative capacity; when the zone is not defined, use 100 meters from the point of discharge

2.2.1.3. Noise levels

Noise prevention and mitigation measures should be taken by all projects where predicted or measured noise impacts from a project facility or operation exceed the applicable noise level guideline at the most sensitive point of reception. Noise impacts should not exceed the levels shown below, or result in a maximum increase in background levels of three decibels at the nearest receptor location off-site.

Table 2-4 Noise Levels of National Environmental Quality (Emission) Guideline

Receptor	**One Hour LAeq (dBA)[a]**	
	Daytime **07:00 – 22:00** **(10:00 – 22:00 for Public holidays)**	**Nighttime** **22:00 – 07:00** **(22:00 – 10:00 for Public holidays)**
Residential, institutional, education	55	45
Industrial, commercial	70	70

[a] Equivalent continuous sound level in decibels

2.2.2. Garment, Textile and Leather Products Manufacturing

This guideline applies to textile manufacturing using natural fibers, synthetic fibers (made entirely from chemicals), and regenerated fibers (made from natural materials by processing these materials to form a fiber structure). It does not include polymer synthesis and natural raw material production.

2.2.2.1. Effluent levels

Parameter	**Unit**	**Guideline Value**
5-day Biochemical oxygen demand	mg/l	30
Absorbable organic halogens	mg/l	1
Ammonia	mg/l	10
Cadmium	mg/l	0.02
Chemical oxygen demand	mg/l	160
Chromium (hexavalent)	mg/l	0.1
Chromium (total)	mg/l	0.5
Cobalt		0.5

Color		7 (436 nm[a], yellow) 5 (525 nm, red) 3 (620 nm, blue)
Copper	mg/l	0.5
Nickel	mg/l	0.5
Oil and grease	mg/l	10
Pesticides		0.05-010[b]
pH	S.U. [c]	6-9
Phenol	mg/l	0.5
Sulfide	mg/l	1
Temperature increase	°C	<3 [d]
Total coliform bacteria	100 ml	400
Total nitrogen	mg/l	10
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

a Nanometers
b 0-05 mg/l for total pesticides (organ phosphorus pesticides excluded); 0.10 mg/l for organo phosphorus pesticides
c Standard Unit
b at the edge of a scientifically established mixing zone which takes into account ambient water quality, receiving water use, potential receptors and assimilative capacity; when the zone is not defined, use 100 meters from the point of discharge

2.2.2.2. Air emission levels

Parameter	**Unit**	**Guideline Value**
Ammonia	mg/Nm^{3a}	30
Carbon disulfide	mg/Nm^3	150
Chlorine	mg/Nm^3	5
Formaldehyde	mg/Nm^3	20
Hydrogen sulfide	mg/Nm^3	5
Particulates	mg/Nm^3	50[b]
Volatile organic compounds	mg/Nm^3	2/20/50/75/100/1 150 [c, d]

a Milligrams per normal cubic meter at specified temperature and pressure
b as the 30-minute mean for stack emissions
c Calculate as Total carbon
d As the 30-minute mean for stack emissions; 2 mg/Nm^3 for volatile organic compounds classified as carcinogenic or mutagenic with mass flow greater than or equal to 10 g/hr; 20 mg/Nm^3 for discharges of halogenated volatile organic compounds with a mass flow equal or greater than 100 g/hr; 50 mg/ Nm^3 for waste gases from drying of large installations (solvent consumption > 15 tons/year); 75 mg/Nm^3 for coating application processes for large installations (solvent consumption > 15 tons/year); 100 mg/Nm^3 for small installations (solvent consumption < 15 tons/year); if solvent is recovered from emissions and reused, the guideline value is 150 mg/Nm^3

2.2.3. **IFC EHS Guidelines**

The EHS Guidelines[1] by International Finance Cooperation (IFC) are technical reference documents with general and industry–specific examples of Good International Industry practice (GIIP),

as defined in IFC's Performance Standard 3: Resources Efficiency and Pollution Prevention. The EHS Guidelines contain the performance levels and measures that are normally acceptable to IFC, and that are generally considered to be achievable in new facilities at reasonable costs by existing technology.

There are two kinds of guidelines, General EHS Guidelines and Industry Sector Guidelines. The General EHS Guidelines contain information on cross-cutting environmental, health, and safety issues potentially applicable to all industry sectors in the following section: (1) Environment, (2) Occupational Health and Safety, (3) Community Health and Safety and (4) Construction and Decommissioning. Table 2-5 shows the contents of the section of Community Health and Safety.

Table 2-5 Community health and safety contents

Contents	Brief Description
Water Quality and Availability	Drinking water sources should at all times be protected so that they meet or exceed applicable national acceptability standards or in their absence the current edition of WHO Guidelines for Drinking-Water Quality. Project activities should not compromise the availability of water for personal hygiene needs and should take account of potential future increases in demand. The overall target should be the availability of 100 liters per person per day.
Structural Safety of Project Infrastructure	Reduction of potential hazards is best accomplished during the design phase when the structural design, layout and site modifications can be adapted more easily. The following issues should be considered and incorporated as appropriate into the planning, siting, and design phases of a project (1) inclusion of buffer strips or other methods of physical separation around project sites to protect the public from major hazards associated with hazardous materials incidents or process failure (2) incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire, and (3) application of locally regulated or internationally recognized building codes, standards and regulations, and mitigation measures.
Traffic Safety	Traffic safety should be promoted by all project personnel during displacement to and from the workplace, and during operation of project equipment on private or public roads. Prevention and control of traffic related injuries and fatalities should include the adoption of safety measures that are protective of project workers and of road users, including those who are most vulnerable to road traffic accidents.
Transport of Hazardous Materials	Projects should have procedures in place that ensure compliance with local laws and international requirements applicable to the transport of hazardous materials.
Disease Prevention	Recommended interventions against the communicable diseases at the project level include (1) providing surveillance and active screening and treatment of workers, (2) preventing illness among workers in local communities by undertaking health awareness and education initiatives, training health workers in disease treatment and conducting immunization programs for workers, and (3) providing treatment through standard case management in on-site or community health care facilities.
Emergency preparedness and Response	All projects should have an Emergency preparedness and Response Plan that is commensurate with the risks of the facility and that includes the following basic elements: (1) Administration (policy, purpose, distribution, definitions, etc.) (2) Organization of emergency areas (command centers, medical stations, etc. (3) Roles and responsibilities, (4) Communication systems, (5) Emergency response procedures, (6) Emergency resources, (7) Training and updating, (8) Checklists (role and action list and equipment checklist), and (9) Business Continuity and Contingency.

2.3. INSTITUTIONAL ARRANGEMENT

The Ministry of Environmental Conservation and Forestry (MOECAF) was reformed as the Ministry of Natural Resources and Environmental Conservation (MONREC) on 30th March, 2016 in

order to undertake both environmental and natural resources conservation and management more effectively. Under Section 3 of the Environmental Impact Assessment Procedure (2015), pursuant to section 21 of the law and Articles 52, 53 and 55 of the Environmental Conservation Rules, all projects and project expansions undertaken by any organization, which may cause impact on environmental quality that, are required to obtain prior permission. This is to be in accordance with section 21 of the Environmental Conservation Law, and Article 62 of the Environmental Conservation Rules, having the potential to cause adverse impacts, that are required to undertake IEE or EIA or to develop an EMP, and to obtain an Environmental Compliance Certificate (ECC) in accordance with this EIA procedure.

2.4. COMMITMENT OF BO DA (MYANMAR) FASHION COMPANY LIMITED

Bo Da (Myanmar) Fashion Company Limited has made the commitments and responsible for the preservation of the environment at and around the area of project site. In addition to this, it shall carry out as per instructions made by Ministry of MONREC in which to conduct an EMP which describe the measure to be taken for preventing, mitigation and monitoring significant environment impacts resulting from the implementation and operation of proposed project or business or activity has to be prepared and submitted and to perform activities in accordance with this EMP and be abided by the environment policy, Environmental Conservation Law and other environmental related rules and procedures.

a) The accuracy and completeness of the EMP,

b) That the EMP has been prepared in strict compliance with applicable laws including this Procedure

c) That the Project will at all times comply fully with the commitments, mitigation measures, and plans in the EMP Report.

Bo Da (Myanmar) Fashion Co., Ltd. shall be responsible for the environmental assessment of factory development as follows:

- Monitoring the factory area operations according to EMP and Environmental Monitoring Plan (EMoP)
- Submitting environmental monitoring reports to ECD frequency less then every 6 month.
- Planning and implementation of CSR activities
- To set up welfare plan such as staff medical checkup, training program and bublic talk for getting knowledge, risk prevention, bonus and social security service
- To carry out fire safety assessment and ensure adequate and appropriate fire safety measures for employees.

3. PROJECT DISCRIPTION

3.1. LOCATION OF PROPOSED PROJECT

The proposed project is located at Latitude 16°54'37.4"N and Longitude 96°03'59.7"E, Plot No. 239, Myay Taing Block No. 25, Shwe Lin Pan Settmu Myo, Hlaing Thar Yar Township. The location map of the proposed project and adjacent condition map are shown in Figure 3-1 and Figure 3-2

3.2. OBJECTIVES OF PROPOSED PROJECT

The proposed project intends to manufacture garment on CMP basic and to export 100% of the finished products. Dong Lin Fashion Group Limited will supply raw materials for garment in People Republic of China. Dong Lin Fashion Group Limited agrees to supply to ready make products and pay CMP charges to Bo Da (Myanmar) Fashion Company Limited.

3.2.1. Site Description of Proposed project site

The total land area is 1.610 acres and main factory buildings, warehouse, kitchen, canteen, maintenance house, etc. which were built on its land area. Also factory layout drawing is able to seen in Figure 3-3 and Figure 3-4.

Figure 3-1Location Map

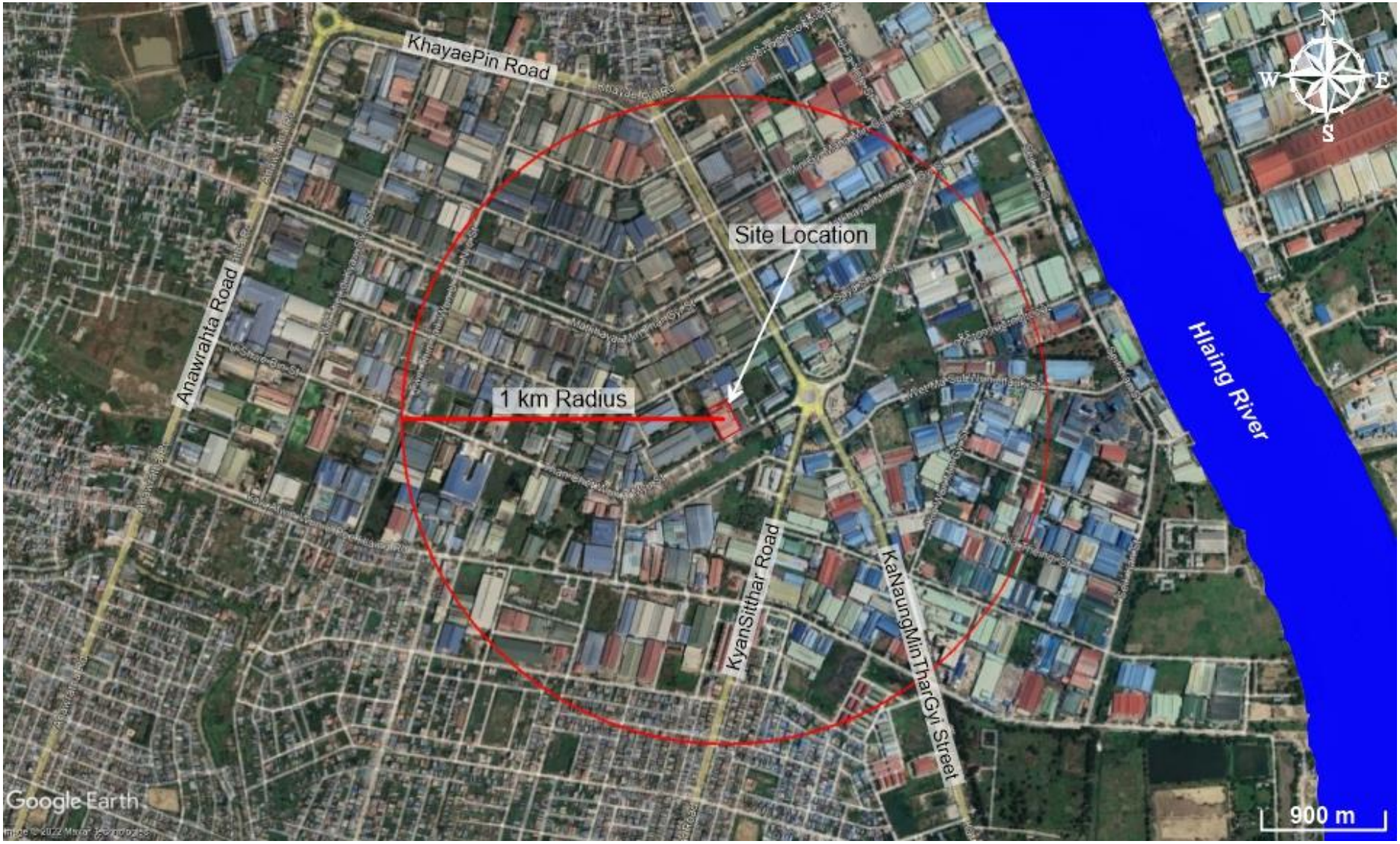


Figure 3-2 Adjacent condition map of Bo Da (Myanmar) Fashion Co.,Ltd.

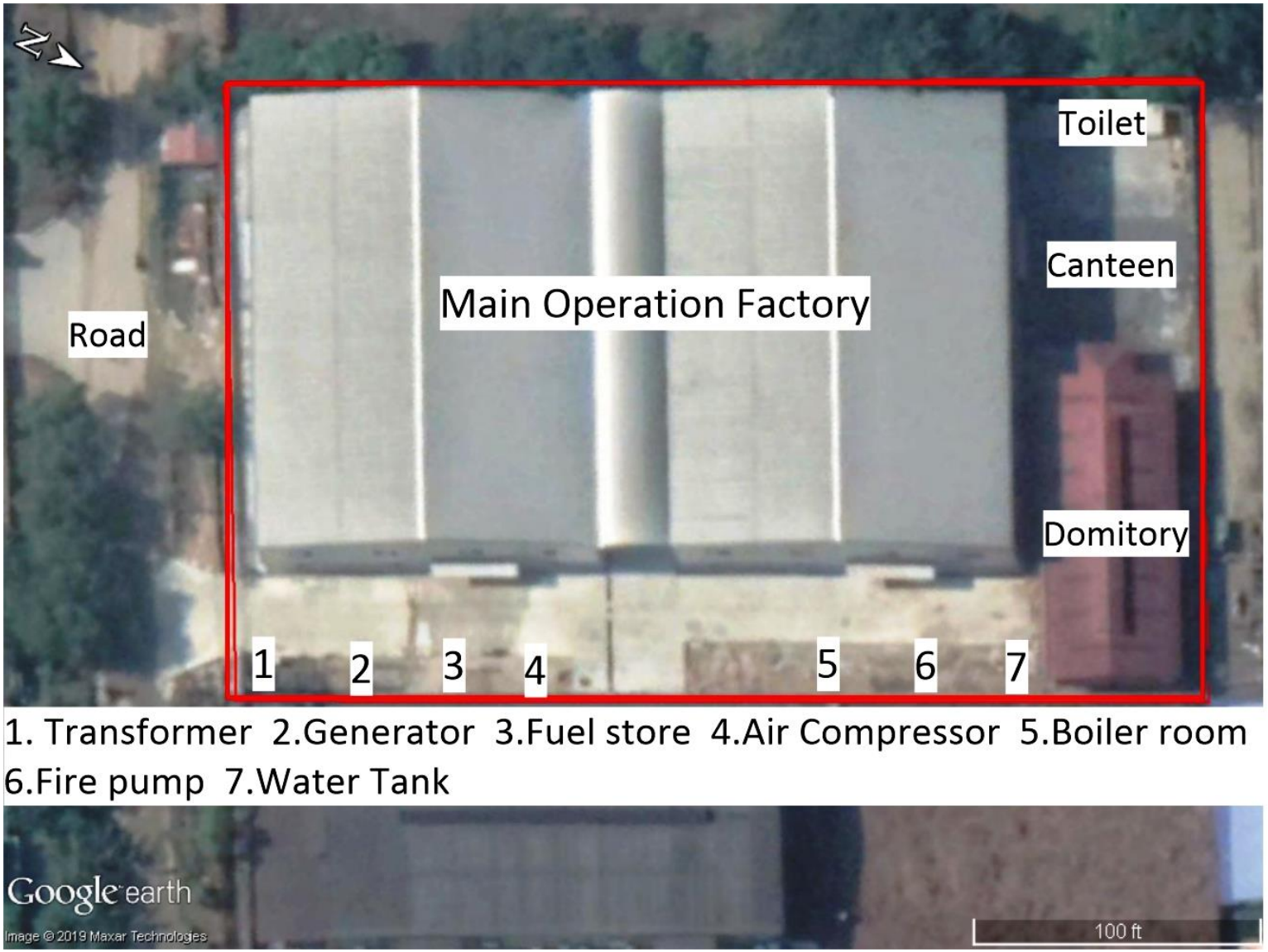
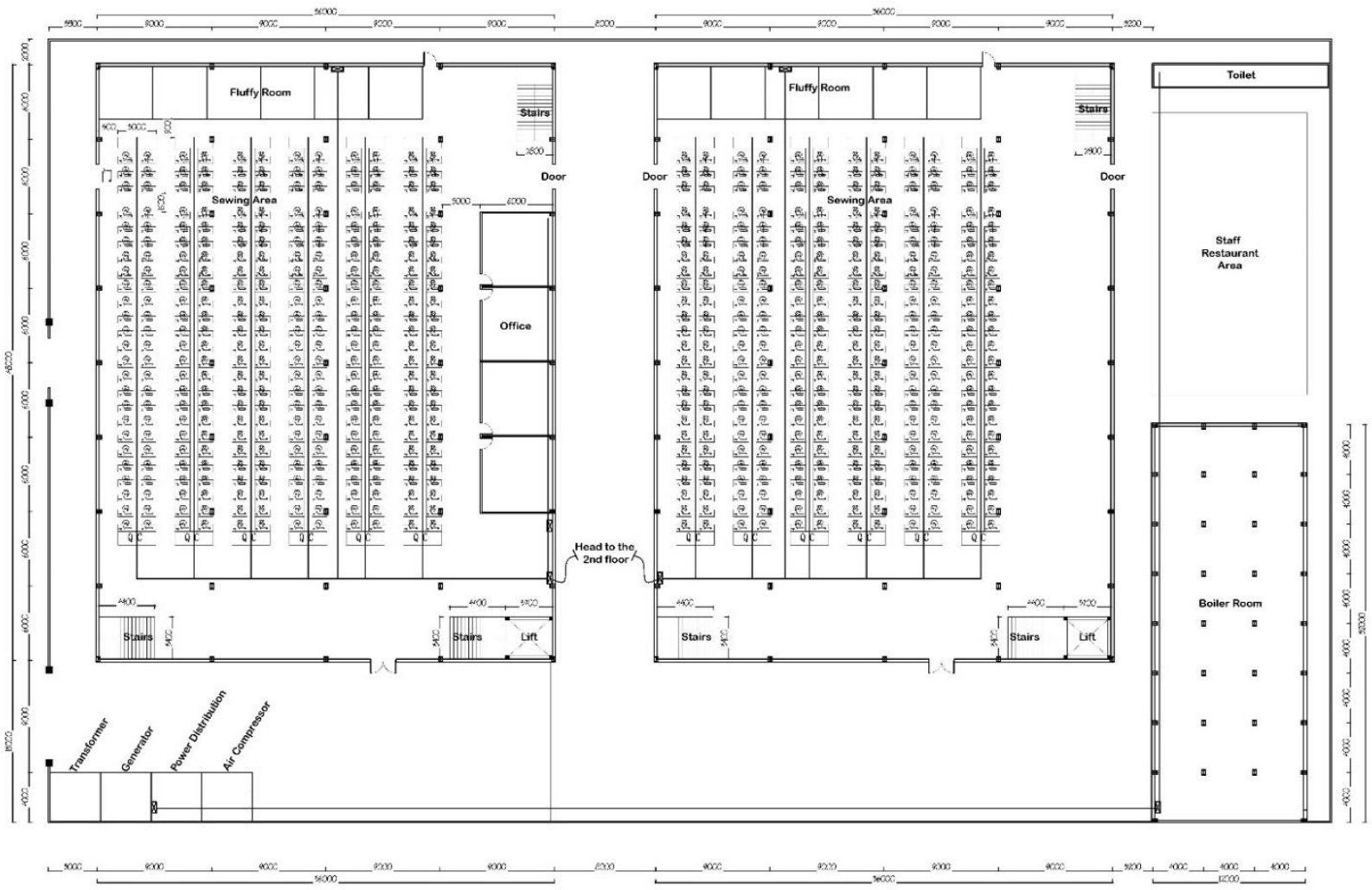


Figure 3-3 Factory Layout Map


Fluffy Room
Stairs
Door
Sewing Area
Office
Fluffy Room
Stairs
Door
Sewing Area
Door
Toilet
Staff Restaurant Area
Head to the 2nd floor
Stairs
Stairs
Lift
Stairs
Stairs
Lift
Boiler Room
Transformer
Generator
Power Distribution
Air Compressor

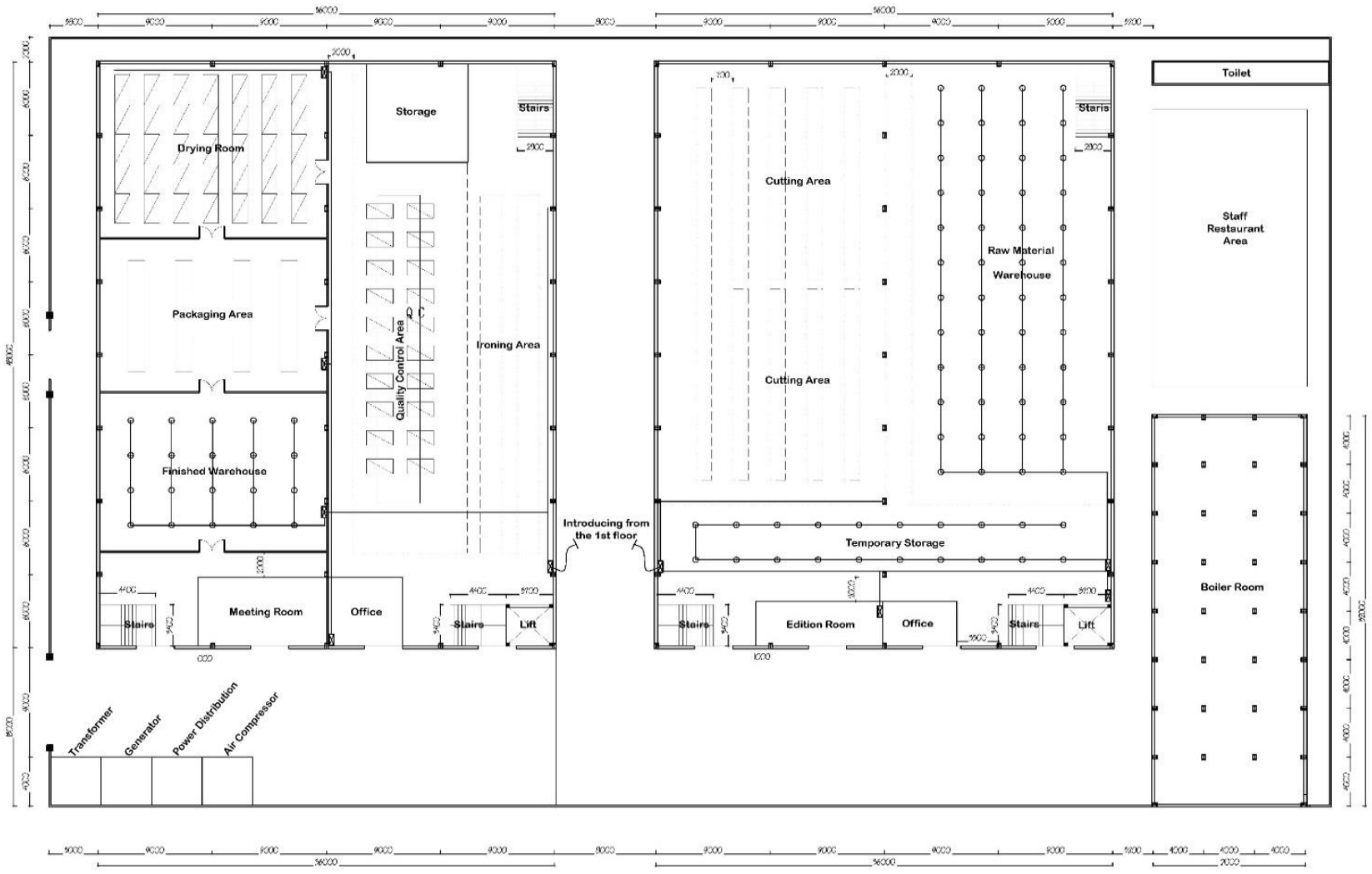


Figure 3-4 Factory Layout Drawing

3.2.2. Production Process

The production process is based on CMP system in which the production on consignment in which the main raw materials (fabrics, ancillary materials, etc.) are provided by overseas buyers and imported free of charge, then cut, sewn and packed in the domestic factories, after which all of the finished products are exported. The main operation of the proposed factory is sewing. The sewing was operated one and two needle sewing machine and checked by quality control supervisor on each sewing line. The ironing process is completed after QC process. Then garment packing is completed and prior to shipping to destinations. The process flow diagram for garment manufacturing is illustrated in Figure 3-5.

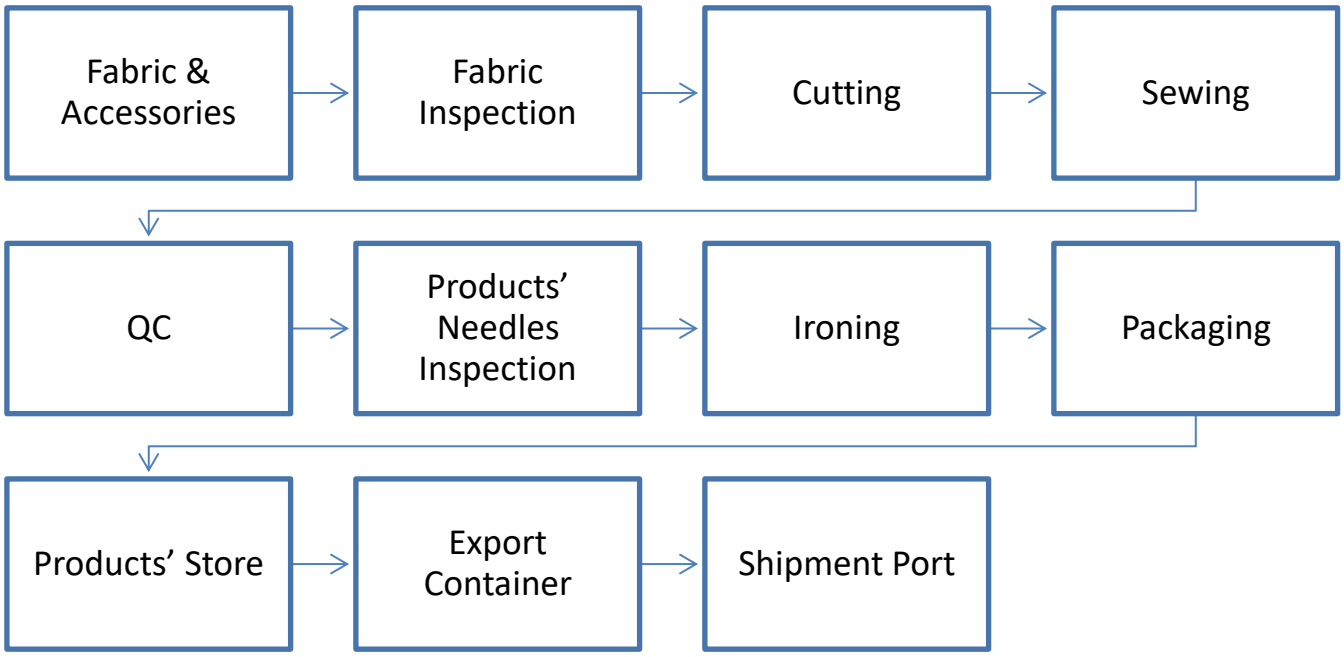


Figure 3-5 Production flow diagram of Bo Da (Myanmar) Fashion

Warehouse

Cutting Area

Sewing Area

Finishing Area

Packing Area

Figure 3-6 Production Photos of Bo Da (Myanmar) Fashion

3.2.3. **Products**

The product will be exported to China, Japan, Korea. During operation, the proposed factory is expected to produce garment products Estimated production rate from one year to ten year are expressed in Table 3-1.

Table 3-1 Annual Production Rate

No	Particulars	Unit	Yr - 1	Yr - 2	Yr - 3	Yr 4	Yr 5	Yr 6-10
I	**Total Production (Pcs)**	**Pcs**	**1,001,250**	**1,001,250**	**1,001,250**	**1,051,313**	**1,051,313**	**1,051,313**
1	Coat Without Padding	Pcs	180,000	180,000	180,000	189,000	189,000	189,000
2	Coat With Padding	Pcs	108,750	108,750	108,750	114,188	114,188	114,188
3	Men's Jacket Without Padding	Pcs	180,000	180,000	180,000	189,000	189,000	189,000

No	Particulars	Unit	Yr - 1	Yr - 2	Yr - 3	Yr 4	Yr 5	Yr 6-10
4	Men's Jacket With Padding	Pcs	135,000	135,000	135,000	141,750	141,750	141,750
5	Men's Pant	Pcs	187,500	187,500	187,500	196,875	196,875	196,875
6	Lady's Vest	Pcs	210,000	210,000	210,000	220,500	220,500	220,500

3.3. UTILITIES

3.3.1. Raw Material

The main raw materials: fabrics, down bags, padding, cord and other related materials are imported form China. . Annual raw materials for production are described in Table 3-2.

Table 3-2 List of Raw Materials Requirement

No	Particular	Unit	**Coat Without** Padding	**Coat With** Padding	**Men's Jacket Without** Padding	**Men's Jacket With** Padding	Men 's Pant & Lady's Vest	Annual Requirement
1	Fabrics	M	2	2	2.3	2.3	2.6	1,814,250
2	Down Bag	M	1.3	1.3	1.5	1.5	0.5	946,125
3	Interlining/ Interlining Tape	M	2.6	2.6			0.0	750,750
4	Down	Kg	1.8	1.8	1.6	1.6	0.8	1,191,750
5	Padding	M		0.35		0.4	0.0	92,063
6	Cord	M	2.9	2.9			0.0	837,375
7	Elastic Band/ String	M	3	3	3	3	1.0	1,998,750
8	Thread(500 meter)	Coil	1.2	1.2	1.2	1.2	2.1	1,143,000
9	Tape	M	5	5	5	5	8.0	4,631,250
10	Label	Pcs	0.5	0.5	0.5	0.5	0.5	406,875
11	Stoper (resin/metal etc)	Pcs	3	3	3	3	4.0	2,628,750
12	Button (resin/metal etc)	Pcs	6	6	6	6	8.0	5,257,500
13	Badge (resin/metal etc)	Pcs	8	8	8	8	10.0	6,885,000
14	Buckle (resin/metal etc)	Pcs	2	2	2	2		1,627,500
15	Eyelet(metal)	Pcs	2	2	2	2	2	1,815,000
16	Ring/Clip (Metal)	Pcs	4	4	4	4	3	4,05,00
17	Rivet(metal)	Pcs	4	4	4	4	8	3,630,000
18	Front/Back/Side zipper	Pcs	8	8	8	8	6	7,260,000
19	Pocket zipper	Pcs	1	1	1	1	12	1,001,250
20	Shoulder pad	Pcs		2		2	2	1,282,500
21	Embroidery patch	Pcs		1		1	4	641,250
22	Hanger	Pcs	1	1	1	1	2	1,001,250
23	Tag	Pcs	1	1	1	1	2	1,001,250
24	Spare button bag	Pcs	1	1	1	1	2	1,001,250
25	Plastic bag	Pcs	1	1	1	1	2	1,001,250
26	Carton	Pcs	1	1	1	1	2	1,001,250
27	Seal tape	Pcs	1	1	1	1	2	1,001,250

3.3.2. Machinery and Equipment

Automation systems for fully automatic and semiautomatic systems control of each process machine or complete processing line will be implemented. List of machinery and equipment required for the garment factory is following in Table 3-3. They are imported from China and 262 days running annually.

Table 3-3 List of Machinery

No.	Machinery Name	Asset	Quantity
1	Single Machine	Set	590
2	Cutter Machine	Set	25
3	Single Cutter Machine	Set	30
4	5th Overlock Machine	Set	45
5	4th Overlock Machine	Set	25
6	Double Needle Machine	Set	15
7	Double Needle Auto Machine	Set	15
8	Snap Machine	Set	30
9	Long Arm Machine	Set	5
10	Long Arm Machine	Set	15
11	Fabric Inspection Machine	Set	2
12	Fabric Loosing Machine	Set	2
13	Fusing Machine	Set	2
14	Fusing Machine	Set	2
15	Needle Detector Machine	Set	2
16	Iron Table	Pc	20
17	Iron Table	Pc	35
18	Iron(For Finishing)	Pc	20
19	Iron (For Sewing Line)	Pc	45
20	Cutting Table	Pc	150
21	Cutting Machine	Pc	8
22	Cloth Cutter Machine	Pc	6
23	Chair	Pc	1100
24	Trolley	Pc	26
25	Store Trolley	Pc	26
26	Bartacking Machine	Pc	6
27	Button Machine	Pc	3
28	Button Hole Machine	Pc	3
29	Pattern Machine	Pc	6
30	Pattern Cutter Machine	Pc	1

No.	Machinery Name	Asset	Quantity
31	Generator(500 KV)	Pc	1

3.3.3. Human Resource

The proposed Factory of Bo Da (Myanmar) Fashion Co., Ltd. has the employees more than 97 % are local people, who manage the company by their dynamic, enthusiastic, experienced, and cooperative skills. Currently, one shift (8 hours + overtime 2 hours) of production are running or operating. Their working days were 262 days per annually. Human resource required by foreign experts/technicians and local persons for administrative and production process are about 816 persons. Among these there are 17 of foreign persons which are also described in Table 3-4.

Table 3-4 Employment Schedule of Bo Da (Myanmar) Fashion Company Limited

No	Particular	Local	Foreign
1	Manager	1	
2	HR Manager	1	
3	Supervisor	25	
4	Fire Safety Officer	1	
5	Security	2	
6	Staff	100	
7	Operation Section Manager	20	
8	Operation Leader	50	
9	Operators	600	
10	Factory Manager		1
11	Supervisor		5
12	Sampling Technician		3
13	Quality Controller Technician		2
14	Pattern Cutting Technician		3
15	Production Technician		2
16	Section leader		1
Total		816	

3.3.4. Water Requirement

Shwe Than Lwin industrial zone has no centralized water supply system and the factory gets water from one tube well installed inside the factory compound. Groundwater from this tube well is pumped in the storage tanks for the factory and domestic use. Tube well water is pumped by 4 inches PVC pipe and treated by oxidation tower, chlorine dosing system, de-iron filter (FRP), carbon filter, and cartridge filter The groundwater stores in two storage tanks on one-underground tanks with capacity of 3000 gallons for firefighting and one tanks with capacity of 2000 gallons for domestic use The main water use in the proposed project is for domestic usage such as for personal washing, food preparation, and washing of utensils. The factory has one tube well depth in 160 ft. Drinking water will

be provided by outsource suppliers.is described by water storage tank and drinking water supply for Bo Da (Myanmar) Fashion factory.

Figure 3-7 Water storage tank and drinking water supply

3.3.5. Electricity and Fuel Requirement

The proposed project intended to get required electricity supply form Yangon City Electricity Supply Board (YESB) and distributed by 315 kVA of Transformer and another sources of energy 62.5 kVA and 550 kVA generators which also be kept as the emergency generator if normal electricity supply could not provide for the proposed project.

Figure 3-8 Electricity Facilities at Bo Da (Myanmar) Fashion Factory

3.3.6. Boiler Usage

The biomass steamed boiler (1 ton per hour of steam capacity) is used in ironing process for daily and used of fuel for steam boiler is wood pellets. Wood pellets were required for boiler operation at about 190 kg per hour, this pellets supply from local supplier. General information of boiler information is mentioned in Table 3-5

Table 3-5 Operation of boiler

Brand Name	OSHIMA Boiler
Product Model	LSS1-1.0-BMF
Fuel Consumption	190 kg/hr
Heat Efficiency	82.63%
Rated Evaporation	1 ton/hr
Rated Steam Pressure	1 MPa
Rated Steam Temperature	184℃

Figure 3-9 Boiler Photos

3.4. GENERATION OF WASTE, EMISSION AND DISTURBANCES

The project will be generated solid waste, liquid waste, and hazardous waste from the operation of the factory. Detail description of waste generation and waste amount are shown in Table 3-6.

Table 3-6 Waste generation and waste amount

Waste		Type of wastes	Estimated waste amount	Source of generation
Operation phase				
Solid waste	Re-usable	Residual pieces of fabric scraps	10% a roll of fabric (kg)	Production line and cutting line
		Raw material cutting wastes	200 kg / month	
		Disposed packaging materials, paper or plastic wrapping	110 kg / month	Materials store and supply packaging
	Non re-usable	Food residues, domestic waste	318.24 kg / day*	Canteen, Kitchens, dormitory
Liquid waste		Sanitary discharge water	81.6 m^3 /day*	Toilet facility, kitchen and canteen
Hazardous waste		Residual chemicals, use chemical container		Chemical usage and store area
		Oil leakage and spills	-	Operation of generator and movements of vehicles

[1] The domestic wastewater generation was based on typical wastewater generation rate of 0.1 m3 per person per day (Metcalf & Eddy, 2004)

The Yangon City solid waste generation rate as of 2012 is 0.39 kg per person per day (Pollution Control and Cleansing Department, Yangon City Development Committee, 2014).

3.5. DECOMMISSIONING PHASE

The proposed project investment duration is 30 years and they will close out the project according to their MIC proposal.

4. BRIEF DESCRIPTION OF SURROUNDING ENVIRONMENT

The purpose of this Chapter is to predict how environmental and socio-economic conditions will affect because of the implementation of the proposed Project. This requires a sound understanding of the baseline conditions at the project site, which established through desktop study research, site surveys, primary data collection and projections for future developments. Findings provide the current and future characteristics of the project site and the value and vulnerability of the key environmental and socio-economic resources and receptors. The following sections provide a description of the environmental and socio-economic aspects of the project.

4.1. METHODOLOGY FOR DATA COLLECTION AND ANALYSIS

The followings methodologies are used for Environmental Management Plan (EMP) for this report preparation;

- Onsite Measurements and Analysis – Baseline parameters such as Indoor temperature, humidity, operation light conditions, noise and water quality of the project site during operation phase were measured onsite. The analyzed results are mentioned in this chapter.
- Secondary data collection of proposed project site area – Socio economic condition, physical/biological environment, and weather data are collected from official township data of Hlaing Thar Yar Township, Yangon Region.

4.2. PHYSICAL COMPONENT IN PROJECT AREA

4.2.1. Topography

The proposed project area is situated in Shwe Lin Ban Industrial Zone, Hlaing Thar Yar Township, and its topographic condition is flat. The proposed project site is primarily agricultural land, but now is initiated into the industrial zone area.

4.2.2. Geology

The Yangon area is underlain by alluvial deposits (Pliestocene to Recent), the non-marine fluvialtile sediments of Irrawady formation (Pliocene), and hard, massive sandstone of Pegu series (early-late Miocene). Alluvial deposits are composed of gravel, clay, silts, sands and laterite which lie upon the eroded surface of the Irrawaddy formation at 3-4.6 m above mean sea level (MSL). The rock type in Yangon is mainly soft rocks, which consist of sandstone, shale, limestones and conglomerate. Geological map of Yangon Regional area is shown in Figure 4-1. [2]

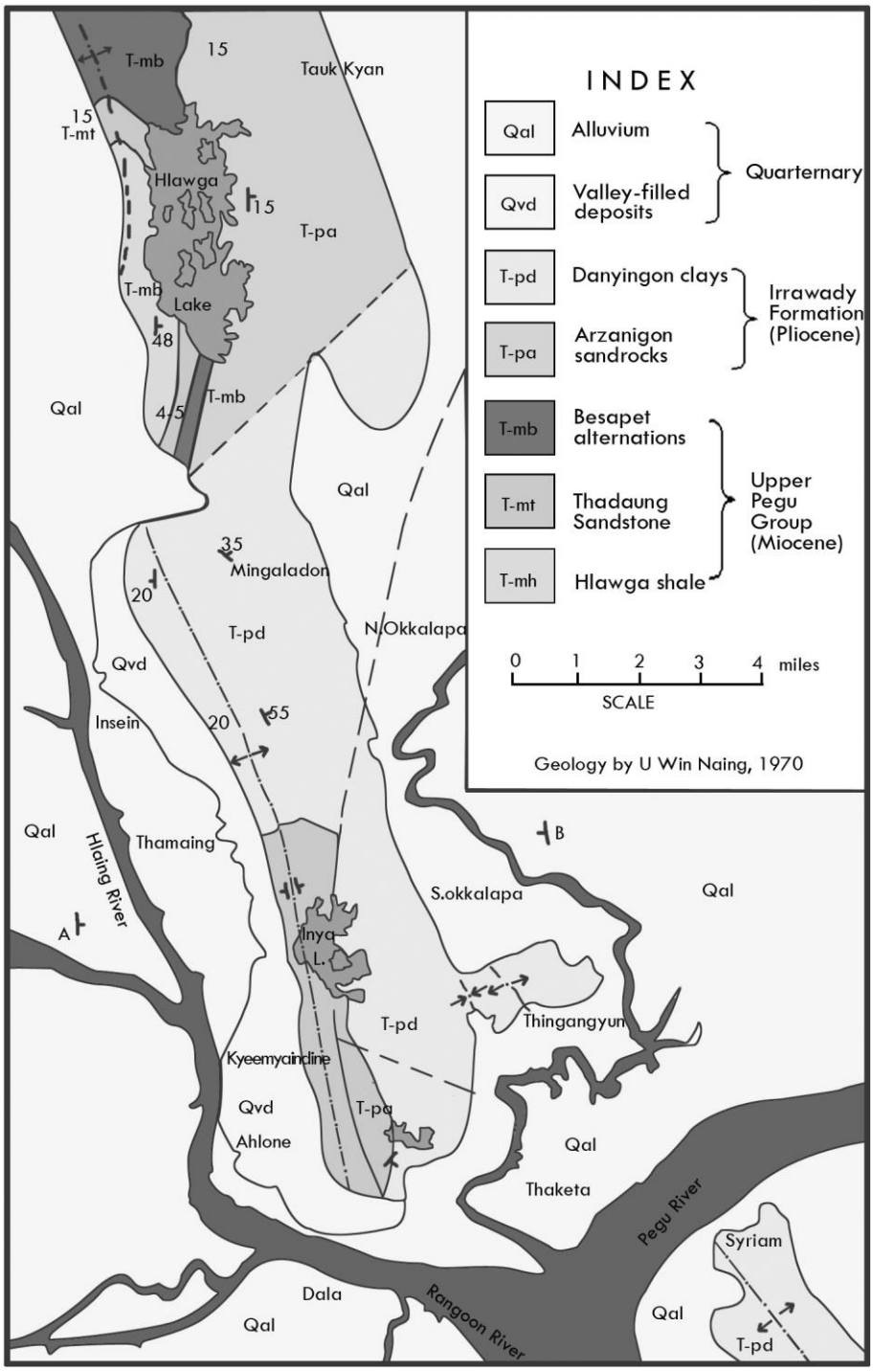


Figure 4-1 Geological Map of Yangon Region

4.2.3. **Tectonics**

Yangon is situated in the southern part of the Central Lowland which is one of the three major tectonic provinces of Myanmar. The Taungnio Range of the Gyophyu catchments area of Taikkyi District, north of Yangon, through the Thanlyin Ridge, south of Yangon forming a series of isolated hills probably resulted from the progressive deformation of the Upper Miocene rocks as the eastern continuation of the subduction or stretching and compression along the southern part of the Central Basin and regional uplifting of the Pegu Yoma (Aung Lwin 2012). [2]

4.2.4. **Soil**

The underlying soil type at the Project Site and its surroundings is characterized as the Meadow and Meadow Alluvial Soil. Meadow Soil is soil which occurs near the river plains exposed to occasional tidal floods, is non-carbonate and usually contains a large amount of salt. Both materials mainly comprise silty clay loam and neutral soil rich in plant nutrient. The upper layers (approximately 0 to 7 m) of the soil at the Project Site comprise largely of cohesive layers with traces of sand and gravel, followed by sand layers with low silt content and trace gravel from 7 to 35 m. The lower layers comprise denser silt layer with traces of sand and gravel from approximately 57 to 70 m. Standard Penetration Test (SPT) results obtained from testing at the Project Site indicate that the soil strength generally increases with depth. The STP results showed that the current soil quality can accommodate the construction of the Project. [2]

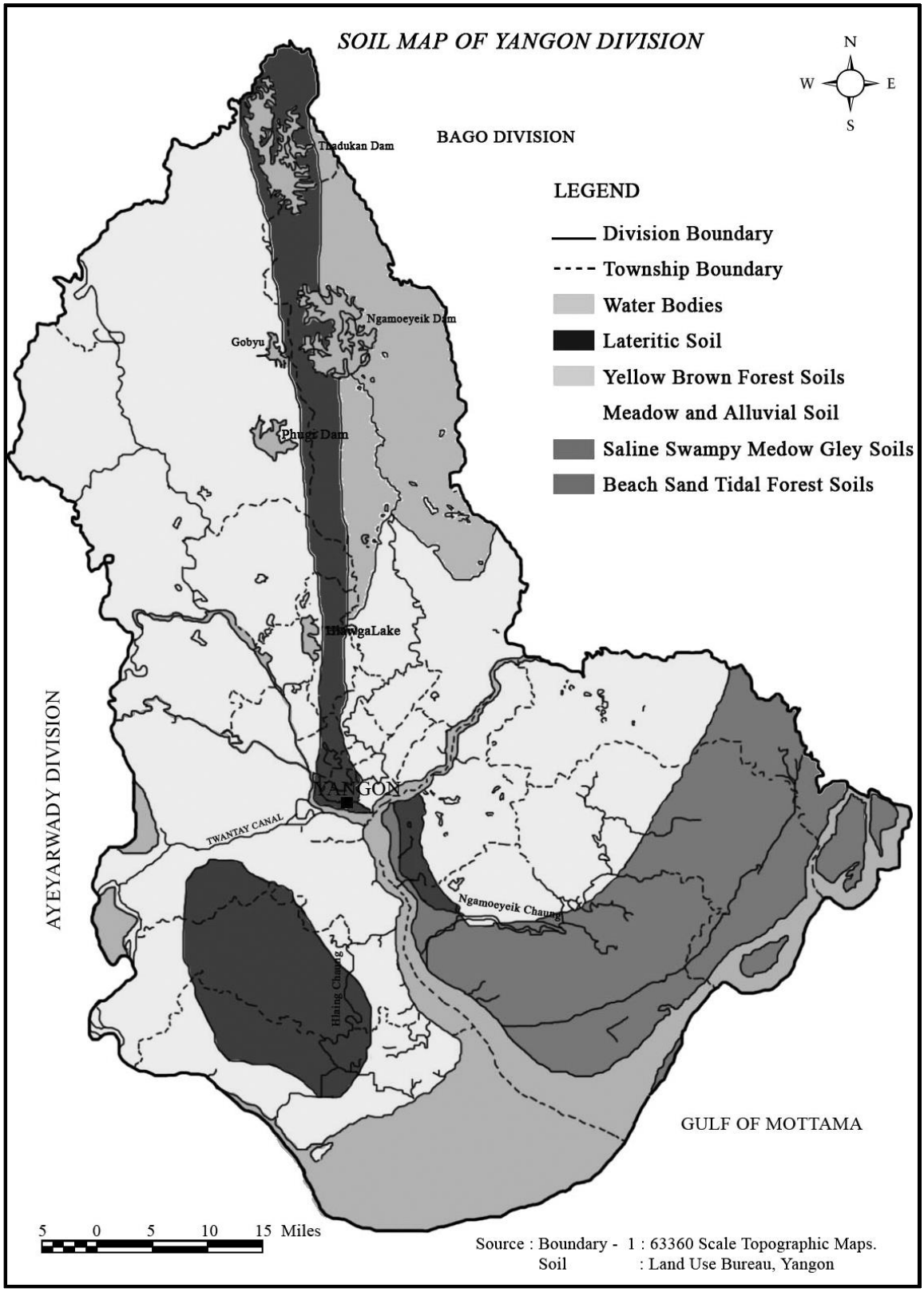


Figure 4-2 Soil map of Yangon (Source: Land use of Bureau of Yangon)

4.2.5. **Hydrogeology**

Yangon is rich in groundwater resources conserved by unconsolidated Tertiary-Quaternary deposits. In Yangon, groundwater is mostly extracted from Valley filled deposits and Ayeyarwady sandstones.

Groundwater: Groundwater availability is generally based on the distribution of permeable and relatively impermeable rocks. The nature of openings in the rocks determines permeability of rocks. Based on local geological considerations, potential groundwater source of Yangon can be roughly divided into two sub regions, namely the low potential area and high potential area. Low potential areas are areas with those rock units of Hlawga Shale, Thadugan Sandstones and Basepet Alternation of upper Pegu Group (Miocene epoch) and Danyingon Clays of Irrawaddy rocks. These rocks and formations are a dense, massive and consolidated nature and have impervious characteristic. High potential areas are underlain by Pliocene Series and recent Formations. High potential area covers approximately 85 percent of the Yangon city including Pabedan. Stand pipe piezometers were installed at a depth of up to 30 m from the existing ground level while a pumping well was installed upon completion of the soil investigation works. Based on the results recorded up to the 8th of December 2012, stabilized groundwater level was observed to range between 0.49 m MSL to -1.81 m MSL4.

Water Supply: The Yangon City Development Committee (YCDC) has an overall responsibility for the management and distribution of water for Yangon City. Presently, YCDC's water supply is obtained from two main sources: (1) reservoir (Hlawga, Gyobu, Pugyi and Ngameoyeik reservoirs) and, (2) groundwater from YCDC's tube wells. Water from these sources is utilized to varying degrees. Areas not supplied with water from the YCDC rely on shallow surface wells and private boreholes. Water supply for the Project Site will be obtained from onsite borewells for both construction and operations due to the poor reliability of municipal supply. Permitting is part of the Planning Consent Application currently underway. The boreholes will be provided and operated by the Developer.

Hydrology: The Project Site lies along the catchment of the Pazundaung River which flows east of the site in a southerly direction to converge into the Yangon River. The Yangon River (also known as the Rangoon River or Hlaing River) is formed by the confluence of the Pegu and Myitmaka rivers and flows into the Gulf of Martaban which is part of the larger Andaman Sea. The river flows along a 40 km stretch flowing from southern Myanmar as an outlet of the Ayeyarwady River into the Ayeyarwady delta. A small portion of the Bago River (the estuary) lies within the Yangon Division. The Pazundaung Creek and Bago River joins the Yangon River and from there, flow towards the southwestern direction into Andaman Sea. [2]

4.2.6. **Climate and Meteorology**

Yangon has a tropical monsoon climate under the Koppen climate classification system. The city typically experiences a distinct rainy season from the month of May through to October when a substantial amount of precipitation occurs; and dry season, which commences from November and ends in April. During the course of a year, average temperatures show some variance with average highs ranging from 26 °C to 36 °C and average lows occurring between 18 °C and 25 °C. The hottest period is between February and May, with little or no rain. At the end of this season, generally from March to April, the average monthly temperature reaches the upper 30°C. The average temperatures

in Yangon range from 24 °C to 36 °C in April during the hot season and it ranges from 18 °C to 32 °C in January during the cooler season.

Rainfall and Relative Humidity: The climate of Myanmar follows a typical monsoon pattern. Historically, the average annual mean rainfall for Yangon is 2,681 mm with the annual average rainy days of 129.3 days. During the course of 2013, the Department of Meteorology and Hydrology (Myanmar) reported an annual precipitation of approximately 2700 mm. The month with the most precipitation was in July. The relative humidity was generally higher from May to October 2013. The dry season occurs from November to April. Based on the historical weather for the last twelve months in Yangon, no precipitation was observed in December 2012, February 2013 and March 2013. The least humid month of the last 12 months was February 2013 with an average daily low humidity of 34%, and the most humid month was September with an average daily high humidity of 80%.

The proposed project is located at Shwe Than Lwin Industrial Zone, Hlaing Thar Yar Township and Yangon Region. The climate condition of Hlaing Thar Yar Township in which the project lies is the dry season, starts in December and ends in March. The raining season starts in June and ends in September and the cold season follow with the cooler, drier months of October to January. The highest temperature ranging 42°C and low range 27°C reference from Township Meteorology data, Regional Data of Hlaing Thar Yar Township. 2012 to 2017 Yearly data of rainfall and temperature is presented in Table 4-1. The weather condition during 21 May 2019 shows the average temperature of 36.43 ◦C while the average humidity is 75.5 percent Table 4-2. [1]

Table 4-1 Annual rainfall and temperature

Year	Rainfall		Temperature	
	Raining day	Rainfall value	Summer season Max (°C)	Winter season Min (°C)
2012-2013	121	53.46	41	27
2013-2014	131	61.25	40	26
2014-2015	128	58.35	39	25
2015-2016	113	48.45	40	26
2016-2017	126	56.97	41	27

Source: Department of Administrative Hlaing Thar Yar Township, Regional data (www.gad.gov.mm.com)

Table 4-2 Relative humidity and temperature measure at factory

Date and Time	Description	Result value	Environmental parameter air station guideline
27 May 2019 (8:00 am to 4:00 pm)	Relative Humidity RH %	75.5 (%)	Present condition
	Temperature	36.43 °C	Present condition

Wind Speed and Direction. Based on 2013 data, it was reported that the month with the highest wind speed was April 2013 with an average wind speed of 3 m/s while the least windy month was December 2012 with an average wind speed of 1m/s. The highest sustained wind speed was 54 m/s, occurring on September 19, 2013 and the highest daily mean wind speed was 4 m/s, occurred on May 14, 2013.

Natural Hazards: Myanmar is exposed to multiple natural hazards including cyclones, earthquakes, floods and fire. It has been periodically exposed by natural disasters. The Yangon District is in the vicinity of the southern section of the Sagaing Fault which has not been active in the past 50 to 75 years indicating that the faults may be under accumulating stress increasing the potential for an earthquake to occur. The Sagaing Fault is the most prominent active fault in Myanmar trending roughly north to south. It has been the originator of a large proportion of destructive earthquakes in Myanmar. The Project Site is also located in an earthquake zone and therefore the building construction design needs to cater for this hazard with adequate planning on emergency response procedures. Myanmar is exposed to cyclones and associated storm surges from the Bay of Bengal. Annually, there are approximately 10 tropical storms in the Bay of Bengal from April to December. Severe cyclones occur during the pre-monsoon period of April to May and post-monsoon period of October to December. The threat of flooding usually occurs in three waves each year: June, August and late September to October.

4.2.7. **Air Quality**

To determine the existing baseline ambient air quality status within the project site on 27, May 2019, 24-hours of working period air pollutants level, which include dust (PM_{10} and $PM_{2.5}$) and gases (CO, CO_2, SO_2, NO_2) were measured at the selected site using the OCEANUS AQM-09 air monitoring station. To reveal the existing status of baseline air quality, the average ambient air qualities measured were compared with National Environmental Quality (Emission) Guideline and international ambient air quality standard (NAAQS, ACGIH) guidelines. The measurement location point is situated at latitude 16°54'38.3"N and longitude 96°03'59.3"E.

It was observed that the air quality of NO_2, O_3, CO, SO_2 concentration levels and particulate matters (PM_{10} and $PM_{2.5}$) within the National Environmental Quality (Emission) Guideline.[3]

Table 4-3 Observed air quality results

Parameters	Observed value	Guideline value	Unit	Organization	Period
CO_2	181.1	5000	ppm	NAAQS	8 hrs
CO	0.03	35	ppm	ACGIH	8 hrs
NO_2	5.1	200	µg/m^3	NEQG	8 hrs
SO_2	1	20	µg/m^3	NEQG	8 hrs
PM_{10}	12.3	50	µg/m^3	NEQG	8 hrs
$PM_{2.5}$	3.4	25	µg/m^3	NEQG	8 hrs

NEQ = National Environmental Quality (Emission) Guideline

NAAQS = National Ambient Air Quality Standards were developed by the U.S. EPA

ACGIH = the American Council of Governmental Industrial Hygienists recommends

Figure 4-3 Air Quality Measurement at the Project Site

4.2.8. **Noise**

The Noise level was measured by using Digital Sound Level Meter for working hours on 27 May 2019. The average noise level in the project site area is presented in Table 4-4 compared with NEQG guideline. However, according to the Noise source monitoring at operation area (inside the production sector) of noise level is exceeding the acceptable level of National Environmental Quality (Emission) Guideline. Noise level is exceeding because of near machinery in operation time.

Table 4-4 Noise level measurement result

Date and Time	Location	GPS Value	Result Value	NEQ Guideline
27 May 2019 (8:00 AM to 4:00 PM)	Building (A) Ground	16°54'37.4"N 96°03'59.7"E	76.51 dBA	70 dBA
	Building (A) 1st Floor	16°54'37.9"N 96°03'59.5"E	70.92 dBA	70 dBA
	Building (B) 1st Floor	16°54'38.9"N 96°03'59.0"E	76.4 dBA	70 dBA

Figure 4-4 Noise level result graph

Figure 4-5 Sound level measurement photo

4.2.9. **Light**

Activities of the workers in the garment factory are highly dependent on the quality of light. Therefore, the consultant conducted the light measurement in the garment factory is presented in Figure 4-6. The illustrates the recommended illumination and limiting glare index applicable to typical works (fairly severe to very severe tasks) in garments factory is provided in Table 4-5.

Appropriate lighting is the need for every department, irrespective to the task being handled. Although, there are some areas where focus on maintaining proper illumination is very crucial in a garment factory, like the inspection points (on-floor and in stores), sampling, and the finishing section, as these areas are crucial for the quality of the production. The tasks involved in these areas require high levels of worker focus and accurate lighting to ensure lower errors and defects passing on to the next stage.

However, according to the result of light measurement at operation area (inside the production sector) is in good condition and at the acceptable level of standard.

Table 4-5 Recommended illumination and limiting glare index based on IES Code, 1968

Visual test	Illumination (lux)	Glare index
Casual seeing	100	28
Rough task with large detail	200	25-28
Ordinary task medium detail	400	25
Fairly severe task, small detail (e.g. drawing office, sewing)	600	19-22
Severe, prolonged task, very small detail (e.g. fine assembly, hand tailoring)	900	16-22
Very severe, prolonged task, very small detail (e.g. gem cutting, hosiery mending, gauging very small parts)	1,300 -2,000	13-16

Source: Koenigsberger, et al. 1975

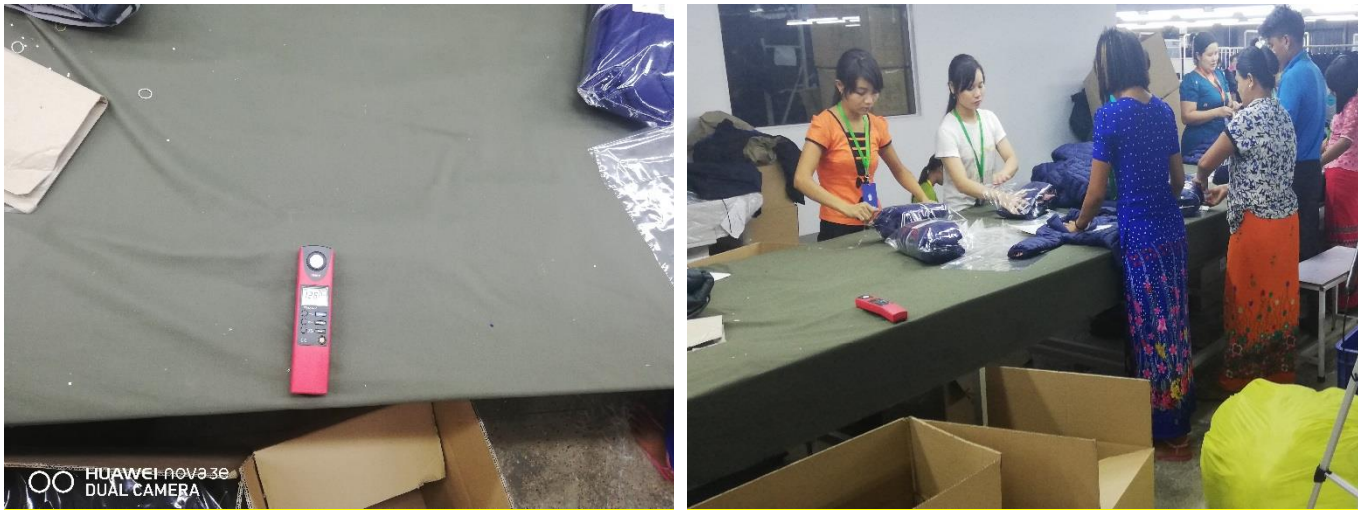


Figure 4-6 Light quality measurement

Table 4-6 Result of light measurement in Bo Da (Myanmar) Fashion Factory

No	Location	Measure value(Lux)	Standard*
	Building (A)		
1	Sewing line A1	559	600
2	Sewing line A2	558	600
3	Sewing line A3	613	600
4	Sewing line A4	621	600
5	Sewing line A5	600	600

No	Location	Measure value(Lux)	Standard*
6	Iron Area line A1	992	600
7	Iron Area line A2	1101	600
8	Packing Area line A1	1280	600
	Building (B)		
1	Sewing line B1	561	600
2	Sewing line B2	519	600
3	Sewing line B3	554	600
4	Sewing line B4	602	600
5	Sewing line B5	576	600
6	Cutting Area B1	691	600
7	Cutting Area B2	518	600

* Lighting standards and codes usually provide recommended illuminance ratios between the task area and its surroundings (EN 12464-1 2002) (CIBSE 1997) (IESNA 2000, 676708).

4.2.10. Ground Water Quality

The baseline data on ground water quality and treated water quality were collected on 11 May, 2019 with respect to WHO Guidelines for Drinking Water Standard and Laboratory analysis results can be seen in Table 4-8 and Table 4-10 for groundwater and treated water. The water quality of the nearest water features, which are likely to be affected by the project, was studied with the aim of understanding, preventing and minimizing water pollutions in the public water sources so as to ensure human health and biodiversity. Water quality is one of the key factors affecting the environment and health. Analyzed results of groundwater and treated water are compare with Drinking water guideline. The collected samples were tested at ISO Tech laboratory. [4]

Table 4-7 Coordinated point of groundwater collection point

Water Parameter	GPS Value	Location
Ground Water	16°54'39.94"N and 96° 3'59.74"E	Within proposed site of Ground water tank

4.2.10.1. Ground water result

Table 4-8 Ground Water quality laboratory results

No	Parameter	Unit	Water result	Drinking standard
1	pH		6.5	6.5-8.5
2	Colour (True)	TCU	Nil	15
3	Turbidity	NTU	2	5
4	Conductivity	micro S/cm	484	
5	Total hardness	mg/l as $CaCO_3$	98	500
6	Calcium hardness	mg/l as $CaCO_3$	66	
7	Magnesium hardness	mg/l as $CaCO_3$	32	
8	Total Alkalinity	mg/l as $CaCO_3$	132	
9	Phenolphthalein Alkalinity	mg/l as $CaCO_3$	Nil	
10	Carbonate ($CaCO_3$)	mg/l as $CaCO_3$	Nil	
11	Bicarbonate (HCO_3)	mg/l as $CaCO_3$	132	
12	Iron	mg/l	0.25	0.3
13	Chloride (as CL)	mg/l	82	250
14	Sodium chloride (as NaCL)	mg/l	135	
15	Sulphate (as SO_4)	mg/l	28	200
16	Total Solids	mg/l	245	1500
17	Suspended Solids	mg/l	3	
18	Dissolved Solids	mg/l	242	1000
19	Manganese	mg/l	Nil	0.05
20	Phosphate	mg/l	Nil	
21	Phenolphthalein Acidity	mg/l	3	
22	Methyl Orange Acidity	mg/l	Nil	
23	Salinity	ppt	0.2	

NG= No guideline

Table 4-9 Coordinated point of treated water collection point

Water Parameter	GPS Value	Location
Treated water	16°53'5.33"N and 96° 2'5.22"E	Within proposed siter

4.2.10.2.Treated water result

According to the water analysis results see in Table 4-10 **(Appendix)**, all of the lists parameter are within the limit of Drinking water guideline.

Table 4-10 Water quality laboratory results

No.	Parameter	Unit	Water result	Drinking Water Guideline (Geneva – 1993)
1.	pH		6.2	6.5 – 8.5
2.	Color (True)	TCU	Nil	15 TCU
3.	Turbidity	NTU	Nil	5 TCU
4.	Conductivity	Micro S/cm	30	
5.	Total Hardness	mg/l as $CaCO_3$	6	500 mg/l as $CaCO_3$
6.	Calcium Hardness	mg/l as $CaCO_3$	4	
7.	Magnesium Hardness	mg/l as $CaCO_3$	2	
8.	Total Alkalinity	mg/l as $CaCO_3$	10	
9.	Phenolphthalein Alkalinity	mg/l as $CaCO_3$	Nil	
10.	Carbonate ($CaCO_3$)	mg/l as $CaCO_3$	Nil	
11.	Bicarbonate (HCO_3)	mg/l as $CaCO_3$	10	
12.	Iron	mg/l	0.05	0.3 mg/l
13.	Chloride (as CL)	mg/l	3	250 mg/l
14.	Sodium chloride (as NaCL)	mg/l	5	
15.	Sulphate (as SO_4)	mg/l	Nil	200 mg/l
16.	Total Solid	mg/l	16	1500 mg/l
17.	Suspended Solids	mg/l	1	
18.	Dissolved Solids	mg/l	15	1000 mg/l
19.	Manganese	mg/l	Nil	0.05 mg/l
20.	Phosphate	mg/l	Nil	
21.	Phenolphthalein Acidity	mg/l	3	
22.	Methyl Orange Acidity	mg/l	Nil	
23.	Salinity	ppt	0.1	

National Environmental Quality (Emission) Guideline NG= No guideline

4.3. BIOLOGICAL COMPONENT

The proposed project site is not located in or near a sensitive ecosystem as the proposed project area is situated in the Shwe Lin Ban industrial zone. The Project Site is a built-environment and the species of flora surveyed at the site are native species uncommon to the Yangon area. There were no protected species or species of conservation value identified.

4.4. SOCIO-ECONOMIC COMPONENT

4.4.1. Population

Bo Da (Myanmar) Fashion factory is located across Hlaing Thar Yar Township in Yangon Region. In 2017, the population of Hlaing Thar Yar Township is about 414,209 people as present in Table 4-11. [1]

Table 4-11 Population of Males and Females at Hlaing Thar Yar Township (2017)

Item	Older 18 year			Younger 18 year			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	105,075	119,903	224,978	44,884	49,782	94,666	149,959	169,685	319,644
Rural	33,257	31,319	64,576	14,953	10,536	29,989	48,210	46,355	94,565
Total	138,332	151,222	289,554	59,837	64,818	124,655	198,169	216,040	414,209

Source: Department of Administrative Hlaing Thar Yar Township, Regional data (www.gad.gov.mm.com)

4.4.2. Religion

The different kinds of religion present in Hlaing Thar Yar Township are shown in Table 4-12. More than 90% of the people living in the township are Buddhists. [1]

Table 4-12 Religion in Hlaing Thar Yar Township (2017)

Township	Buddhist	Christian	Hindu	Muslim	Total
Hlaing Tharyar	395,789	6,400	8,320	3,700	414,209

Source: Department of Administrative Hlaing Thar Yar Township, Regional data (www.gad.gov.mm.com)

4.4.3. Local Economy

Among regional towns, Hlaing Thar Yar Township has a variety of businesses and services operating in the community with other businesses/services, based in the region. Most of the source of livelihood in the Township is employment of factory. Services and facilities available include:

- post office
- beauticians
- butcher
- hairdressers
- furniture and electrical store
- restaurants
- cafes
- shoe and clothing shops
- industrial services
- pharmacy
- veterinarian
- bus service
- gift stores
- music store
- pubs and bars
- florist

4.4.4. Public Infrastructure and Access

4.4.4.1. Communication and Transportation

Major transportation route in Haling Thar Yar Township are railway, port, and car road as presented in Table 4-13. [1]

Table 4-13 Transportation route

Categories	Township		Miles
	From	to	
Sail	Pan Hlaing River and Hlaing confluence	Ngwe pin Lae Industrial	8
Bus line (61,23,68,16,6,69,17,74,20,52,53,54,67) City Bus	WYTU	Downtown area	
Car (Yangon - Pathein road)	King Ba Yin Naung bridge	Mya Sein yaung Stream	5.4
Car (Yangon – Nyaung Tone road)	Aung zaya Bridge	BOC traffic circle	3.2
Car (King Anawyattar Road)	Shwe Pyi Thar Bridge	Thamakone Traffic circle	4.6

Source: Department of Administrative Hlaing Thar Yar Township, Regional data (www.gad.gov.mm.com)

4.4.4.2. Electricity

The electricity demand of Hlaing Thar Yar Township is higher and higher due to the normally increased in population and infrastructure. [1]

4.4.4.3. Education

Location of major schools were situated i.e. basic education primary school (B.E.P.S.), basic education middle school (B.E.M.S), basic education high school (B.E.H.S) and university, in the Hlaing Thar Yar Township. The name and the located village tract/ ward of schools are described in Table 4-14. [1]

Table 4-14 List of major school in Hlaing Thar Yar Township

No.	Name of School	Location
1	West Yangon Technological University	Outside Padan Village Tract
2	BEHS (1)	N0 (2) ward
3	BEHS (2)	No (12) ward
4	BEHS (3)	NO (17). Ward
5	BEHS (4)	NO (5) ward
6	BEHS (5)	NO (7) ward
7	BEHS (6)	Yae Okken
8	BEHS(7)	NO (16) ward

No.	Name of School	Location
9	BEHS (8)	NO (20) ward
10	BEMS (Branch) (1)	NO (6). Ward
11	BEMS (Branch) (2)	Nyaung Village Tract
12	BEMS (Branch) (3)	Dine Su, Nyaung Village
13	BEMS (Branch) (4)	NO (6) ward
14	BEMS (Branch) (5)	NO (1) ward
15	BEMS (Branch) (6)	NO (10) ward
16	BEMS (Branch) (7)	Outside Padan Village Tract
17	BEMS (Branch) (8)	NO (18) ward
18	BEMS (Branch) (9)	Shwe Lin Pan Village Tract
19	BEMS (Branch) (10)	NO (9). Ward
20	BEMS (Branch) (11)	NO (12). Ward
21	BEMS (Branch) (12)	NO (18). Ward
22	BEMS (Branch) (13)	NO (15). Ward
23	BEMS (Branch) (14)	NO (14). Ward
24	BEMS (Branch) (15)	NO (13). Ward
25	BEMS (Branch) (16)	NO (11). Ward
26	BEMS (Branch) (17)	NO (7). Ward
27	BEMS (Branch) (18)	NO (11). Ward
14	BEPS (1 to 32)	Hlaing Thar Yar
15	Pre School (1 to 6)	Hlaing Thar Yar

Source: Department of Administrative Hlaing Thar Yar Township, Regional data (www.gad.gov.mm.com)

4.4.4.4. Health Status

The diseases of high prevalence reported in 2013 are Tuberculosis (TB), followed by Acute Respiratory Infection (ARI), Diarrhea, TB and snakebites. With reference to the Township Health Profile 2014 of Hlaing Thar Yar Township, no accidental work injuries reported to the township hospital in 2013. The common diseases are shown in Table 4-15.

Table 4-15 Common Diseases in the Hlaing Thar Yar Township

Disease	Hlaing Tharyar	
	Morbidity	Mortality
Malaria (Per 100000P)	-	-
Dysentery	21	-
Diarrhea (Per 100000P)	37	-
TB (Sputum+)(Per 10000P)	67	-
Hepatitis	5	-

Table 4-16 Lists of hospital in the Hlaing Thar Yar Township

Hospital Name	Beds/Services	Responsible
Township Hospital	200	Government
Cottage Hospital (Shwe Lin Pan)	16	Government
Pan Hlaing	95	Private
Tun Foundation	20	Private
Total	330	-

Source: Department of Administrative Hlaing Thar Yar, Regional data (www.gad.gov.mm.com)

4.5. CULTURAL AND VISUAL COMPONENTS

Hlaing Thar Yar Township is growing into a busy and vibrant community. The population fluctuates; however, there has been steady growth over the last decade. It tends to be a stopover on a journey rather than a destination. It has a number of sites that are interesting; however, there is no main attraction. Visitors to the town are generally visiting for work, investment or family reasons. [1]

5. POTENTIAL ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

5.1. METHODOLOGY FOR THE ASSESSMENTS

The assessment of each impact is based on consideration of the magnitude, duration, spatial and frequency of activities, which are going to be carried out during three phases and characteristics of the project site. The assessment is qualitative and the significance of each impact is classified into 5 categories in overall.

The following methodology has been applied to assess the environmental impacts of the factory mainly on air, water, land, biodiversity, including human beings. Each source of impact has been assessed by four parameters, magnitude, duration, extent and probability and each assess point have 5 scales as mentioned in Table 5-1.

Table 5-1 Impact assessment parameters and its scale

Assessment	Scale				
	1	2	3	4	5
Magnitude (M)	Insignificant	small and will have no effect on working environment	Moderate and will result in minor changes on working environment	High and will result in significant changes on working environment	Very high and will result in permanent changes on working environment
Duration (D)	0 - 1 year	2 - 5 year	6 - 15 year	Life of operation	Post Closure
Extent (E)	Limited to the site	Limited to the local area	Limited to the region	National	International
Probability (P)	Very improbable	Improbable	Probable	Highly probable	Definite

Then, the Significant Point (SP) calculated by following formula.

Significant Point (SP) = (Magnitude + Duration + Extent)* Probability

Impact Significance: Based on calculated significant point, impact significance can categorize as follows:

Significant Point (SP)	Impact Significance
<15	Very Low
15-29	Low
30-44	Moderate
45-59	High
60	Very high

5.2. IMPACT IDENTIFICATION

The development of infrastructure for the proposed project likely to happen changes in the local environment in terms of physical, biological and socio-economic aspects along with the perspective on both positive and negative impacts. The potential environmental impacts brought by various activities of proposed factory project will be identified and judged by site surveying with checklist, meeting with client team, including plant manager and supervisor, representatives from the factory operators and assessing the environmental baseline information for operation and decommissioning phases along with its mitigation measure.

5.2.1. Positive Impact

During the project implementation, local people can get job opportunities in administrative sectors, office works, transportation sectors, skill and unskilled workers, etc. Due to the implementation of the project, there will be employment opportunities especially for workers from the local community. Employees will also improve more in their professional knowledge and skills. The net effect of job creation is the improvement of the livelihoods and living standards of the beneficiaries and poverty reduction, development of local people's livelihood. Cause of the proposed project is located in Shwe Lin Ban Industrial Zone, there may have business opportunities to local people. Local people can have a market by selling foods, snacks and drinks nearby the factory.

5.2.2. Negative Impact

The following Figure 5-1 briefly described the potential negative impacts of the proposed project. There are four main types of impacts; impact on environmental resources, impact on ecological resource, impact on human and impact of waste generation.

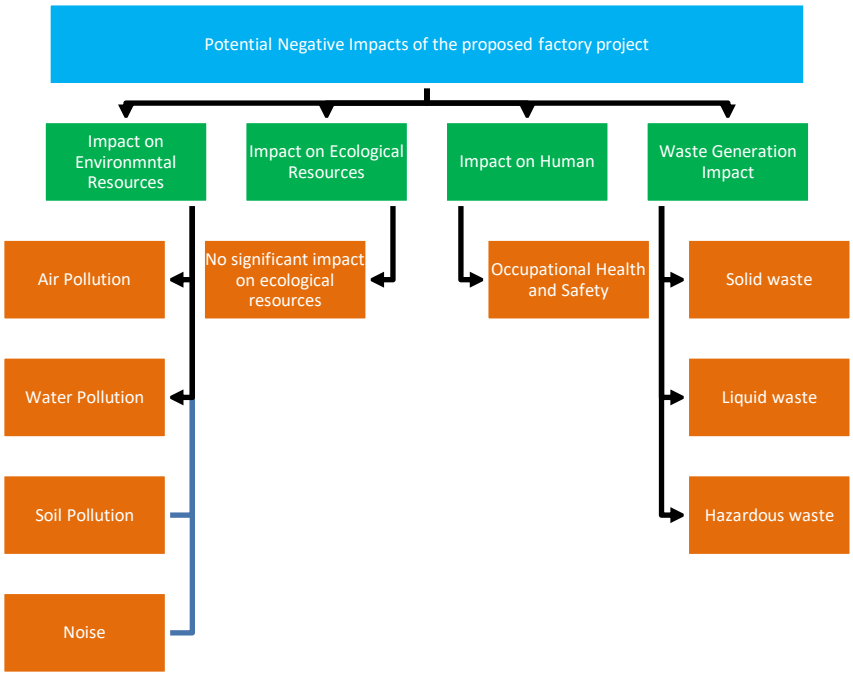


Figure 5-1 Potential negative impact affect from proposed factory project

5.1. POTENTIAL ENVIRONMENTAL IMPACT DURING CONSTRUCTION AND DECOMMISSIONING PHASE

Construction phase: The project factory is already constructed during environmental assessment study and site visit. Therefore, the proposed project is located in industrial zone and already finished the construction, the potential impact on environment is not assessed and affected must be caused the construction period.

Decommissioning phase: The proposed duration of the investment shall be 30 years. The term of the Lease shall be initial 30 years commencing from the date of signing of the Lease Agreement between Local owner and Bo Da (Myanmar) Fashion Co., Ltd. for proposed project site for 6515.439 sq meter of land. The project of land and building will be restitution to land owner after close the operation. Therefore, the assessment study cannot be needed for environmental impact assessment during decommission phase.

These two phases of operation shall be represented by land owner. If the owner will be demolished their factory, they will need mitigation and monitoring plan for environmental impact. Therefore, Myanwei's environmental assessment team presented for monitoring plan during decommissioning phase.

5.2. IMPACT ON ENVIRONMENTAL RESOURCES

5.2.1. Impact on Air Quality

The project factory is already constructed during environmental assessment study and site visit. During construction phase, dust emission was addressed as potential environmental impact and is expected to be non-significant because the construction phase is a short-term affect. So, we are not assessed potential environmental impact during construction phase.

During the operation phase, there is no emission of smoke from the process of production. Particulate matters are generated during cutting and pressing the raw materials. But that particles amount is low. Dust particles, CO2 and SO2 would be emitted from the activities of loading, unloading and transportation of the raw materials and final product. Various activities as cooking from kitchen, using air conditioners in office building, storage of raw materials, vehicles movements, operating diesel generators and boiler combustion would also be a factor slightly affecting to air quality.

Though main electricity source for the factory is the national grid line, sound-proof diesel generators will be set-up in case of electricity shortages. So, 62.5 kVA and 550 kVA of standby generator will be used for both operation and administration appliances. The proposed project will use annually 1,660 gallons of diesel for vehicles such as transportation vehicle and emergency use of a generator. The following table shows the amount of CO_2 emission coming from the combustion of fuels.

Burning diesel or other fuels creates exhaust gasses. Diesel generators produce carbon dioxide (CO2), nitrogen oxide (NOx), and particulate matter. These generators and boiler release this into the atmosphere and substantially reduce air quality in the nearby regions. Every liter of fuel has 0.73 kg of pure carbon, 2.6 kg of carbon dioxide released per liter of diesel fuel.

Category of GHGs Assessment

Category	Range
Negligible	no GHG assessment necessary
Low	< 20 kt/y CO_2-equivalent per year
Medium-Low	20 – 100 kt CO_2- equivalent per year
Medium-High	100 kt – 1 Mt CO_2- equivalent per year
High	>1 Mt CO_2-e equivalent per year

Source: EBRD GHG Assessment Methodology, 2010

CO_2 Emission by the Uses of Fuel

No.	Type	Amount(gallon/year)	Equivalent CO2 emission (Kilotons)	Status
1	Diesel for generator	1,660	0.1359	Negligible
2	Fuel for Boiler	11590.46	0.0200	Negligible

Furthermore, likewise the construction phase, negative impact on ambient air quality such as emissions of dust particles emission from the movement of vehicles used for carrying decommissioned materials and gaseous emission from these vehicles and machines can be expected during the decommissioning phase of the proposed project after its lifespan, 50 years.

5.2.2. Impact on Water Quality

During the construction period, water consumption is for implementation of the construction works and domestic water usage by construction workers. Surface water and ground water could be contaminated from the several activities of construction works such as mixing of the concrete, wetting of dry surfaces, washing of the equipment, etc. Moreover, oil spill from the vehicles and machinery can pollute water quality and can enter into the ground water and run into near river during the rainy season. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, impact on water quality is not assessed for this project.

During operation phase of garment manufacturing factory, there is no water use for processing purpose. Tube well is the main source of raw water for factory waster use. The raw water is provided for the whole factory use of general office facilities such as canteen, toilets and kitchen. Moreover, sewage disposed from the employees, staffs, oils spill and grease leakage from transporting vehicles and machinery equipment used in operating the production of garment can seriously pollute the quality of underground water source. But the factory plans to use separate waste water channels, septic type toilet system and sewage treatment plants in accordance with YCDC guidelines to avoid potential contaminations and hazards by waste water and sewages. So, it can cause low impact to the water quality.

During the decommissioning phase, oil spill from the demolished vehicles and machinery can penetrate into the ground water quality. Water can also be contaminated by activities related with decommissioning works and waste disposed by workers.

5.2.3. Impact on Soil Quality

During the construction phase, the excavation works from the construction activities must be the major impact on soil. The soil is compacted by the vehicles and the solid waste disposal improperly by the workers can affect the soil quality. Oil spillage from the vehicles could be also polluted to the soil. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, impact on water quality is not assessed for this project.

During the operational phase, there is no significant impact on soil quality due to garment manufacturing activities because concrete road facilities have been implemented at the whole project site area. However, there may be effect on soil if wastes from the operation period are disposed improperly.

During the decommissioning phase, transportation of decommissioning materials and transferred of heavy machinery may happen oil leakage and lubricants, and thus it can lead to impact on soil. Moreover, hazardous releases of materials or oil utilized in the infrastructure can contaminate the existing soil during the decommissioning phase.

5.2.4. Impact of Noise

During the construction phase, significant impact on noise and vibration to surrounding environment must be generated from the movements of vehicles, operating the machinery, excavation activities and transportation of equipment and construction materials by heavy trucks. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, the proposed project is located in industrial zone and already finished the construction, the potential impact on noise and vibration is not assessed and short-term affect must be caused the construction period is temporary.

During the operation phase, noise impact may be a significant impact for Garment production sectors. The significant sources of noise impact activities are the operation of various machinery and equipment listed in for sewing line, cutting line and the emergency used of generator, vehicles and automobile movements (short-term noise) will be noise impacts sources. According to the noise results of 8 hours continuously measurement, at the source of operation area inside the factory and within the factory area are slightly exceeding the noise level of 70 dB of NEQ (emission) guideline. Therefore, no obvious influence can be caused expected to environment.

During the decommissioning phase, the heavy vehicles, machineries and equipment used for decommissioning activities can affect the noise level and vibration of the area.

5.3. IMPACT ON ECOLOGICAL RESOURCES

The proposed project is located in the industrial zone. Therefore, there is no wildlife, forests, protected area, coastal resource or mangrove area and rare and endangered species are found around the project area. The nearest water body is Pan Hlaing River which is running south to north and later join into the Hlaing River in the east.

5.4. IMPACT ON HUMAN

5.4.1. Socio-economic

The proposed project is the long-term investment in the industrial sector. Most of the impacts of the proposed project on socio-economic environment may be positive. Implementation of proposed project may create temporary employment during construction and decommissioning phases and permanent jobs in the operation phase. Subsequently, socio-economic standards of local people will be increased and eventually it may lead to the economic growth at local and regional level.

5.4.2. Occupational Health and Safety

During the construction phase, significant accidents and injuries like electric shocks, falling from heights, chemical exposure, crushing injury, fire hazards can be occurred due to the construction activities including metal grinding and cutting, concrete work and welding the metals. Moreover, accidents and injuries to workers and local communities could be caused from heavy vehicles movement for the transport of construction materials and equipment. Small injuries due to slips, headache and sickness must be caused of the noise, air pollution and odor could also be affected to the workers and local people. However, the project factory is already constructed during environmental assessment study and site visit. Therefore, impact on water quality is not assessed for this project.

During the operation phase, using the machinery for production process can get injuries. Noise from the generating of the machine and generator may also affect the health of people working in the project area. Fire and explosion hazards are mainly cause from the storage of raw materials and poor management of waste disposal. The usage of fuel must carefully handle because spillage and leakage of oil and grease can cause ignition of fire. Domestic wastewater or grey water produced from canteen, kitchen and toilets will cause enormous breeding of mosquitos, which can lead to diseases like malaria and dengue fever, if not carefully managed.

During the decommissioning phase, activities related with decommissioning process can cause injuries and can affect the health of decommissioning workers

5.4.1. Waste Disposal

5.4.1.1. Solid Waste

During the construction and decommissioning phase, various kinds of solid wastes will be generated. These wastes will be collected and clean every day to avoid any undesirable working condition and environmental impacts. Based on their types (glass, metal, plastic, wood, cement residues, oil spills and paper based), these solid wastes will be collected separately in rubbish bins and regular and proper disposal will be done in accordance with YCDC guidelines.

In the operation phase, major solid wastes of the proposed garment factory may be generated form production lines, cutting and packaging. Factory shall use textile, thread and carton box as raw materials. The residual pieces of the fabric scraps from the production lines and cutting line used carton box, plastic sheet from the packaging are the main source of solid waste. In addition to factory solid waste, canteen, kitchen and dormitory will produce solid wastes mainly personal remnants, household wastes and food residues.

5.4.1.2. Liquid Waste

There may be expected no significant liquid waste from the construction and decommissioning phase. The main source of the liquid waste of these two phases may be from the sanitary wastewater.

During the operation phases, sanitary wastewater from the usage of toilet facilities, kitchen and canteens will be discharged as liquid waste. All of the liquid waste will be collected in septic tanks which are attached with proper sewage treatment tanks (as mentioned in factory site plan) and regular monitoring should be done in cooperation with YCDC and follow the YCDC guidelines for proper disposal.

5.5. PROJECT ACTIVITIES AND ITS SIGNIFICANT IMPACTS

The relative importance of each impact is assessed based on the understanding that general mitigation measures will be integrated into the baseline project. Therefore, when the general mitigation measures reduce impacts to the point of rendering them negligible they are excluded from further analysis. Once the significance of the impact is established as more than negligible, it is described and additional, specific mitigation measures may be proposed to allow optimal integration of the project into the environment.

Table 5-2 Evaluation and Perdition of Significant Impacts

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Construction Phase; It is not assessed in this phase, because of construction is already completed during EMP preparation.							
Operation Phase							
Air pollution	• Dust and GHGs emission from vehicles used for transporting raw materials and final products • Particulate matters emission from the activities of production process • Emission of smoke from steam boiler (rice briquettes) and kitchen • Emission from emergency diesel generator	3	4	2	4	36	Moderate
Water pollution	• Sewage disposed of from the toilets • Oil spill and grease leaks from transporting vehicles and machinery equipment used in operation phase	2	4	2	3	24	Low
Soil Contamination	• Accidental spillage of oil used by vehicles operating	1	4	1	2	12	
Noise Pollution	• Generating noise from the production machinery • Noise from the generating of the emergency generators	3	4	1	4	32	Moderate
Fire Hazard	• Poor electrical installations • waste disposed area • Raw materials storage	3	5	2	4	48	High

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
Solid waste	• residual pieces of fabric scraps from the production lines • Waste from packaging materials • Waste from kitchen, dormitory and office.	3	4	1	4	32	Moderate
Liquid waste	• Septic system and sewage. • Domestic liquid waste disposal from office, kitchen and dormitory.	2	4	2	4	32	Moderate
Hazardous waste	• Engine oil leaks, spills at diesel storage and during fuel refueling. • Used oil and lubricant discharged from the maintenance of vehicles and machines.	2	4	1	2	14	Very Low
Occupational Health and Safety (Accidents, Injuries)	• Accidental cases cause by operating machines. • Electricity and emergency diesel generators. • Unloading, mixing, cutting, pressing and packaging activities. • Accidental cases of thermic fluid heater	3	4	1	4	32	Moderate
Social-economic Condition	• Job opportunities for local people	-	-	-	-	-	Positive Impact
Risk Assessment							
Electrical failures	• Aging Equipment. According to the 2019 Plant Engineering Maintenance Study, aging equipment is the leading cause of equipment failure, accounting for 40 percent of unplanned downtime in plants. • Operator Error. • Lack of Preventive Maintenance. • Over-Maintenance.	2	4	1	2	14	Very Low Insignificance
Equipment malfunctioning	• Improper operation. Failure to perform preventive maintenance • Too much preventive maintenance. • Failure to continuously monitor equipment.	3	4	1	3	24	Low
Mechanical and structure failures	• Industrial machine failure includes things like bearing failure, metal fatigue, corrosion, misalignment, and general surface degradation. • Incorrect selection of materials.	3	4	1	3	24	Low

Environmental Impact	Project Activities	Significant of Potential Impacts					Impact Significance
		M	D	E	P	SP	
	• Errors in design calculation and detailing. • Improper construction techniques and insufficient quality control and supervision. • Chemical attacks on concrete structures. • External mechanical factors.						
Decommissioning Phase							
Air pollution	• Decommissioning of buildings and related materials • Transportation of demolished materials	3	1	1	4	20	Low
Water pollution	• Sewage form decommissioning workers • Demolition machinery equipment	3	1	1	3	15	Low
Soil Contamination	• Decommissioning of buildings and related materials • Transportation of demolished materials	3	1	1	3	15	Low
Noise Pollution	• Decommission activities • Transportation of demolished materials	3	1	1	3	15	Low
Waste disposal	• Sewage system • Demolished debris such as bricks, concrete materials	2	1	1	3	12	Very Low
Hazardous waste	• Used lubricants from decommissioning vehicles and machines	2	1	1	3	12	Very Low
Occupational Health and Safety (Accidents, Injuries)	• Decommissioning activities • Transportation of demolished materials	3	1	2	3	18	Low
Social-economic Condition	• Temporary job opportunities for local people	-	-	-	-	-	Positive Impact

According to the result of analysis, it can be concluded that most of the project activities have low significance on environment, in all phases. Project activities that can produce solid waste and liquid waste are moderate significance. Moreover, project activities that emit dust and GHGs and accidental cases are moderately significant. Fire hazard potential of the proposed project and noise pollution are highly significant. But this can be prevented or mitigated by using the following mitigation measures. The following figure shows the impact significance of the proposed project.

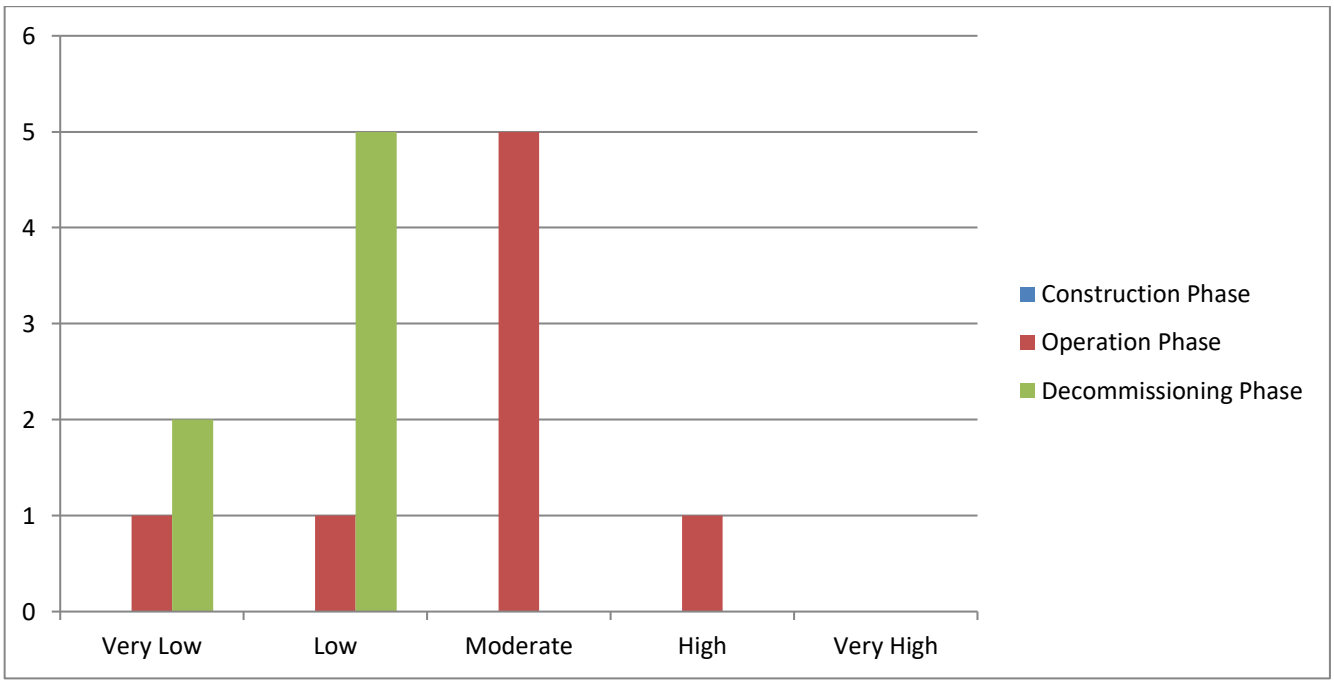


Figure 5-2 Impact significance of the proposed factory project

5.6. MITIGATION MEASURES OF IMPACT ON ENVIRONMENTAL RESOURCES

5.6.1. Recommended Air Impact Mitigation Measures

During the operation phases, ventilation system of the factory is enough for the workers cause the proponent has installed Moist Fan around the factory building. To control air pollution, the vehicles, generators and machineries have to check and maintain regularly. Since the factory compound area is paved with concrete, dust emission from the movements of vehicles and cars is not significant. The project proponent must install good exhaust system at the kitchen to reduce adverse impacts of indoor air quality. The factory uses chimney for generator and steam boiler through which the flue gas are emitted for reducing the impact of stack emission on environment. Monitoring and check installed cyclones and ventilation system. The factory has planted trees in its premises to reduce carbon emission and thus minimize air pollution. Ensuring vehicles, compressor and generator are well maintained.

During the decommissioning phases, the impact on air quality can be controllable and reduced to minimum level and minimized dust emissions from material handling sources. Sprinkling water on the top soil can reduce dust emission from the demolishing activities. In the proposed project area, vehicle movements should be limit and maintain and check the vehicles and machineries regularly. Burning the demolished materials and residual wastes must not be allowed.

5.6.2. Mitigation Measure of Impact on Water

During the operation phase, water discharge from the factory site will be treated by silts track tank before discharging. Water effluent levels should be within acceptable limit of the National Environmental Quality (Emissions) Guidelines values. The factory plan has kitchen, canteen and toilet facilities attached in various buildings of the factory. In the kitchen, separated drainage lines are provided to flow wastewater from the activities washing and cooking, etc. And around the compound

area of the project area, drainages are also provided and maintain to flow storm water (rain water, snow and surface water). The compound area of the factory is paved with concrete and the drainages are covered and holes are there to flow the storm water. The existing drainage at the project area can be seen in Figure 5-3. Besides, the factory plans to use separate wastewater channels, septic type toilet system. Wastewater from the dining room, canteens and toilet facilities are collected in septic tanks which are attached with sewer treatment plant and the proponent will connect and cooperate with YCDC to be carried out for disposing of these septic tank wastes. To mitigate the impact on water, the drainages around the compound area of the factory have to maintain and clean regularly. Spillage and leakages of oil and grease should also be minimized.

Figure 5-3 Drainage and Septic tank in project area

During the decommissioning phases, appropriate sanitary facilities should be provided for demolishing workers. An accidental spill of fuel and oil should be avoided. Wastes generated from the demolishing activities should not be disposed directly into the drainage channels.

5.6.3. Mitigation Measure of Impact on Soil Contaminate

During the operation phase, the compound area of the factory area will be paved with concrete and hence, contamination due to the oil spillage at this area is insignificant. But refilling fuel must be done with great care for preventing spillage.

During the decommissioning phase, impact on soil can be mitigated by using modernized machineries, these machines would be maintained regularly and isolated maintenance area would be identified. Any accidental spills of fuel, oil or other hazardous waste must be avoided. Construction wastes and demolishing debris should be disposed properly.

5.6.4. Mitigation Measure of Impact on Noise

During the operation phase, the regular maintenance plans for vehicles, machines generators should be provided to mitigate impact on noise. Using modernized low noise machines should be used if possible. Noise impact to employees shall be minimized by providing earmuffs and ear plugs to those working near the noisy machines.

During the decommissioning phases, temporary noise pollution can be controlled by planning regular maintenance for decommissioning vehicles and machines. Moreover, construction and decommissioning activities should not be worked during nighttime.

5.7. MITIGATION MEASURES OF IMPACT ON HUMAN

5.7.1. Mitigation Measures on Fire Hazard

The project proponent has provided fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening is also constructed with the capacity of 3,000 gallons at the proposed area. The emergency contact numbers of township and district fire services department must be printed and tagged at easily visible places for fire emergency cases. The emergency fire alarms are installed at the factory for alerting the workers in case of fire. The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases. In addition, the project proponent has plans to provide trainings on firefighting for the workers by a professional or otherwise by sending to training courses. The plan to install fire alarm system and fire-frightening system are mentioned in Figure 5-4.

Figure 5-4 Firefighting plan and Escape plan

5.7.2. Mitigation Measure for Occupational Health and Safety

The proposed project has a clinic and a nurse. Medicines and first aid kits are provided in this clinic. Moreover, these medicines and first aid kits are provided for emergency cases of workers. First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for workers. According to the observed light intensity values, the proponent provides

sufficient lighting for workers for safe working and reducing optical problems of the workers. Personal Protective Equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for each department. To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures. The project proponent must manage the drainage systems of the factory to prevent health risk of the workers.

The Occupational Safety and Health Administration (OSHA) have recommended permissible noise exposure limit for industrial workers, which is based on 90 dB (A) for 8 hours exposure a day with 5dB trading rates. According to OSHA, the maximum allowable noise level for workers is 90 dB (A) for 8 hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas, need to provide if actual noise level monitoring results are more than 90 dB (A) at the work site for working time hours for 8 hours.

Table 5-3 Permissible exposure of noise limits

Total Time of Exposure Per Day in Hours	Noise Level dB(A)
8	90
6	92
4	95
3	97
5	100
1	105
½	110
¼	115

Figure 5-5 Clinic photo

5.7.3. Mitigation Measure of Waste Generation

During the operation phase, the project proponent provides separate garbage bins at each building. All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste houses: Non-hazardous Waste Production related house, Hazardous Waste Production related house, Non- Hazardous Waste Non-Production related house and Hazardous Waste Non-Production related house and final wastes will be disposed by using YCDC's service.

During the decommissioning phase, some of demolished solid wastes must be recycled and the other solid wastes should be stored in dedicated waste storage area in the project site and transferred to YCDC for final disposal.

6. ENVIRONMENTAL MANAGEMENT PROGRAM

6.1. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

The objective of the environmental management is to ensure potential environmental issues are managed by proper mitigation measures in compliance with the relevant laws and regulations stipulated by national authorities. Environmental management is based on the basic principles of management known as the P-D-C-A cycle (Figure 6-1). Environmental management consists of four related tasks as described below:

- Plan (P) - What need to be done

Mitigation measures for the potential environmental impacts of the factory such as air emission, noise, solid waste, wastewater and health and safety at work are described in this chapter. The Project Proponent will follow the plan for the mitigation measures according to the scheduled time.

- Do (D) - Implement the plan

The mitigation measures for the potential environmental impacts will be implemented appropriately by the Project Proponent as described in this chapter.

- Check (C) - Monitor and evaluate the results of implementation

The effectiveness of the mitigation measures will be monitored, evaluated and documented.

- Act (A) - Taking corrective actions to improve the results, if found inadequate

If nonconformities are noted with reference to the environmental monitoring benchmarks, corrective actions need to be planned to mitigate the existing environmental impacts.

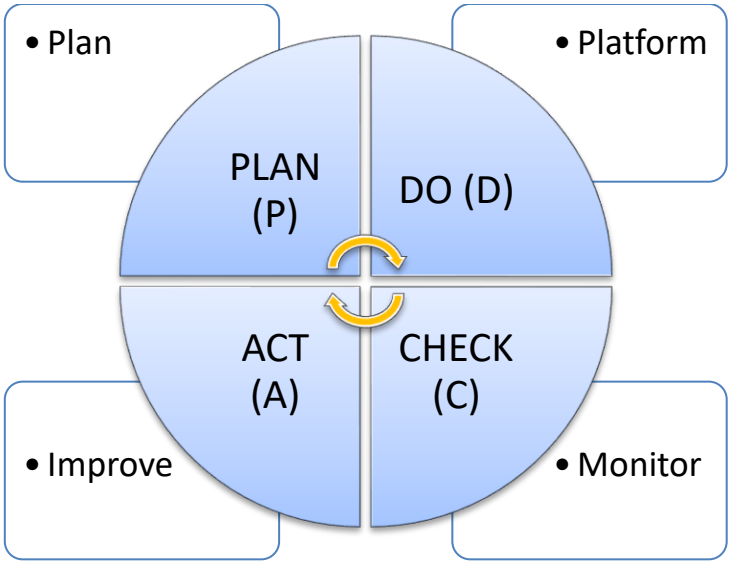


Figure 6-1 PDCA cycle

6.1.1. Institutional Requirement

Bo Da (Myanmar) Fashion Company Limited will manage the development of the proposed project. The project proponent should appoint Health, Safety and Environment (HSE) issues throughout the duration of the project phases. HSE team is responsible for implementation and

monitoring of EMP and Environmental Monitoring Plan (EMP) as well as coordination with local authorities and the nearby communities. The HSE Team also makes regular review of EMP to cover all potential impacts, amendments and modifications.

6.1.2. Responsibilities of the EMP

In order to ensure the sound development and effective implementation of the EMP, it will be necessary to identify and define the responsibilities. The environmental management practices, procedures, and responsibilities are defined herein to get full compliance with the existing environmental policy, laws, rules and regulations of the Republic of the Union of Myanmar. The following entities should be involved in the implementation of this EMP:

Bo Da (Myanmar) Fashion Company Limited: The proponent will be charged with the responsibility for ensuring that the proposed development has been accomplished in an environmentally sound manner. This can be achieved by inclusion of environmental specifications in the tender specifications, selection of environmentally conscious contractors, and supervision to ensure that the objectives of this EMP are met. The implementation of Environmental Management Plan (EMP) process will prepare and follow up by appointed persons for health, safety, and environmental management under the instruction of management team of Bo Da (Myanmar) Fashion Company Limited for EMP implementation facilities.

ECD (Yangon Region): The responsibility of ECD is to exercise general supervision and coordinating over all matters relating to the environment and to be instrumental in providing guidance for recognized regulatory frameworks.

Third-Party Environmental Consultant: The environmental consultant will have to ensure that the proposed EMP is up to date and is being followed properly by the proponent. Periodic audits of the EMP will have to be done to ensure that its performance is as expected, by comparing with operating standards so that any corrective actions can be taken.

6.1.3. Structure and Responsibilities for the EMP Development and Implementation

Bo Da (Myanmar) Fashion Company Limited. shall manage the development of the proposed project. The project proponent should appoint Health, Safety and Environment (HSE) issues throughout the duration of the project phases. HSE team is responsible for implementation and monitoring of EMP and Environmental Monitoring Plan as well as coordination with local authorities and the nearby communities. The HSE Team also makes regular review of EMP to cover all potential impacts, amendments and modifications. The HSE officer is responsible to the HSE components of the project and on matters relating to the implementation of the EMP throughout operation life.

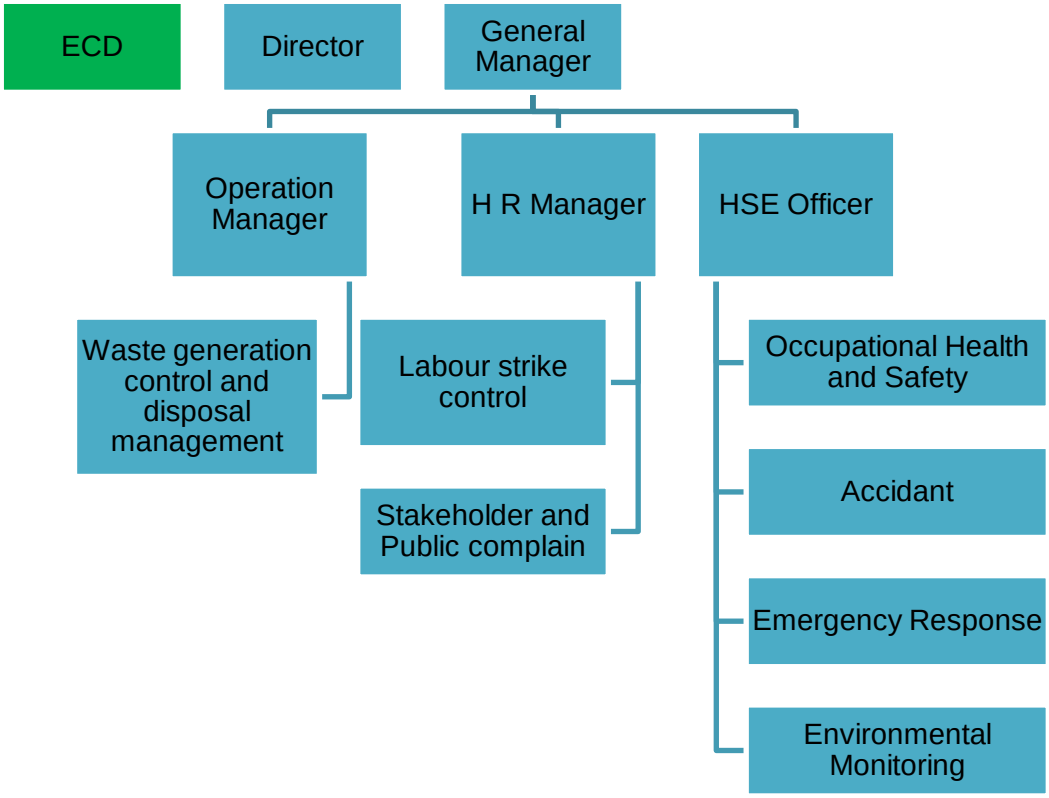


Figure 6-2 Organization Structure of Environmental Management Plan

Table 6-1 Responsibilities of HSE members

Roles	Responsibilities
General Manager	The General Manager will be assisted by the Operations Manager and also the HR and HSE Officer. In terms of environmental protection commitments, the Operation Manager will be the key driving force and will be responsible for: • Establishing overall environmental direction and policy • Ensuring the implementation of the EMP • Ensuring investigation of all environmental incidents are reviewed and that reports are submitted on time • Ensuring an effective system of internal and external communication is in place • Providing advice regarding the environmental program
Operation Manager	The Operation Manager will assist the General Manager in looking into the overall environmental matters during the operational phase of the Project. The Operation Engineer will also be responsible for: • Adherence to the overall environmental direction and policy • Ensuring the implementation of the recommended actions in the investigation of all environmental incidents • Managing resources for operation wastes
HR Manager	The HR Manager will carry out the day-to-day management of workers and social issues in the factory. The HR Manager will be responsible for: • Assisting the management in publicising and implementing corporate and local policies, objectives and programs • Maintaining key environmental-related documents and information

Roles	Responsibilities
	• Communicating/ liaising with the local authorities on environmental issues
HSE Officer	The HSE Officer will be the key person in charge of all environmental matters pertaining to the site. The HSE Officer will be responsible for: • Coordinating the implementation of environmental programs, including monitoring of the project site environmental performance • Performing periodic internal environmental audits and inspections to ensure compliance with the legal environmental requirements • Ensure a monitoring system is in place to track and report all health, safety and environmental incidents; • Carry out a thorough initial site inspection of environmental controls prior to work commencement; • Record and provide a written report to the General Manager and production team of non-conformances with the EMP and require the HR Manager to undertake mitigation measures to avoid or minimize any adverse impacts on environment or report required changes to the EMP.

6.2. ENVIRONMENTAL MANAGEMENT ACTION

The EMP Bo Da (Myanmar) Fashion Company Limited has been prepared to address potential issues based upon discussion with factory management, workers, local community view, stakeholder consultation and from the site visit of experts. The EMP is additional to and compliments the factory's safety management system. The following environmental issues that require environmental management plans based upon the potential impacts of activities Bo Da (Myanmar) Fashion Company Limited are as follows:

6.2.1. Air Pollution/Dust Management Plan

Objectives:	• To minimize the adverse impact to air quality caused by stack gas emission from generator and also dust management generated from vehicular movement. • To comply with relevant government rules
Performance Indicator:	• Nil complaints relating to air quality management • Extraction equipment maintained as per maintenance schedule
Relevant government law and rule	• National Environmental Quality (Emission) Guidelines (2015)
Management Plan	• The factory must be plant in its premises which reduce the carbon emission by the factory and minimize the air pollution • Periodic maintenance of generator is conducted • Prohibiting the burning of waste materials at the project site • Providing mask to the employees who work in any dusty area • Installation the windscreens to breakup the wind flow
Estimated Cost	• 700,000 Kyats per year
Responsibility	Management of the factory; • Head of maintenance-Total implementation of above of air pollution management plan

	• Production manager-Air quality in the production area is good enough • Manager -To hire organization/independent third party testing air quality • EHS officer-Monitor the hygiene of ambient air quality in surrounding of the factory

6.2.2. **Water Consumption Management Plan**

Objectives:	• The water consumption management is aimed at minimizing ground water use
Performance Indicator:	• Prohibitions on accessing and using underground water without a license • Water consumption saving of general water use from groundwater
Relevant government law and rule	• The Underground Water Act (1930)
Management Plan	• Install water meter for internal control of water consumption • All staff trains and makes aware conservation practices and proper methods of water use must be place in toilets and other areas of water consumption • The contamination of water is avoided by suitable management of oil and fuel used in machineries and vehicles • Trees plantation surrounding the factory
Estimate Cost	• 100,000 Kyat per year
Responsibility	Manager • Arrange audit on water usage controls environmental officer

6.2.3. **Wastewater Management Plan**

Objectives:	• Prevent pollution underlying groundwater sources
Performance Indicator:	• Implement an environmental friendly sewerage system
Relevant government law and rule	• National Environmental Quality (Emission) Guidelines (2015) • YCDC Guidelines
Management Plan	• Ensure that drainage lines and sewage system of factory and the nearest public drainage are watertight and sufficient capacity • Regular check and maintain sewerage facility. • Clean the factory‘s drainage to avoid odor emission and to avoid the block of water flow • Regularly monitor and check the discharge temperature from boiler wastewater before directly discharge into factory‘s final drainage
Estimated Cost	• 500,000 Kyats per year
Responsibility	• Manager -To hire organization/independent third party testing wastewater quality • EHS officer-Monitor the condition of factory’s drainage and sewerage system

6.2.4. **Fire Management Plan**

Objectives:	• To ensure that fire control practices are implemented on site to minimise the risk of fire from site operations and bush fires
Relevant government law and rule	Myanmar Fire Brigade Law 2015
Time Frame	• Entire life spans of proposed project operation
Management Plan	• Must be provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. • Must be indicated the emergency exit and assembly point in public area. • Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening. • The emergency fire alarms are installed at the factory for alerting the workers in case of fire. • The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases.
Monitoring & Reporting	To check monthly Visual inspection, Firefighting equipment (fire extinguish, firefighting hose, portable fire pumps, fire hose reels, fire monitor and firefighting nozzles)
Estimated cost	500,000 Kyats per year
Responsibility	HSE Manager, Operation Manager or Environmental Management Team of Bo Da (Myanmar) Fashion Company Limited

6.2.5. **Solid waste management Plan**

Objectives:	• To minimize waste generation by developing strategies for the management and disposal of all waste in a manner that is sustainable and sensitive to the environment • To comply government waste management policy
Performance Indicator:	Nil complaints relating to noise nuisance
Relevant government law and rule	• YCDC guidelines
Management Plan	• The factory does not dispose any kind of solid waste on the factory premises or not dump in the surface water like local pond, canal or river, etc. • The solid wastes are stored properly and separately in a certain location in proper manner such as cloth scrap waste need to collect at one place and poly/carton waste should collect at another place. Metal/Hazardous material waste such as fudge electric bulbs, empty chemical container are stored another in separate place of storage area. • Recycle wastes like cloth scrap, carton box, plastic sheet, etc. are hand over to local buyer for reuse and waste-tracking record shall be kept every day. • The metal or glass waste of electric bulb is taken by the suppliers to recycle them. • The daily domestic waste of workers hand over to YCDC waste collector to collect

	every day • Daily wastes are stored clearly labeled containers and in such a manner that all related personnel are provided proper training about the relevant issues.
Estimated Cost	• 50,000 Kyats per month
Responsibility	Manager (HR) • Responsible for overall site cleanliness and waste management • Regular waste collection to minimize excessive waste storage

6.2.6. **Noise Management Plan**

Objectives:	• To avoid nuisance noise to nearby residents generated from generator and other machineries. • To comply with noise standard of National Environmental Quality (Emission) Guideline
Performance Indicator:	Nil complaints relating to noise nuisance
Relevant government law and rule	• National Environmental Quality (Emission) Guidelines (2015)
Management Plan	• Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment • Impose speed limit to track and vehicles at the transportation route. • Provide sufficient personal protective equipment (PPE) at the work place • All the related personnel will be provided proper training about the relevant issues and ensure PPE wear during working in noisy area.
Responsibility	Manager • To hire organization/independent third party testing noise level • Ensure that all workers use PPE during operation

6.2.7. **Emergency Response Plan and Disaster Management Plan**

Objectives:	• Reduce the risk of accidents at the factory area
Performance Indicator:	• Establish a safe working environment
Relevant government law and rule	• The Employment and Skill Development Law (August 2013) • ILO guide to Myanmar Labour Law (2017)
Management Plan	• The factory management has taken proper measures to handle any emergency situation like fire, earthquake, flood and storm • Provision and inspection of firefighting equipment and fire hydrant system in all the sections • A detail evaluation plan (fire exist, emergency exit door, etc.) is established and communicated with workers • Periodic inspection of safety relief valve provided with pressure vessels and

	equipment, preventive maintenance; aware the workers about electric shock by necessary training. • Regular fire drill operation is conducted • Workers are informed about what to do in earthquake like stay in a safe place such as under table of desk, not to try move outside during earthquake, workers who will be outside during earthquake shall remain stay out of the building, trees, lump post, etc. Other relevant safety instruction of emergency situation it informed to workers by training • Workers are aware of dangers from physical hazards such as obstacles covered by floodwater (storm debris, drainage opening, ground erosion) and from displaced reptiles (Snake) or other animals. • A medical team has been prepared for primary treatment (First Aid) • Prepare an emergency contact directory consisting contact numbers of nearest fire service, local police station, hospitals, etc. and display it in a place that everybody can see it easy. • Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management • Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety
Estimated cost	• Approximately 1,500,000 Kyats per year
Responsibility	Manager and EHS officer • Arrange firefighting training after every 3 months • Responsible for fire control and response • Monitoring daily danger warning and bans

6.2.8. **Occupational safety and health management plan**

Objective	• To provide a broad framework for improving standards of workplace health and safety to reduce work-related injury and illness.
Relevant Government Law and Rule	Public Health Law (1972), Prevention and Control of Communicable Diseases Law 1995 (Amendment 2011), Occupational Safety and Health Law (2019)
Time Frame	• Entire life spans of proposed project
Management Action	• First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers. • According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers. • Personal Protective Equipment (PPE) like earmuffs, safety gloves, helmets and goggles are provided for each department. • To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures. • Manage the drainage systems of the factory to prevent health risk of the workers. • The maximum allowable noise level for workers is 90dB(A) for 8hours exposure a day. Thus, adequate protective noise impact measures in the form

	of ear muffs/ear plugs to the workers working in high noise areas.
Monitoring and Reporting	• Weekly check fire extinguishers and water hydrant in position • Daily inspect that all fire exist are open • Servicing fire extinguisher and records accidents
Estimated Cost	500,000 Kyats per year
Responsible Person	HSE Manager, Operation Manager or Environmental Management Team of Bo Da (Myanmar) Fashion Company Limited

6.2.9. **Energy Management Plan**

Objectives:	• To improve energy efficiency, reduce cost, optimize capital investment, reduce environmental and greenhouse gas emissions, and conserve natural resources
Relevant government law and rule	National Energy Management Committee (Myanmar Energy Master Plan 2015)
Time Frame	Once in a year throughout the factory life
Management Plan	• Installation of timers and thermostats to control heating and cooling • Energy saving light installed in different area of the factory for saving energy • Used of energy saving devices must be installed • Ensure that good housekeeping measures such as turning off equipment and lights when not in use
Monitoring & Reporting	Conduct annual energy efficiency of adult to find out the scope for energy saving
Estimated cost	Approximately 100,000 Kyats per year
Responsibility	Manager • To arrange energy audit technical personnel • To monitor and record electricity consumption, other related energy issues and take necessary actions if any problem arises

6.3. **ENVIRONMENTAL MONITORING SCHEDULE AND REPORTING**

The EMoP cell members responsible may conduct daily, weekly or monthly general inspections of the project area and facilities. The objectives are to identify non-compliances to EMoP. Table 6-2 is provided the environmental monitoring schedule for Bo Da (Myanmar) Fashion factory. The factory submits monitoring report to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP,

Table 6-2 Environmental monitoring schedule for Bo Da (Myanmar) Fashion Co., Ltd.

Issues	Parameter	Frequency	Area to be monitored	Monitoring Cost (MMK)	Responsible section
Operation Phase					
Common	Monitoring of mitigation measures	Yearly (3 years after operation)	The project	2,500,000 Kyats	Environmental Management Team's Bo Da (Myanmar)

Issues	Parameter	Frequency	Area to be monitored	Monitoring Cost (MMK)	Responsible section
					Fashion Company Limited
Air quality	SO2, NO2, CO, CO2, PM2.5, PM10	Biannually monitoring and reporting to ECD (First 3 years after operation)	One point in the factory	700,000 Kyats	Environmental Management Team's Bo Da (Myanmar) Fashion Company Limited
Water Quality	pH, DO, BOD, COD,TDS, Temp, Oil and Grease, Chlorine, Arsenic	Biannually monitoring	Final discharge point of factory drainage	300,000 Kyats	Environmental Management Team's Bo Da (Myanmar) Fashion Company Limited
Noise	Noise level in decibel (dBA)	Once per Month	Point in the factory	300,000 Kyats	Environmental Management Team's Bo Da (Myanmar) Fashion Company Limited
Waste Generation	Solid waste, Liquid waste and Hazardous waste	Weekly	Recycle house and waste house and at the factory office	50,000 Kyats	Environmental Management Team's Bo Da (Myanmar) Fashion Company Limited
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory	500,000 Kyats	Environmental Management Team's Bo Da (Myanmar) Fashion Company Limited
Light intensity	Illuminance	Monthly	At the production line (especially cutting and QC)	50,000 Kyats	Environmental Management Team's Bo Da (Myanmar) Fashion Company Limited
Decommissioning Phase					
Air quality	SO2, NO2, CO, CO2, PM2.5, PM10	One time during this phase	One point in the production area	1,000,000 Kyats	Land Owner
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	200,000 Kyats	Land Owner
Rehabilitation	Recovering and Revegetation		All decommissioning area		Land Owner

6.4. CORPORATE SOCIAL RESPONSIBILITY (CSR) PLAN

The CSR activities have the objective to uplift quality of life and gain favorable relations from all communities in the operation area. The CSR program for Bo Da (Myanmar) Fashion Company Limited textile factory consists of three main sectors; Health, Education and Community Development Sector. CSR activities are conducted in compliance with MIC's guideline for implementation of CSR program.

Bo Da (Myanmar) Fashion Company Limited will contribute 2% of our Net Profit to social welfare activities that will help society and country of Myanmar. Our social welfare activities shall include training of our employees such as on job training to be more qualified, language (Chinese) training on weekends with experienced teachers and providing necessary healthcare such as medical checkups and giving proper medical knowledge about deceases and its prevention. Part of our CSR activity such as donations will also contribute to public school around our factory Table 6-3.

Table 6-3 CSR plan at Bo Da (Myanmar) Fashion Company Limited

No	Particle	Contribution
1	Public school	0.5%
2	Non-profit training	1
3	Employees healthcare	0.5%

6.4.1. Public School

We will contribute 0.5% of our net profit to the public school near the factory to be a part of creating the better community. We will also work together with the school to understand more about the needs and we will also ensure that our contributions will be used in the most effective and efficient way for the society.

6.4.2. Non-profit Training

We will contribute 1% of our net profit for the trainings of our Employees. Our trainings include job-related trainings, language trainings and safety trainings. The main objective of our trainings are that we want our garment with their work but also improving their other skills such as language and promoting knowledge about safety measures and occupational health employees to be not only become more productive and more qualified.

6.4.3. Healthcare

One of our main concern is the well-being of our employees. We will contribute 0.5% of our net profit for the healthcare which includes medical checkup for the employees and providing health education to our workers.

6.5. CAPACITY BUILDING AND TRAINNING PLAN

The emergency preparedness is vital, as quick, and correct response is necessary in case of emergency to reduce injuries, harm, and other damage. Care should be given for during processing

activities in order to prevent synthetic errors and accidental cases (e.g., electricity shock and fire hazards).

The emergency response plans should be established for handling all foreseeable emergencies in the workplace and must provide the following;

6.5.1. Assignment of responsibilities

All senior staff such as a line/production manager or safety officer should be assigned to lead the emergency response team and charged with the duties of (1) assessing the emergency and taking necessary actions (2) overseeing the implementation of the emergency response plan (3) organizing regular drill (4) ensuring all emergency equipment is well maintained.

6.5.2. Emergency procedures

Emergency procedures are operating instructions for employees to follow in emergency case About work safety in the concerned processing, the management team should

a) Identify and list out all possible emergency situations in the workplace
b) Assess the effects and impacts of the emergency situations
c) Establish emergency response plans
d) Provide and maintain emergency equipment and other necessary resources
e) Ensure that staff are familiarized with the arrangements in case of emergencies by providing procedural instructions and employee training and organizing drills

6.5.3. Training for Emergencies

The type, amount and frequency of training varies, depending upon the task's employees are expected to perform. Although training must be provided to employees at least annually, safety meetings and drills should be conducted at more frequent intervals.

Regardless of the specific type of facility, training should include, though not be limited to the following;

- Hazard recognition and prevention (fire, explosion, etc.)
- Proper use of fire extinguishers
- Emergency reporting procedures
- Preventive maintenance
- Hazardous materials spill response
- First Aid

6.5.4. Fire Prevention and Protection

The fire prevention and protection program must address the following topics:

Prevention; policies, practices and procedures designed to keep the conditions necessary for a fire from coming together

- Hot work permits
- Lockout/tag out policies
- Design specifications for storage of flammable materials

Severity reduction; policies, practices and procedures designed to reduce the spared of fire and end the fire.

- Emergency plans
- Alarm systems
- Portable fire extinguishers
- Fire Protection Equipment

Cleanup; policies, practices and procedures designed to return the affected area to an operational level and reduce other losses created by improper cleanup

- First aid
- Removal of debris to an appropriate waste site
- Equipment and facility repair

6.5.5. Fire Protection Equipment

1. Explosion Suppression Systems: Explosion suppression systems should be used in unusually hazardous areas such as elevator legs, boots, and head, or in areas such as bins, distributors, and tanks.

2. Portable Fire Extinguishers: All buildings within a facility must have fully charged and operable portable fire extinguishers. If employees are expected to use portable extinguishers or other firefighting equipment against incipient fires, they must be trained to use the equipment. Training must include the following:
   - Correct type of extinguisher to use on different classes of fire
   - Proper techniques for use of the equipment to extinguish a fire
3. Standpipes and Hoses: All areas within a facility that are above 75 feet from ground level and in which combustible materials other than grain are stored should have wet or dry standpipes and hoses installed.

4. Automatic Sprinkler Systems: Automatic sprinkler systems are recommended in areas containing combustible materials.

5. Fire Hydrants: All grain and feed mill facilities should have adequate public or private fire hydrants on site. Each fire hydrant should have an adequate water supply.

6.5.6. Fire Safety and Evacuation Plan

Fire Evacuation plans should include the following information

- Emergency escape routes must be clearly shown on floor plans and workplace maps
- Employers must know that their employees know the emergency escape routes
- Procedures for employees who must remain to operate critical equipment before evacuating
- Identification and assignment of personnel responsible for rescue or emergency medical aid

Fire Safety Plans should include the following information:

1. Procedure for reporting a fire or other emergency
2. Site plans indicating the following

- The Occupancy assembly point
- The locations of fire hydrants
- The normal routes of fire department vehicles access

3. Floor Plans identifying the locations of the following
   - Exits
   - Primary evacuation routes
   - Secondary evacuation routes
   - Accessible egress routes
   - Areas of refuge
   - Exterior area for assisted rescue
   - Manual fire alarm boxes
   - Portable fire extinguishers
   - Occupant-use hose stations
   - Fire alarm annunciators and controls

The following American National Fire Fighting Association (NFFA) Standards must be following.

Table 6-4 American National Fire Fighting Association (NFFA) Standards

No.	Parameters	Proposed Capacity	Remark
1	Fire water flow	14 bars	
2	Deluging rate	12.0 liters/m2/min	
3	Foam rate	10.0 liters/m2/min	
4	Maximum water pressure	190 liters/min	For storage area

Emergency evacuation Drill: An exercise performed to train staff and occupants and to evaluate their efficiency and effectiveness in carrying out emergency excavation procedures

Employee Training and Response Procedures: Employee shall be trained in the fire emergency procedure described in their fire evacuation and fire safety plans and training should be based on these plans;

Frequency: Employee shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation and at least annually thereafter. Records shall be kept and made available to the fire code official upon request.

Employee Training Program: Employee shall be trained in fire prevention, evacuation and fire safety in accordance with the following sections.

Fire Prevention Training - Employee shall be apprised of the fire hazards of the materials and processes to which they are exposed. Each employee shall be instructed in the proper procedures for preventing fires in the conduct of their assigned duties

Evacuation Training – Employees shall be familiarized with the fire alarm and evacuation signals, their assigned duties in the event of an alarm or emergency, evacuation routes, areas of refuge, exterior assembly areas and procedures for evacuation

Fire Safety Training – Employee assigned fire-fighting duties shall be train Toiled to know the locations and proper use of portable fire extinguishers or other manual fire-fighting equipment and the protective clothing or equipment required for its safe and proper use.

6.5.7. Site Fire Control

1. Alert other people through fire alarm
2. If small, control using an extinguisher
3. Contact fire brigade if not under immediate control
4. Attend to human life in immediate danger
5. For electrical fires turn off power before fighting
6. Once out of the building, stay out. Do not allow people to go back into the burning building to collect valuables. While evacuating the building, close doors (but do not lock) to slow down the spread of fire
7. Obey all instructions
8. Proceed to an emergency evacuation area (Muster Point)

6.5.8. Employee Information and Training

Employees must be informed about any operations in their work area where hazardous chemicals or materials are present. They must also be informed about the locations and availability of the hazard communication program, list of chemicals and SDSs. Employees must receive training on the following:

- Methods for detecting the presence or release of a hazardous chemical, such as monitoring devices and the visual
- appearance or odor of the chemical
- Physical and health hazards of chemicals in their work area
- How to protect themselves using work practices, emergency procedures and personal protective equipment
- How to interpret the information on the labels and MSDS.

6.5.9. Health and Safety Training Plan for Worker

Health and Safety Training plan currently used and provided in Bo Da (Myanmar) Fashion Company Limited to all employees and workers by trainings internally and externally. Specific trainings are recommended and conducted according to the health and safety guidelines to enhance worker's health and to prevent all potential risks and hazards might occur in the factory. All required trainings related to health and the respective departments propose safety or operational parts, top management makes decision and HR organizes and conducts the trainings.

Table 6-5 Training Plan Used in Bo Da (Myanmar) Fashion Company Limited

No.	Health and Safety Guidelines	Training needs
1.	Management	General fire and emergency response plan, evacuation. All training materials and procedures covering health and safety for workers and employees
2.	Machine safety and noise management	Training for machine operations to all operators Use of PPE and proper use of any necessary protection

		Maintenance and Emergency procedures
3.	Environment safety	Understanding and training on recognition and maintenance not to affect environment
4.	Material storage and safety	Safety use of related devices and machines Use of necessary protections in working areas Sanitation work
5.	Fire Safety	Firefighting and evacuating training and practices Firefighting materials/ devices use
6.	First Aid	first aid / CPR/ AED training from providers (Outsource) training on hazard of pathogens

6.5.10. Emergency Contact Number of Hlaing Thar Yar Township

Bo Da (Myanmar) Fashion Co., Ltd is located at Shwe Lin Ban Industrial Zone, Haling Thar Yar Township. The Emergency contact number of Haling Thar Yar township is presented in the following

Table 6-6.

Table 6-6 Emergency Contact Number

Shwe Lin Ban Zone Fire Station	01-254000
Haling Thar Yar General Hospital	01-640814
Hlaing Thar Yar Police Station	01-645016

6.6. GRIEVANCE REDRESS MECHANISM (GRM)

People who live near the project affected area or stakeholders can complain about the problems and impacts that they suffer; they can complain though Grievance Committee, which includes the responsible persons of Bo Da (Myanmar) Fashion Company Limited representative from Shwe Lin Ban Industrial Zone and representative from General Administration Department (Hlaing Thar Yar Township). Small issues will be solved at the Grievance Committee stage and other unsolved problems will be submitted to higher responsible authorities and finally the responsible person decided by the court in legal terms. The following diagram (Figure 6-3) show steps of Grievance Redress Mechanism of Proposed Factory Project.

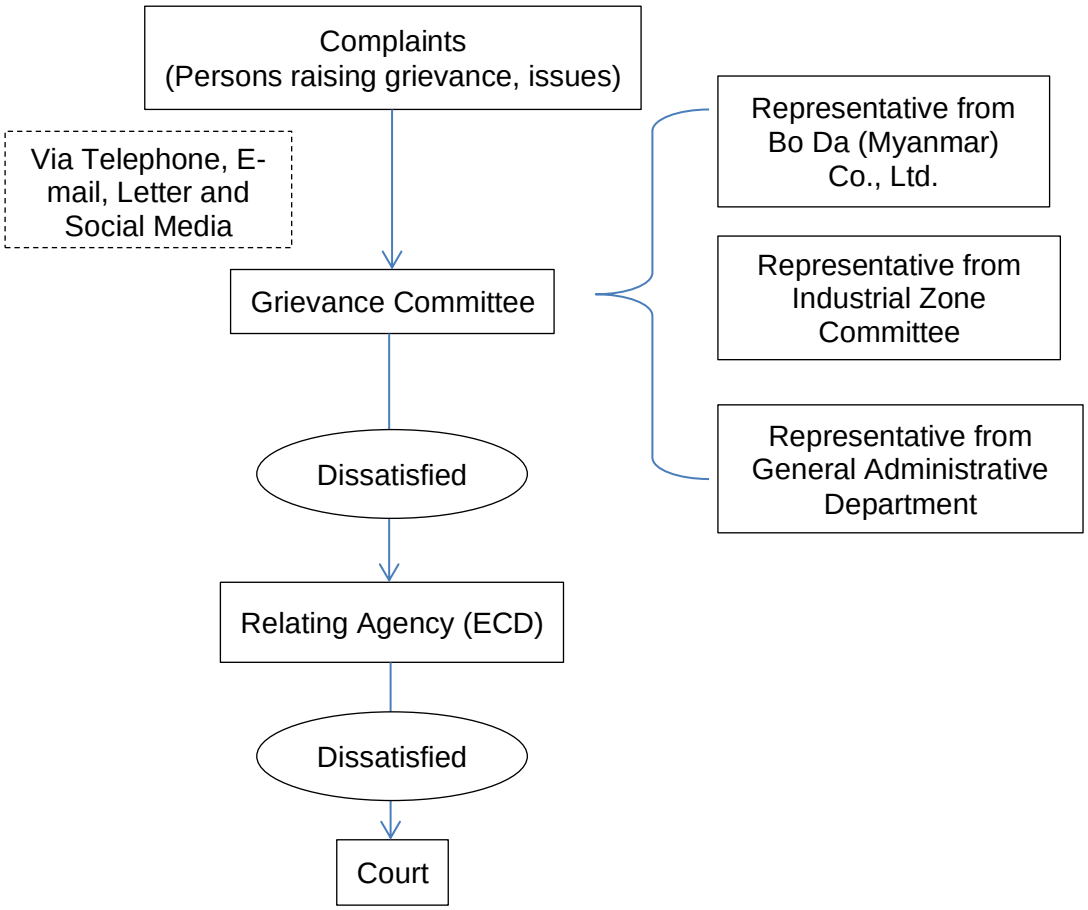


Figure 6-3 Grievance Redress Mechanism flow diagram

7. PUBLIC CONSULTATION

7.1. PUBLIC CONSULTATION PROCESS

This chapter presents results of public consultation and information disclosure conducted for the Bo Da (Myanmar) Fashion factory. Public participation can be considered as the required element of the EMP process. In this study various stakeholder‘s participation were made.

Public consultation during preparation of EMP report was conducted on 10, September 2019, following the EIA procedure.

The project’s stakeholders in this category are key officials or representatives of the regional and local authorities who have direct responsibilities for the administration of the EMP process for environmental and social clearance and issuing operation permits for proposed development projects.

For this factory, relevant key offices at the national level are Environmental Conservation Department (ECD) and Industry Supervision and Inspection Department.

Relevant key office at the regional level is Yangon City Development Committee (YCDC), General Administrative Department, Fire Department, Factories and General Labor Law Inspection Department, Public Health Department, Industrial Supervision and Inspection Department.

Public consultation carried out after the presentation on the project, followed by questions, answers and discussion. Htet Wai Aung presented EMP study and findings from Myanwei, after the presentation following question and answer section. Summary of public consultation meeting is presented. Figure 7-1 shown the consultation meeting photo. **(PCM attendant list and presentation power point slide are described in Appendix)**

Table 7-1 Summary of public consultation meeting

Time and Date	Tuesday,10 September 2019 10:30-12:30
Venue	Sky Hotel, Hlaing Tharyar Township, Yangon.
Agenda	Presentation on the Background Information of Project, Project Description, Impact Assessment, Environmental Mitigation Environmental Management Plan and Monitoring Plan Received and Answer from feedback of participants

7.2. RECOMMEND SUGGESTION AND COMMENT

After the presentation, the floor opened for questions and answers. There is no suggestion and comment for presentation and EMP draft report, because the project is sample manufacturing of garment (CMP basic). In addition,

Suggestion; U Kyaw Kyaw; Assistant supervisor (Environmental Conservation and Cleaning Department-Industrial Section) YCDC

- To compliance with YCDC procedure for solid waste management and disposed process
- To implement the sufficient septic tank design for workers

Suggestion; U Vial Ngaih Lian; Public Health Department

- Factory workers shall be aware for using the person protective equipment
- To provide long time care of medical checking for workers
- To provide the medicines for aliment and must be enough the medicines for injuries
- To provide the PPE to the employees who work in that factory and
- To provide the nurse who is not only reality nurse but also got the experience in concerning filed.

Suggestion; U Maung Win Zaw; YCDC

- To provide the waste tank for waste water and some used oils
- To plant the some plants in this factory and
- To make when they wasted at that time to get a bail



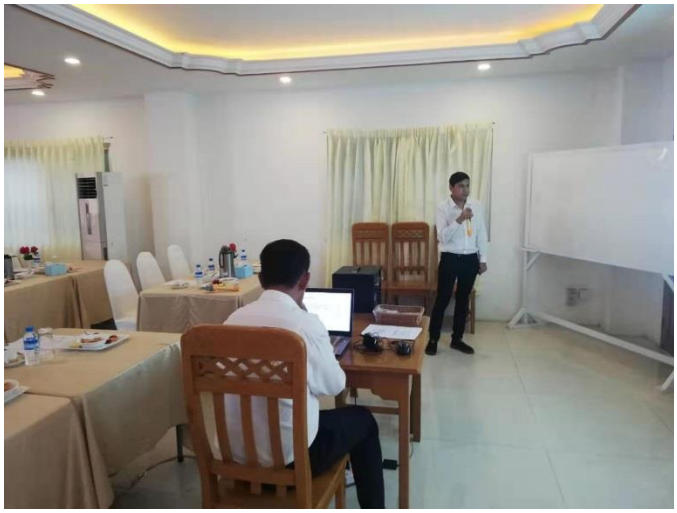




Figure 7-1 Public consultation meeting

8. CONCLUSION & RECOMMENTATION

8.1. CONCLUSION

Environmental Management Plan (EMP) has been prepared for Bo Da (Myanmar) Fashion Company Limited factory is located at Plot No. 239, Myay Taing Block No.25, Shwe Lin Ban Industrial Myo, Hlaing Thar Yar Township, Yangon region. The main objective of the study is focused specially on the required environmental management measures or creating environmentally friendly workplace. An EMP has been carried out for the factory according to the requirement of the proponent as it has been made for poly resin product manufacturing factory.

Thus, the factory management can take proper mitigation steps against adverse environmental impacts by following this EMP. The necessary measure to mitigate impact regarding different environmental parameter such as air, water, waste, noise has been proposed in this EMP.

However, all necessary implementation measures to mitigate adverse environmental, health and safety impacts have already been taken to meet National Environmental Quality (Emission) Guideline (2015). On the other, the factory has positive impacts in terms of environmental in the operation phase. Further, this will indirectly help in boosting up the national economic condition through foreign investment. An outline of EMP has been given in the present report to mitigate/enhance the impacts, which occurs during operation phase of the factory.

The effective implementation of the mitigation measures proposed will ensure towards good environmental management within the proposed project area. Furthermore, the environmental monitoring plan prepared as part of the EMP will provide adequate opportunities to address any residual impacts during the operation phase.

In conclusion, it has been figured out that, the proposed garment factory is going to generate local employment opportunities and enhance capabilities and working skills of employees. Consequently, their socio-economic standard is expected to be improved and undertaking corporate social responsibilities (CSR) as recommended. The study further concluded that positive impacts will be of immense benefit to the local community and national development as well.

8.2. RECOMMENTATION

This is recommended that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory
- Solid wastes and liquid wastes need to dispose according to YCDC rules and regulation
- Workers should be provided proper training and it should be ensured that workers use PPE during factory operation area.
- Daily, monthly and annual action plan shall be formulated based on this EMP and practiced at operation level.

- Keep full records of environmental management activities and present to annual independent third party environment audit.
- Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

Finally, the proponent should follow the comments and suggestions made by ECD after reviewing this EMP report. Once concerned authorities approve EMP, effective implementation of EMP by the project proponent is essential. The proponent should abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

9. REFERENCE

[1] General Administrative Department (Hlaing Thar Yar Township), Hlaing Thar Yar Township Data (2017).

[2] Hla Hla Aung, " Potential Seismicity of Yangon Region (Geological Approach), " Yangon Surface Displacement As Detected by Insar Time Series Analyisi" July 2011.

[3] Ministry of Natural Resources and Environmental Conversation (MONREC), "Environmental Impact Assessment Procedure" December 2015.

[4] Ministry of Natural Resources and Environmental Conversation (MONREC), "National Environmental Quality (Emission) Guidelines" December 2015.

APPENDIX A
Company Document's Bo Da (Myanmar) Fashion Company Limited

Form (5-B)

THE REPUBLIC OF THE UNION OF MYANMAR
YANGON REGION INVESTMENT COMMITTEE
ENDORSEMENT

No. 215 1
Date 14.3.19

ment No. YGN – 175/2019 Date 14 March 2019

This endorsement is issued by Yangon Region Investment Committee according to the section 25, sub-section (d) of the Myanmar Investment Law-

(1) Name of Investor MR. LI DONGLIANG

(2) Citizenship CHINESE

(3) Residence Address NO.10, LISHENG VILLAGE,DASHENGZHUANG, XINQIAO TOWN, JINGJIANG CITY, JIANGSU PROVINCE, PEOPLE'S REPUBLIC OF CHINA.

(4) Name and Address of Principle Organization -

(5) Place of Incorporation -

(6) Type of business MANUFACTURING OF GARMENT ON CMP BASIS

(7) Place(s) of investment Project PLOT NO. (239), MYAY TAING BLOCK NO. 25, SHWE LIN BAN INDUSTRIAL MYO , HLAING THAR YAR TOWNSHIP, YANGON REGION

(8) Amount of Foreign Capital US$ 0.637 MILLION

(9) Period for Foreign Capital to be brought in WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF ENDORSEMENT

(10) Total Amount of Capital (Kyat) EQUIVALENT IN KYAT OF US$ 0.637 MILLION

(11) Construction/ Preparation Period ONE YEAR

(12) Validity of Endorsement 30 YEARS

(13) Form of Investment WHOLLY FOREIGN OWNED

(14) Name of Company Incorporated in Myanmar BO DA (MYANMAR) FASHION COMPANY LIMITED

YRIC1752019

14/3/2019

(Phyo Min Thein)
Chairman

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှု ကော်မတီ

အတည်ပြုမိန့်

အတည်ပြုမိန့်အမှတ် ရကတ-၁၇၅/၂၀၁၉ ၂၀၁၉ ခုနှစ် မတ်လ ၁၄ ရက်

ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှု ကော်မတီသည် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှု ဥပဒေ ပုဒ်မ-၂၅ ပုဒ်မခွဲ (ဃ) အရ ဤအတည်ပြုမိန့်ကိုထုတ်ပေးလိုက်သည် -

(၁) ရင်းနှီးမြှုပ်နှံသူအမည် MR. LI DONGLIANG

(၂) နိုင်ငံသား CHINESE

(၃) နေရပ်လိပ်စာ NO.10, LISHENG VILLAGE, DASHENGZHUANG, XINQIAO TOWN, JINGJIANG CITY, JIANGSU PROVINCE, PEOPLE'S REPUBLIC OF CHINA

(၄) ပင်မအဖွဲ့အစည်းအမည်နှင့်လိပ်စာ -

(၅) ဖွဲ့စည်းရာအရပ် -

(၆) ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား CMP စနစ်ဖြင့် အဝတ်အထည်အမျိုးမျိုး ချုပ်လုပ်ခြင်းလုပ်ငန်း

(၇) ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ) မြေကွက်အမှတ် (၂၃၉)၊ မြေတိုင်းရပ်ကွက် အမှတ်-၂၅၊ ရွှေလင်ဗန်း စက်မှုမြို့၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

(၈) နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ အမေရိကန်ဒေါ်လာ ၀.၆၃၇ သန်း

(၉) နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ အတည်ပြုမိန့် ရရှိသည့် နေ့မှ ၁ နှစ် အတွင်း

(၁၀) စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) အမေရိကန်ဒေါ်လာ ၀.၆၃၇ သန်း နှင့် ညီမျှသော မြန်မာကျပ်ငွေ

(၁၁) တည်ဆောက်မှု/ ပြင်ဆင်မှုကာလ ၁ နှစ်

(၁၂) အတည်ပြုမိန့်သက်တမ်း ၃၀ နှစ်

(၁၃) ရင်းနှီးမြှုပ်နှံမှုပုံစံ ရာခိုင်နှုန်းပြည့်နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု

(၁၄) မြန်မာနိုင်ငံတွင် ဖွဲ့စည်းမည့် ကုမ္ပဏီအမည် BO DA (MYANMAR) FASHION COMPANY LIMITED

YRIC1752019

(ဖြိုးမင်းသိန်း)
ဥက္ကဋ္ဌ

THE REPUBLIC OF THE UNION OF MYANMAR
YANGON REGION INVESTMENT COMMITTEE
Plot No. 49, Seinlae May Street,
Kabar Aye Pagoda Road, Yankin Township, Yangon
Tel : 01-658263
Tel : 01-658264

The Republic of the Union of Myanmar ★ Yangon Region Investment Committee ★ No. 215 1 Date 14.3.19

Our ref : YRIC-1/E-175/2019(215 L)

Date : 14 March 2019

Subject: **Decision of the Yangon Region Investment Committee on the Endorsement for manufacturing of garment on CMP basis under the name Bo Da (Myanmar) Fashion Company Limited.**

Reference: Bo Da (Myanmar) Fashion Company Limited's letter dated 4th March 2019

1. The Yangon Region Investment Committee, at its meeting (4/2019) held on 6th March 2019, approved the Endorsement for investment in manufacturing of garment on CMP basis under the name of Bo Da (Myanmar) Fashion Company Limited's submitted by Mr.Li Dongliang (70%)and Mr.Yao Akang (30%), from the People's Republic of China as a wholly Foreign owned investment in accordance with the Myanmar Investment Law and Rules.

2. The terms and conditions of the Endorsement are stated in the following paragraphs:

(a) The term of an Endorsed project shall be thirty (30) years commencing from the date of the issuance of the Endorsement by the Yangon Region Investment Committee.

(b) The term of the Lease Agreement for land and buildings shall be initially ten (10) years and extendable for two times for ten(10) years commencing from the date of signing of the Lease Agreement between U Shin Myin @ U Sai Aung Myint (Lessor) and Bo Da (Myanmar) Fashion Company Limited (Lessee).

(c) The annual rent for the land and buildings shall be US$ 84700.71 (United States Dollar eighty-four thousand and seven hundred and seventy-one cents dollars only) calculated at the

rate of US$ 13 square meter per year measuring on total area of (1.610 acres) 6515.439 square meters.

(d) Bo Da (Myanmar) Fashion Company Limited which has obtained the Endorsement for enjoyment of exemptions and reliefs under sections 75,77 and 78 of the Chapter XVIII of Myanmar Investment Law, may submit the application form.

(e) Bo Da (Myanmar) Fashion Company Limited shall use its best efforts to achieve a timely realization of the work stated in the Endorsement application.

(f) Bo Da (Myanmar) Fashion Company Limited shall obey and respect the responsibilities of investors under section 65 of Myanmar Investment Law and Chapter XX of Myanmar Investment Rules.

(g) Bo Da (Myanmar) Fashion Company Limited shall carry out prevention, mitigation and monitoring of significant environmental impacts according to the type of investment activities in accordance with the relevant laws, rules, regulations and procedures.

(h) Bo Da (Myanmar) Fashion Company Limited shall submit to the Myanmar Investment Commission any transfer of shares or transfer of the business to any person during the investment period in accordance with section 72 of Myanmar Investment Law and rule 191of Myanmar Investment Rules.

(i) Bo Da (Myanmar) Fashion Company Limited,which has benefitted from the Endorsement or enjoyment of exemptions or reliefs, shall submit an annual report in the prescribed form to the Myanmar Investment Commission within three (3) months at the end of the financial year in accordance with rule 196 of Myanmar Investment Rules and shall publish a summary of the

report on its website or the Myanmar Investment Commission's website.

(j) Bo Da (Myanmar) Fashion Company Limited must, during the operation period under the Endorsement of the Yangon Region Investment Committee, submit its operating report quarterly in the prescribed form in accordance with rule 197 of Myanmar Investment Rules.

3. Bo Da (Myanmar) Fashion Company Limited shall carry out in accordance with the stipulations of the relevant Union Ministries, governmental department and governmental organizations to obtain license, permit or registration as per section 65(d) of Myanmar Investment Law.

4. Bo Da (Myanmar) Fashion Company Limited shall submit five (5) copies of all approvals, licences, permits and similar authorizations relevant to the initial implementation of the investment and the Lease Agreement for land and building to the Yangon Region Investment Committee.

14/3/2019

(Phyo Min Thein)
Chairman

Bo Da (Myanmar) Fashion Company Limited

cc: 1. Ministry of Office of the Union Government
2. Office of the Myanmar Investment Commission
3. Ministry of Home Affairs
4. Ministry of Natural Resources and Environmental Conservation
5. Ministry of Labour, Immigration and Population
6. Ministry of Industry
7. Ministry of Commerce
8. Ministry of Planning and Finance
9. Ministry of Investment and Foreign Economic Relations
10. Chairman, CMP Enterprises Supervision Committee
11. Director General, Department of Environmental Conservation

14. Director General, Department of Trade
15. Director General, Directorate of Investment and Company Administration
16. Director General, National Archives Department
17. Director General, Customs Department
18. Director General, Internal Revenue Department
19. Monitoring and Supervision Division , Directorate of Investment and Company Administration

APPENDIX B
Transitional Consultant Registration Certificate

REPUBLIC OF THE UNION OF MYANMAR
Ministry of Natural Resources and Environmental Conservation
CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION
(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 10048 Date 07 JUL 2017

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the person under Environmental Impact Assessment Procedure, Notification No. 616/2015.
(ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၅၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို လူပုဂ္ဂိုလ်အားထုတ်ပေးလိုက်သည်။)

(a)	Name of Consultant (အကြံပေးပုဂ္ဂိုလ်အမည်)	U Lin Htet Sein
(b)	Citizenship (နိုင်ငံသား)	Myanmar
(c)	Identity Card / Passport Number (မှတ်ပုံတင်/နိုင်ငံကူးလက်မှတ် အမှတ်)	7/ Tha Ka Na (N) 101377
(d)	Address (ဆက်သွယ်ရန်လိပ်စာ)	No.54, Room No.704, Waizayantar Tower, Waizayantar Road, Thingangyun Township, Yangon. lin.tbs@gmail.com , 09 421137569
(e)	Organization (အဖွဲ့အစည်း)	Total Business Solution Co., Ltd.
(f)	Type of Consultancy (အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)	Person
(g)	Duration of validity (သက်တမ်းကုန်ဆုံးရက်)	31 March 2018

Director General
Environmental Conservation Department
Ministry of Natural Resources and Environmental Conservation

Areas of Expertise Permitted
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Geology and Soil

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended for nine months from (1.4.2019) to (31.12.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၉) ရက်နေ့မှ (၃၁.၁၂.၂၀၁၉) ရက်နေ့အထိ (၉)လသက်တမ်း တိုးမြှင့်သည်။
Soe Naing 10.6.2019
For Director General
(Soe Naing, Director)
Environmental Conservation Department

APPENDIX C
Mornitoring Result

Light Result

MYANWEI CONSULTING GROUP
Plot No. (36, 38), Room No. 9A, 9th floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar.
Office: (+95) 1 526574, Mobile: (+95) 9775405118, 9792528677, 9449251888; Website: www.myanweiconsulting .com

Project Name:	Bo Da (Myanmar) Fashion Company Limited
Project Location:	Plot No.239, Myay Taing Block No. 25, Shwe Lin Ban Industrial Zone, Hlaing Thar Yar Township, Yangon region.
Sampling Date:	27 May, 2019
Sampling Time:	8:00 Am to 4:00 pm
Sampling Condition:	Normal
Sampling By:	Environmental Team Represented By Myanwei Consulting Group Company Limited

Instrument	Type	Sampling Rate	Location
Uni-T (Luminometer)	UT380 Series	100 times/second	16°54'38.58"N 96° 3'59.85"E

No	Measure area	Unit	Result	Standard	Remark
1	Sewing Area	Lux	590	400	Above
2	Iron Area	Lux	1046	900	Above
3	Packing Area	Lux	1280	900	Above
4	Cutting Area	Lux	600	1000	Below

IESNA Lighting Handbook

Department	Type of Light	Wattage of Light	Lux Level
Fabric store	Fluorescent tube light	40 W	300
Sewing floor	LED tube light	20 W (T8)	400
Cutting floor	LED tube light	22 W (T8)	1000
Finishing	LED tube light	28 W (T8)	600
Inspection points	LED tube light	28 W (T8)	900 (except 1500 at audit tables)
Sampling	LED tube light	22 W (T8)	500
Office areas	Fluorescent tube light	36 W (T)	300

Lin Htet Sein
Environmental Consultant
Myanwei Consulting Co., Ltd.

Noise result

MYANWEI CONSULTING GROUP

Plot No. (36, 38), Room No. 9A, 9th floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar.
Office: (+95) 1 526574, Mobile: (+95) 9775405118, 9792528677, 9449251888; Website: www.myanweiconsulting .com

Project Name:	Bo Da (Myanmar) Fashion Company Limited
Project Location:	Plot No.239, Myay Taing Block No. 25, Shwe Lin Ban Industrial Zone, Hlaing Thar Yar Township, Yangon region.
Sampling Date:	27 May, 2019
Sampling Time:	8:00 Am To 4:00 pm
Sampling Condition:	Normal
Sampling By:	Environmental Team Represented By Myanwei Consulting Group Company Limited

Instrument	Type	Sampling Rate	Location
Digital Sound Level Meter	GM 1356 USB	30 -130 dB	16°54'38.9"N 96°03'59.0"E

No	Place	Unit	Result	Standard	Remark
1	Building (A) Ground	dBA	76.51	70 dBA	Slightly Above
2	Building (A) 1st Floor	dBA	70.92	70 dBA	Normal
3	Building (B) 1st Floor	dBA	76.4	70 dBA	Slightly Above

National Environmental Quality (Emission) Guideline

Receptor	One Hour Laeq (dBA)	Guideline value
	Daytime	Nighttime
	7:00 – 22:00 (10:00 – 22:00 for Public holidays)	22:00 – 07:00 (22:00 – 10:00 for Public holidays)
Residential, Institutional, Educational	55	45
Industrial, Commercial	70	70

Lin Htet Sein
Environmental Consultant
Myanwei Consulting Co., Ltd.

Monitoring Graph

Water Result

TECH LABORATORY

ISO 9001:2015 Cert. No. 688600

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg: (Civil), Dip S.E(Delft) Lecturer of YIT (Retd). Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 1 of 1

W0519 425

WATER QUALITY TEST RESULTS FORM

Client	Boda Myanmar Fashion
Nature of Water	Raw Water
Location	Hlaing Thar Yar, Shwe Lin Ban.
Date and Time of collection	11.5.2019
Date and Time of arrival at Laboratory	13.5.2019
Date and Time of commencing examination	14.5.2019
Date and Time of completing	16.5.2019

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
pH	6.5		6.5 - 8.5
Colour (True)	Nil	TCU	15 TCU
Turbidity	2	NTU	5 NTU
Conductivity	484	micro S/cm	
Total Hardness	98	mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness	66	mg/l as $CaCO_3$	
Magnesium Hardness	32	mg/l as $CaCO_3$	
Total Alkalinity	132	mg/l as $CaCO_3$	
Phenolphthalein Alkalinity	Nil	mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)	Nil	mg/l as $CaCO_3$	
Bicarbonate (HCO_3)	132	mg/l as $CaCO_3$	
Iron	0.25	mg/l	0.3 mg/l
Chloride (as CL)	82	mg/l	250 mg/l
Sodium chloride (as NaCL)	135	mg/l	
Sulphate (as SO_4)	28	mg/l	200 mg/l
Total Solids	245	mg/l	1500 mg/l
Suspended Solids	3	mg/l	
Dissolved Solids	242	mg/l	1000 mg/l
Manganese	Nil	mg/l	0.05 mg/l
Phosphate	Nil	mg/l	
Phenolphthalein Acidity	3	mg/l	
Methyl Orange Acidity	Nil	mg/l	
Salinity	0.2	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by
Signature: Zaw Hein Oo
Name: B.Sc (Chemistry)
Sr. Chemist
ISO TECH Laboratory

BODO

Approved by
Signature: Soe Thit
Name: B.E (Civil) 1980,
Technical Officer
ISO TECH Laboratory

(a division of WEG Co.,Ltd.)

ISO TECH LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg: (Civil), Dip S.E(Delft) Lecturer of YIT (Retd). Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

ISO 9001:2015 Cert. No. 688600

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Issue No - 1.0/Page 1 of 1

W0519 426

WATER QUALITY TEST RESULTS FORM

Client	Boda Myanmar Fashion
Nature of Water	Treated Water
Location	Hlaing Thar Yar, Shwe Lin Ban.
Date and Time of collection	11.5.2019
Date and Time of arrival at Laboratory	13.5.2019
Date and Time of commencing examination	14.5.2019
Date and Time of completing	16.5.2019

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
pH	6.2		6.5 - 8.5
Colour (True)	Nil	TCU	15 TCU
Turbidity	Nil	NTU	5 NTU
Conductivity	30	micro S/cm	
Total Hardness	6	mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness	4	mg/l as $CaCO_3$	
Magnesium Hardness	2	mg/l as $CaCO_3$	
Total Alkalinity	10	mg/l as $CaCO_3$	
Phenolphthalein Alkalinity	Nil	mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)	Nil	mg/l as $CaCO_3$	
Bicarbonate (HCO_3)	10	mg/l as $CaCO_3$	
Iron	0.05	mg/l	0.3 mg/l
Chloride (as CL)	3	mg/l	250 mg/l
Sodium chloride (as NaCL)	5	mg/l	
Sulphate (as SO_4)	Nil	mg/l	200 mg/l
Total Solids	16	mg/l	1500 mg/l
Suspended Solids	1	mg/l	
Dissolved Solids	15	mg/l	1000 mg/l
Manganese	Nil	mg/l	0.05 mg/l
Phosphate	Nil	mg/l	
Phenolphthalein Acidity	3	mg/l	
Methyl Orange Acidity	Nil	mg/l	
Salinity	0.1	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by
Signature: Hein
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist
ISO TECH Laboratory

B U Da

Approved by
Signature: (m.p)
Name: Soe Thit
B.E (Civil) 1980,
Technical Officer
ISO TECH Laboratory

(a division of WEG Co.,Ltd.)

APPENDIX D
Public Consultation Meeting

Attended List

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း

နေ့စွဲ - ၁၀ ရက်၊ စက်တင်ဘာလ၊ ၂၀၁၉ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
1.	Daw Tin Moe Aye	HR (MGR)	BO DA (MYANMAR)	09960515014	
၉.	U Kyaw Lin Htike	Audit	Bo DA (Myanmar)	09-970061880	
3	U Aung Moe Taw	E.p (Super)	BoDa (Myanmar)	09-776414544	
4	U Htun May Aung	E.p (MGR)	〃 〃	09-970244778	
5	Daw Ohnmar Myint	Compliance Staff	Handa (Yangon)	09-952676849	
6.	Daw Sandar Myo	HR Manager	Handa (Yangon) Garment	09-795285107	
7.	Nang Mya Aye	Assistant G. M	Handa (Yangon) Garment	09-428328477	
8	မောင်မောင် Win Zaw	Y.C.D.C. ဝန်ထမ်း	Y.C.D.C.	09-423780694.	
9	U Val Ngaih Cian	THA	Public Health Dept	095062446	

တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း

နေ့စွဲ - ၁၈ ရက်၊ စက်တင်ဘာလ၊ ၂၀၁၉ ခုနှစ်

စဉ်	အမည်	ရာထူး	ဌာန / အဖွဲ့အစည်း	ဆက်သွယ်ရန်	လက်မှတ်
၁၀	U Kyaw Kyaw	Assistan Supervisor.	YCDC. DCCD.	09509857 4.	
၁၁	Daw Mmi Mmi Swe	Supervisor	D.I.S.I	09254007967	

Presentation Slides

Bo Da (Myanmar) Fashion Co., Ltd ၏ (CMP) စနစ်ဖြင့် အင်္ဂတ်အထည်အမျိုးမျိုးထုတ်လုပ်ခြင်းလုပ်ငန်း

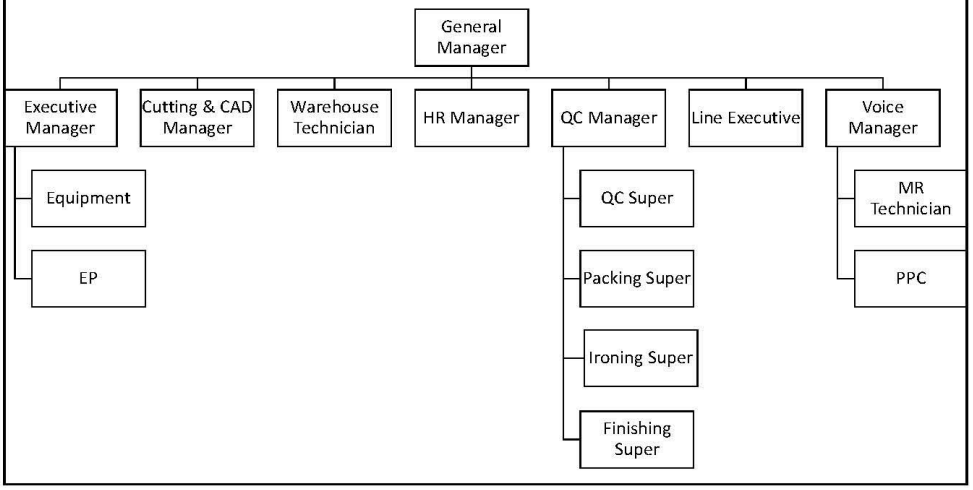
ပတ်ဂန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အစီရင်ခံစာ (မူကြမ်း) အတွက် သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးပွဲ အခမ်းအနား။

ဝဂရက်၊ စက်တင်ဘာလ၊ ၂၀၁၉ ခုနှစ်။
Preparaed By
Myanwei Consulting Co., Ltd.

အစည်းအဝေး အကြောင်းအရာ

Bo Da (Myanmar) Fashion Company Limited

Bo Da (Myanmar) Fashion Co., Ltd. ၏ ဖွဲ့စည်းပုံ



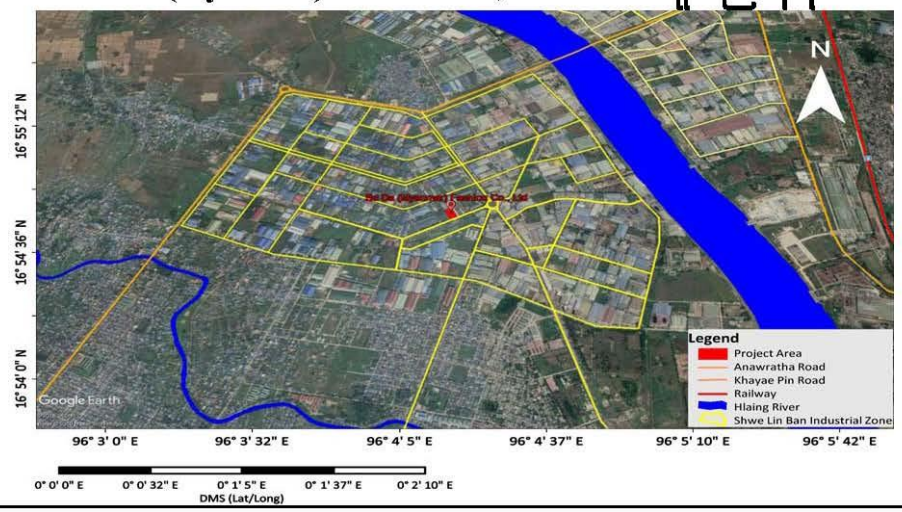
Bo Da (Myanmar) Fashion Company Limited

လုပ်ငန်းအမျိုးအစား	(CMP) လခစားစနစ်ဖြင့် အင်္ကျီတ်အထည်အမျိုးမျိုးထုတ်လုပ်ခြင်းလုပ်ငန်း
ခွင့်ပြုမိန့်အမှတ်	(ခွင့်ပြုမိန့်အမှတ်- ရက-၁/၃/၄ (အီးအိုင်အေ) (၆၂၁/၂၀၁၉) ၂၀၁၉ ခုနှစ်၊ ဇူလိုင်၊ ၁၂ ရက်။
ရင်းနှီးမြှုပ်နှံမှု	၁၀၀ ရာခိုင်နှုန်း နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု
မြေဧရိယာ	မြေဧရိယာစုစုပေါင်း = ၁.၆၁၀ ဧက(၆၅၁၅.၄၃၉ စတုရန်းမီတာ)
အဆောက်အဦး	(၆,၁၃၆ စတုရန်းမီတာ) အဆောက်အဦး = ၁ လုံး (၃၇၂ စတုရန်းမီတာ) အဆောက်အဦး = ၁ လုံး
ရင်းနှီးမြှုပ်နှံသည့်ကာလ	နှစ် ၂၀ ရင်းနှီးမြှုပ်နှံမှု
စက်ရုံလိပ်စာ	မြေကွက်အမှတ် (၂၃၉)၊ မြေတိုင်းရပ်ကွက်အမှတ် (၂၅)၊ ရွှေလင်ပန်းစက်မှုမြို့၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။

လုပ်ငန်းလည်ပတ်ရန်အခြေခံလိုအပ်ချက်များ

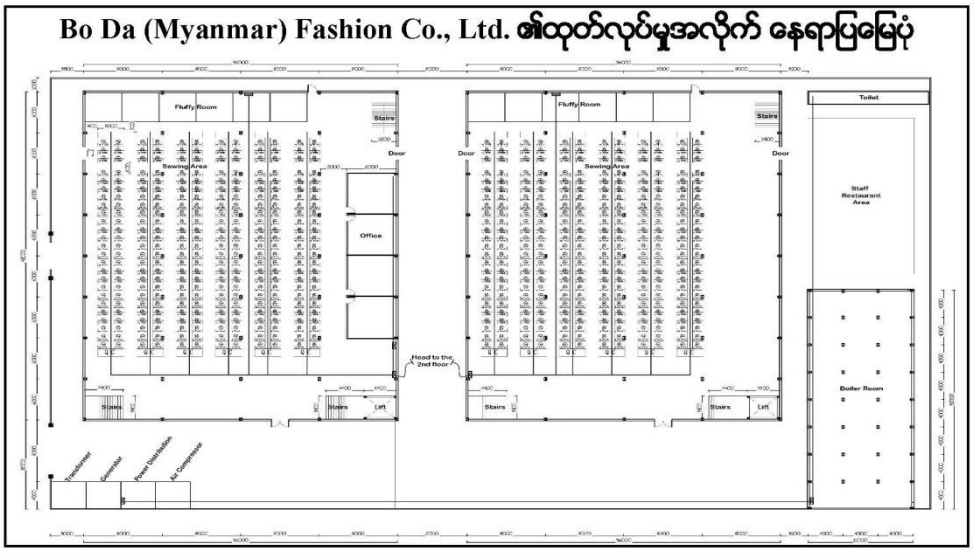
ရေအသုံးပြုမှုအခြေအနေ	
ရေအရင်းအမြစ်	အဝီစိတွင်းရေ (၁ တွင်း)
အဓိကလိုအပ်ချက်	
လက်ရှိလူဦးရေ	၈၁၆ ယောက်
အဓိကကုန်ကြမ်း	ပိတ်စ၊ ချည်မွှေးနှံ၊ မျှော်ကြိုးပြား၊ ကြယ်သီး။
နှစ်စဉ်ထွက်ကုန်ပစ္စည်းပမာဏ	နှစ်စဉ် ပျမ်းမျှ (၂,၁၇၀,၄၂၇) ထည်

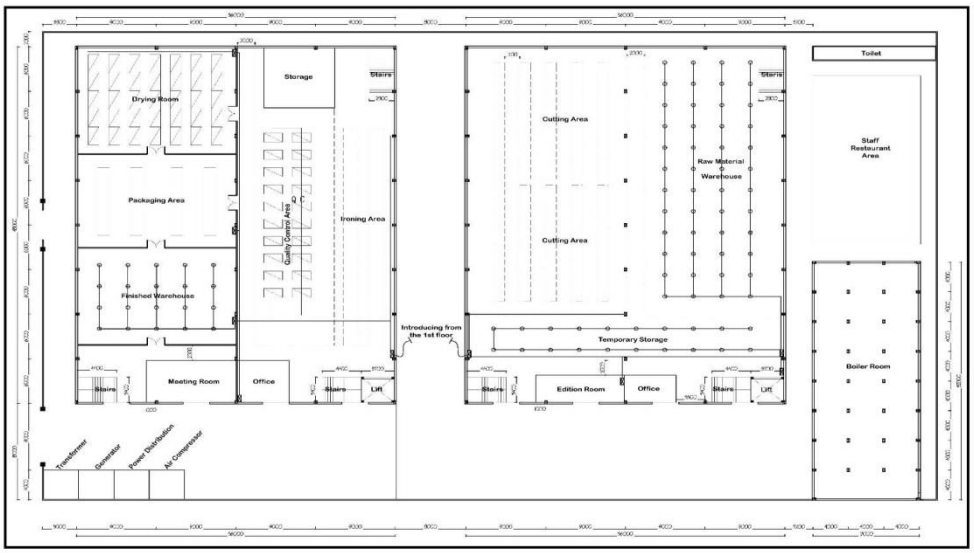
Bo Da (Myanmar) Fashion Co., Ltd. ၏ စက်ရုံတည်နေရာ



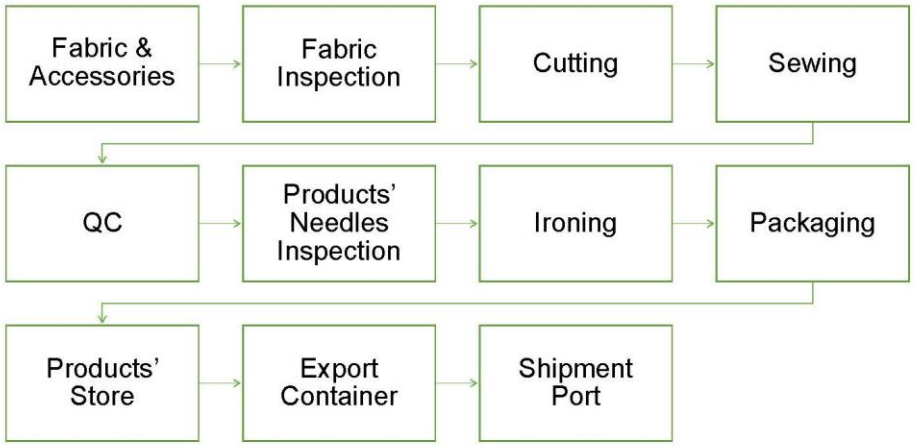
Bo Da (Myanmar) Fashion Co., Ltd. ၏ထုတ်လုပ်မှုအလိုက် နေရာပြမြေပုံ

1. Tranformer 2. Generator 3. Power Distribution 4. Air Compressor


Bo Da (Myanmar) Fashion Co., Ltd. ဓါတုတ်လုပ်မှုအလိုက် နေရာပြမြေပုံ
Fluffy Room
Stairs
Door
Sewing Area
Office
Head to the 2nd floor
Toilet
Staff Restaurant Area
Boiler Room
Lift
Transformer
Generator
Power Distribution
Air Compressor


Storage
Drying Room
Packaging Area
Finished Warehouse
Quality Control Area
Ironing Area
Meeting Room
Office
Introducing from the 1st floor
Cutting Area
Raw Material Warehouse
Temporary Storage
Edition Room
Toilet
Staff Restaurant Area
Boiler Room
Transformer
Generator
Power Distribution
Air Compressor

Bo Da (Myanmar) Fashion Co., Ltd. ၏ထုတ်လုပ်ပုံအဆင့်ဆင့်



Bo Da (Myanmar) Fashion Co., Ltd. ၏ထုတ်လုပ်ပုံများ

Warehouse

Cutting

Sewing

Sewing

Finishing

Packing

Bo Da (Myanmar) Fashion Co., Ltd. ၏ထုတ်ကုန်ပစ္စည်းများ

Coat Without Padding

Coat With Padding

Men's Jacket Without Padding

Men's Jacket With Padding

Men's Pant

Lady's Vest

စက်ရုံ၏ဆောင်ရွက်ချက်များ

ပန်ထမ်းများအတွက်ရေပြင်ဆင်ထားရှိမှု

ဝန်ထမ်းများအတွက်စားသောက်ဆောင်

ဝန်ထမ်းများအတွက် Toilet Facilities

ဝန်ထမ်းများအတွက်ဆေးပေးခန်းထားရှိမှု

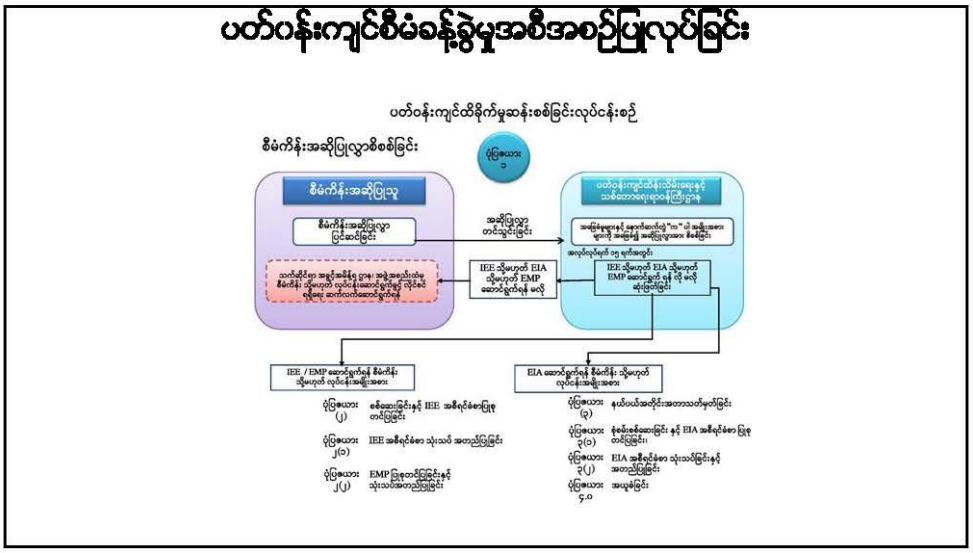
Bo Da (Myanmar) Fashion Co., Ltd. ၏ လျှပ်စစ်သုံးစွဲမှု

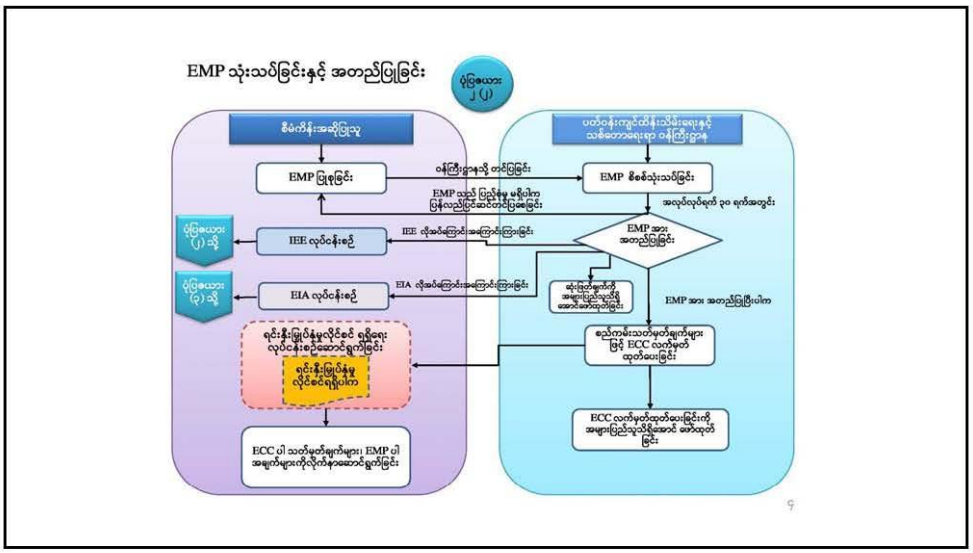


မီးဘေးအန္တရာယ်အတွက်သင်တန်းပို့ချနေမှုများ

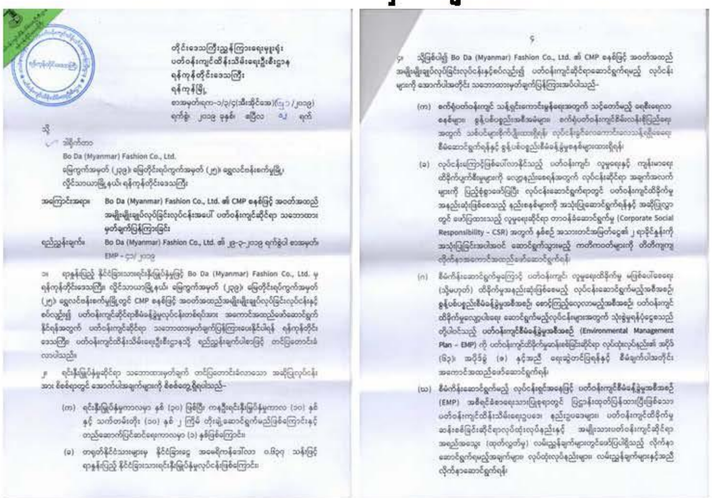
ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်အား မိတ်ဆက်ခြင်း

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ပြုလုပ်ခြင်း





သဘောထားမှတ်ချက်



တိုင်းဒေသကြီးညွှန်ကြားရေးမှူးရုံး
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ရန်ကုန်တိုင်းဒေသကြီး
ရန်ကုန်မြို့
စာအမှတ်၊ ရက-၁/၃/၄(အီးအိုင်အေ)(၅၁၁ / ၂၀၁၉)
ရက်စွဲ၊ ၂၀၁၉ ခုနှစ်၊ ဧပြီလ ၈၂ ရက်

သို့
အိုက်တာ
Bo Da (Myanmar) Fashion Co., Ltd.
မြေကွက်အမှတ် (၂၃၉)၊ မြေတိုင်းရပ်ကွက်အမှတ် (၂၅)၊ ရွှေလင်ပန်းစက်မှုမြို့၊
လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

အကြောင်းအရာ။ Bo Da (Myanmar) Fashion Co., Ltd. ၏ CMP စနစ်ဖြင့် အဝတ်အထည် အမျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်းအပေါ် ပတ်ဝန်းကျင်ဆိုင်ရာ သဘောထားမှတ်ချက်ပြန်ကြားခြင်း

ရည်ညွှန်းချက်။ Bo Da (Myanmar) Fashion Co., Ltd. ၏ ၂၉-၃-၂၀၁၉ ရက်စွဲပါ စာအမှတ် EMP - ၄၁/ ၂၀၁၉

၁။ ရာနှုန်းပြည့် နိုင်ငံခြားသားရင်းနှီးမြှုပ်နှံမှုဖြင့် Bo Da (Myanmar) Fashion Co., Ltd. မှ ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်၊ မြေကွက်အမှတ် (၂၃၉)၊ မြေတိုင်းရပ်ကွက်အမှတ် (၂၅)၊ ရွှေလင်ပန်းစက်မှုမြို့တွင် CMP စနစ်ဖြင့် အဝတ်အထည်အမျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်းနှင့် စပ်လျဉ်း၍ ပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုလုပ်ငန်းတစ်ရပ်အား အကောင်အထည်ဖော်ဆောင်ရွက်နိုင်ရန်အတွက် ပတ်ဝန်းကျင်ဆိုင်ရာ သဘောထားမှတ်ချက်ပြန်ကြားပေးနိုင်ပါရန် ရန်ကုန်တိုင်းဒေသကြီး ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ ရည်ညွှန်းချက်ပါစာဖြင့် တင်ပြတောင်းခံလာပါသည်။

၂။ ရင်းနှီးမြှုပ်နှံမှုဆိုင်ရာ သဘောထားမှတ်ချက် တင်ပြတောင်းခံလာသော အဆိုပြုလုပ်ငန်းအား စိစစ်ရာတွင် အောက်ပါအချက်များကို စိစစ်တွေ့ရှိရပါသည်-

(က) ရင်းနှီးမြှုပ်နှံမှုကာလမှာ နှစ် (၃၀) ဖြစ်ပြီး ကနဦးရင်းနှီးမြှုပ်နှံမှုကာလ (၁၀) နှစ်နှင့် သက်တမ်းတိုး (၁၀) နှစ် ၂ ကြိမ် တိုး၍ ဆောင်ရွက်မည်ဖြစ်ကြောင်းနှင့် တည်ဆောက်ပြင်ဆင်ရေးကာလမှာ (၁) နှစ်ဖြစ်ကြောင်း။

(ခ) တရုတ်နိုင်ငံသားများမှ နိုင်ငံခြားငွေ အမေရိကန်ဒေါ်လာ ဝ.၆၃၇ သန်းဖြင့် ရာနှုန်းပြည့် နိုင်ငံခြားသားရင်းနှီးမြှုပ်နှံမှုလုပ်ငန်းဖြစ်ကြောင်း။

၄

၃။ သို့ဖြစ်ပါ၍ Bo Da (Myanmar) Fashion Co., Ltd. ၏ CMP စနစ်ဖြင့် အဝတ်အထည် အမျိုးမျိုးချုပ်လုပ်ခြင်းလုပ်ငန်းနှင့်စပ်လျဉ်း၍ ပတ်ဝန်းကျင်ဆိုင်ရာဆောင်ရွက်ရမည့် လုပ်ငန်းများကို အောက်ပါအတိုင်း သဘောထားမှတ်ချက်ပြန်ကြားအပ်ပါသည်-

(က) စက်ရုံပတ်ဝန်းကျင် သန့်ရှင်းကောင်းမွန်ရေးအတွက် သင့်တော်မည့် ရေဆိုးရေလာစနစ်များ၊ စွန့်ပစ်ပစ္စည်းအစီအမံများ၊ စက်ရုံပတ်ဝန်းကျင်စိမ်းလန်းစိုပြည်ရေးအတွက် သစ်ပင်များစိုက်ပျိုးထားရှိရန်၊ လုပ်ငန်းခွင်ကောင်းသောသန့်ရှင်းရေး စီမံဆောင်ရွက်ရန်နှင့် စွန့်ပစ်ပစ္စည်းစီမံခန့်ခွဲမှုစနစ်များထားရှိရန်၊

(ခ) လုပ်ငန်းကြောင့်ဖြစ်ပေါ်လာနိုင်သည့် ပတ်ဝန်းကျင်၊ လူမှုရေးနှင့် ကျန်းမာရေး ထိခိုက်ပျက်စီးမှုများကို လျော့နည်းစေရန်အတွက် လုပ်ငန်းဆိုင်ရာ အချက်အလက်များကို ပြည့်စုံစွာဖော်ပြပြီး လုပ်ငန်းဆောင်ရွက်ရာတွင် ပတ်ဝန်းကျင်ထိခိုက်မှု အနည်းဆုံးဖြစ်စေသည့် နည်းစနစ်များကို အသုံးပြုဆောင်ရွက်ရန်နှင့် အဆိုပြုလွှာတွင် ဖော်ပြထားသည့် လူမှုရေးဆိုင်ရာ တာဝန်ခံဆောင်ရွက်မှု (Corporate Social Responsibility - CSR) အတွက် နှစ်စဉ် အသားတင်အမြတ်ငွေ၏ ၂ ရာခိုင်နှုန်းကို အသုံးပြုခြင်းအပါအဝင် ဆောင်ရွက်သွားမည့် ကတိကဝတ်များကို တိတိကျကျ လိုက်နာအကောင်အထည်ဖော်ဆောင်ရွက်ရန်၊

(ဂ) စီမံကိန်းဆောင်ရွက်မှုကြောင့် ပတ်ဝန်းကျင်၊ လူမှုရေးထိခိုက်မှု မဖြစ်ပေါ်စေရေး (သို့မဟုတ်) ထိခိုက်မှုအနည်းဆုံးဖြစ်စေမည့် လုပ်ငန်းဆောင်ရွက်မည့်အစီအစဉ်၊ စွန့်ပစ်ပစ္စည်းစီမံခန့်ခွဲမှုအစီအစဉ်၊ စောင့်ကြည့်လေ့လာမည့်အစီအစဉ်၊ ပတ်ဝန်းကျင်ထိခိုက်မှုလျော့ပါးရေး ဆောင်ရွက်မည့်လုပ်ငန်းများအတွက် သုံးစွဲမှုရန်ပုံငွေသည် တို့ပါဝင်သည့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (Environmental Management Plan - EMP) ကို ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၏ အပိုဒ် (၆၃)၊ အပိုဒ်ခွဲ (စ) နှင့်အညီ ရေးဆွဲတင်ပြရန်နှင့် စီမံချက်ပါအတိုင်း အကောင်အထည်ဖော်ဆောင်ရွက်ရန်၊

(ဃ) စီမံကိန်းဆောင်ရွက်မည့် လုပ်ငန်းရှင်အနေဖြင့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP) အစီရင်ခံစာရေးသားပြုစုရာတွင် ပြဋ္ဌာန်းထုတ်ပြန်ထားပြီးဖြစ်သော ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ၊ နည်းဥပဒေများ၊ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်းနှင့် အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များတွင်ဖော်ပြပါရှိသည့် လိုက်နာဆောင်ရွက်ရမည့်အချက်များ၊ လုပ်ထုံးလုပ်နည်းများ၊ လမ်းညွှန်ချက်များနှင့်အညီ လိုက်နာဆောင်ရွက်ရန်၊

သက်ရောက်မှုဆန်းစစ်ခြင်းရလဒ်များနှင့် ထိခိုက်မှုအဆင့်သတ်မှတ်ချက်များ

စီမံကိန်းပတ်ဝန်းကျင်အနေအထား

စဉ်	အကြောင်းအရာ	ဖော်ပြချက်
၁။	ကိုဩဒိနိတ်အမှတ်	မြောက်လတ္တီကျူ ၁၆°၅၉′၂၇.၇"နှင့် အရှေ့လောင်ဂျီကျူ ၉၆° ၃′၃၃.၈၃"
၂။	ရာသီဥတုအခြေအနေ	လှိုင်သာယာမြို့နယ် နှစ်စဉ်ပျမ်းမျှအမြင့်ဆုံးအပူချိန် ၃၂°C မှ အနိမ့်ဆုံးအပူချိန် ၂၄°C စုစုပေါင်း မိုးရေချိန်လက္ခ ၁၀၅.၅
၃။	စက်ရုံနေရာတွင်မြေအသုံးချမှု	စက်မှုလုပ်ငန်းနှင့်သက်ဆိုင်သောမြေအသုံးချမှုပုံစံ (စက်မှုဇုန်)
၄။	လမ်းပန်းဆက်သွယ်ရေး	ပုသိမ်လမ်း၊ ညောင်တုန်းလမ်းဧရာဝတီလမ်း။
၅။	အနီးဆုံးရေအရင်းအမြစ်	လှိုင်မြစ်
၆။	သစ်တောဧရိယာ	မရှိ
၇။	ကန့်သတ်ကာကွယ်ထားသော ဧရိယာ	မရှိ
၈။	တိုင်းတာမှုရလဒ်	❑ ဆူညံသံ တိုင်းတာခြင်း ❑ လေထုညစ်ညမ်းမှု တိုင်းတာခြင်း ❑ အလင်းရောင် တိုင်တာခြင်း ❑ အပူချိန် နှင့် စိုထိုင်းမှု အရည်အသွေး တိုင်းတာခြင်း

ဆူညံသံတိုင်းတာမှု

Date/ Time	Measurement Area	GPS value	Measurement Result	NEQ Guildline
27 May, 2019	Building (A) Ground Floor	16°53‘37.4"N 96°03‘59.7"E	76.51 dBA	70 dBA
27 May, 2019	Building (A) First Floor	16°54‘37.9"N 96°03’59.5"E	70.92 dBA	70 dBA
27 May, 2019	Building (B)	16°54’38.9"N 96°03’59.0"E	76.4 dBA	70 dBA

အထက်ဖော်ပြပါ ဆူညံသံတိုင်းတာမှုရလဒ်များအရ
Bo Da (Myanmar) Fashion Company Limited ၏ဆူညံသံများမှာ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် ထက်ကျော်လွန်မှုအနည်းငယ်ရှိနေသည်ကို လေ့လာတွေ့ရှိရပါသည်။

ထုတ်လုပ်မှုဧရိယာအတွင်း
ဆူညံသံတိုင်းတာမှု

စက်ရုံတွင်းဆူညံသံတိုင်းတာမှု

Bo Da (Myanmar) Fashion Co.,Ltd. ၏ဆူညံသံတိုင်းတာမှုပြဂရပ်

လေထုညစ်ညမ်းမှုတိုင်းတာခြင်း

Date/Time	Measurement Area	GPS Value	Parameters	Observed value	Guideline Value	Unit
27 May, 2019	Building (A)	16°53'37.4"N 96°03'59.7"E	PM_{10} $PM_{2.5}$	15.6 12.2	50 25	µg/m³
27 May, 2019	Buildimg (B)	16°54'38.9"N 96°03'59.0"E	PM_{10} $PM_{2.5}$	20.7 13.3	50 25	µg/m

တိုင်းတာချက်များအရ Bo Da (Myanmar) Fashion Co., Ltd. သည် လေထုညစ်ညမ်းမှုမရှိသည်ကို တွေ့ရှိရပါသည်။

Bo Da (Myanmar) Fashion Co., Ltd. ၏ လေထုညစ်ညမ်းမှုတိုင်းတာမှုများ

လုပ်ငန်းခွင်အလင်းရောင်တိုင်းတာမှု

Date/Time	Measurement Area	Measurement Value	Standard
Building (A)			
27 May,2019	Sewing Area	590.2	600
27 May, 2019	Ironing Area	1047	600
27 May, 2019	Packing Area	1280	600
Building (B)			
27 May, 2019	Sewing Area	563	600
27 May, 2019	Cutting Area	605	600

Lighting standards and codes usually provide recommended illuminance ratios between the task area and its surroundings (EN 12464-1 2002) (CIBSE 1997) (IESNA 2000, 676708).

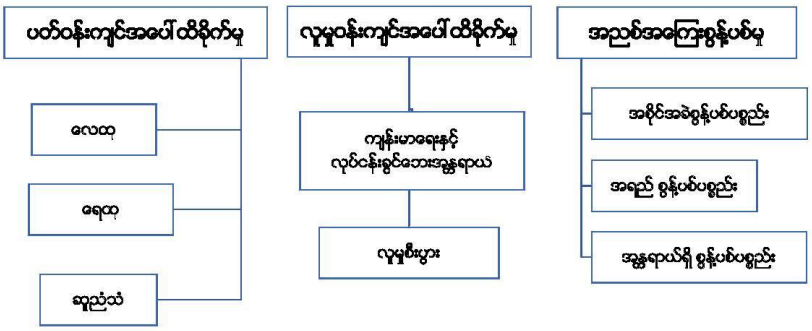
လုပ်ငန်းခွင်အတွင်း အလင်းရောင်တိုင်းတာမှု

အပူချိန်တိုင်းတာမှု

Bo Da (Myanmar) Fashion Co.,Ltd. ၏ လုပ်ငန်းခွင်ပျမ်းမျှစိုထိုင်းမှုမှာ ၅၁.၈၈% နှင့် အပူချိန်တိုင်းတာမှုမှာ ၄၃.၀၇° C ရှိပါသည်။

ပတ်ပန်းကျင်အပေါ် သက်ရောက်မှုများနှင့် ဖြေလျှော့ရေးနည်းလမ်းများ

စီမံကိန်းကြောင့်ဖြစ်ပေါ်လာနိုင်သော လူမှုပတ်ဝန်းကျင်အပေါ် ထိခိုက်မှုများ



သက်ရောက်မှု	စီမံကိန်းဆောင်ရွက်ချက်	လျှော့နည်းစေရန် အရေးယူဆောင်ရွက်မှု
လေ အရည်အသွေး	အရေးပေါ် သုံးမီးစက်နှင့် ဘွိုင်လာတို့မှ အခိုးအငွေ့ထွက်ရှိခြင်း	မီးခိုးခေါင်းတိုင်တပ်ဆင်ခြင်း၊ NOx ထွက်ရှိမှုနည်းသော နည်းပညာသုံး စက်ပစ္စည်းများကို သုံးစွဲခြင်း၊ ဘွိုင်လာအတွက် သီးသန့်မီးခိုးခေါင်းတိုင် တပ်ဆင်စေခြင်း၊ စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
ဆူညံသံ	လေမှုတ်စက်၊ မီးစက်	ဆူညံသံများသော နေရာများကို သီးခြားတည်ဆောက်ခြင်း။
စက်ရုံ စွန့်ပစ်ရေဆိုး	နေအိမ်၊ စားသောက်ဆောင်တို့မှ စွန့်ထုတ်ရေ	မိလ္လာစနစ်နှင့် ရေမြောင်းများကိုပုံမှန်သန့်ရှင်း ရေးလုပ်ခြင်း။

သက်ရောက်မှု	စီမံကိန်းဆောင်ရွက်ချက်	လျော့နည်းစေရန် အရေးယူဆောင်ရွက်မှု
စွန့်ပစ်ပစ္စည်း (အဓိပ်အခဲ)	➢ စက်ရုံမှထွက်သော စွန့်ပစ်ပစ္စည်း (ပိတ်ဖြတ်စ၊ထုတ်ပိုးပစ္စည်းများ ဖြစ်သောစက္ကူစနှင့်ပလက်စတစ်များ) ➢ ဝန်ထမ်းစွန့်ပစ်အမှိုက်များ	➢ စက်ရုံတွင် စွန့်ပစ်ပစ္စည်းများကို ပြန်လည်အသုံးပြုနိုင်သောပစ္စည်း၊ စွန့်ပစ်ရန်ပစ္စည်းနှင့် အန္တရာယ်ရှိပစ္စည်းဟူ၍ ခွဲခြားထားရှိခြင်း ➢ စွန့်ပစ်ရာတွင် သက်ဆိုင်ရာအဖွဲ့အစည်း (YCDC) ဖြင့်ဆက်သွယ်ပြီး စနစ်တကျစွန့်ပစ်စေခြင်း ➢ YCDC သန့်ရှင်းရေးဌာနသို့ နေ့စဉ်အကြောင်းကြားပြီး သိမ်းဆည်းစေခြင်း

သက်ရောက်မှု	စီမံကိန်းဆောင်ရွက်ချက်	လျော့နည်းစေရန် အရေးယူဆောင်ရွက်မှု
လုပ်သားကျန်းမာရေးနှင့် လုပ်ငန်းခွင်အန္တရာယ်ကင်းရှင်းရေး	➢ ကူးစပ်ရောဂါ၊လုပ်ငန်းခွင်အတွင်း ထိခိုက်ရှနာမှု ➢ ကုန်ပစ္စည်းသယ်ယူပို့ဆောင်ခြင်းနှင့် မော်တော်ယာဉ်သွားလာခြင်း	➢ လုပ်သားများအတွက်ပုံမှန်ကျန်းမာရေးစစ်ဆေးပေးခြင်း၊ကျန်းမာရေးစောင့်ရှောက်မှုပေးခြင်း၊ အသိပညာပေးခြင်း၊ ➢ စက်ရုံတွင်အရေးပေါ်ပြုစုရန်ဆေးပေးခန်းထားရှိခြင်း၊ ➢ လုပ်ငန်းခွင်အန္တရာယ်ကင်းရှင်းရေးအတွက် သင်တန်းပို့ချပေးခြင်း။ ➢ Personal Protective Equipment (PPE) ဟုခေါ်သော အကာအကွယ်ပစ္စည်းများဖြစ်သည့် လေကာ/နေကာမျက်မှန်များ၊ နှာခေါင်းစည်း၊ Helmets စသည်တို့အားထောက်ပံ့ခြင်း၊ အသိပညာပေး သင်တန်းများ ပေးခြင်း။

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်

လေထုညစ်ညမ်းမှုလျော့ချရေး

ရည်ရွယ်ချက်	စက်ရုံဥပုံးစက်ကိရိယာများကြောင့်ပတ်ဝန်းကျင်လေထုထိခိုက်မှုကိုလျော့ချစေရန်နှင့် ကောင်းမွန်သောထိန်းသိမ်းမှု ပြုလုပ်ရန်
လိုက်နာရမည့် စည်းကမ်း	**အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)**
စီမံခန့်ခွဲမှု အစီအစဉ်	➢ စက်ရုံအတွင်းနှင့် အနားဝန်းကျင်တွင် သစ်ပင်ပန်းမန်စိုက်ပျိုးခြင်း ➢ စက်ရုံအတွင်း မည်သည့်စွန့်ပစ်ပစ္စည်းအား မီးရှို့ဖျက်စီးခြင်း မပြုလုပ်ခြင်း ➢ လုပ်သားများအား Personal Protective Equipment (PPE) ဟုခေါ်သော အကာအကွယ်ပစ္စည်းများဖြစ်သည့် လေကာ/နေကာမျက်မှန်များ၊ နှာခေါင်းစည်း၊ Helmets စသည်တို့အားထောက်ပံ့ခြင်း၊ အသိပညာပေး သင်တန်းများ ပေးခြင်း
စောင့်ကြည့်ရေးနှင့် မှတ်တန်းပြုလုပ်ခြင်း	ပတ်ဝန်းကျင်လေထုအရည်အသွေး (CO, NO_2, SO_2, $PM_{2.5}$, PM_{10}) ကို တစ်နှစ်ကို ၂ ကြိမ်တိုင်းတာပေးရန်
အချိန်ကာလ	စက်ရုံလုပ်ငန်းလည်ပတ်နေစဉ်ကာလတလျှောက်လုံး
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှတစ်နှစ်ကို ၃ သိန်းခန့် ကုန်ကျမည်
တာဝန်ယူရမည့် ပုဂ္ဂိုလ်	➢ ပြုပြင်ထိန်းသိမ်းရေးအရာရှိ - လေထုညစ်ညမ်းမှုလျော့ချရေးနည်းလမ်းများ ➢ ထုတ်လုပ်ရေးမန်နေဂျာ- လုပ်ငန်းခွင်လေထုသန့်ရှင်းရေး ➢ မန်နေဂျာ - ပတ်ဝန်းကျင်လေအရည်အသွေးတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

ဆူညံသံလျှော့ချရေး

ရည်ရွယ်ချက်	ဘေးပတ်ဝန်းကျင်ဆူညံမှုမဖြစ်ပေါ်ရန်
လိုက်နာရမည့် စည်းကမ်း	➢ **ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅)** ➢ **အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)**
စီမံခန့်ခွဲမှုအစီအစဉ်	➢ မီးစက်၊လေမှုတ်စက်တို့ကို ဆူညံသံထိန်းချုပ်နိုင်သော ခန်းဖွဲ့စည်းမှုပုံစံ တည်ဆောက် ထားခြင်း ➢ လုပ်ငန်းသုံးယာဉ်များကိုဆူညံသံလျှော့ချရန်သတ်မှတ်အရှိန်ထက်ကျော်လွန်မောင်းစေခြင်း ➢ လုပ်သားများအား Personal Protective Equipment (PPE) ဟုခေါ်သော အကာအကွယ်ပစ္စည်းများဖြစ်သည့် လေကာ/နေကာမျက်မှန်များ၊ နားခေါင်းစည်း၊ Helmets စသည်တို့အား ထောက်ပံ့ခြင်း၊ အသိပညာပေး သင်တန်းများ ပေးခြင်း
စောင့်ကြည့်ရေးနှင့် မှတ်တမ်းပြုစုခြင်း	လုပ်ငန်းခွင်ဆူညံသံပမာဏကို တစ်နှစ် ၂ ကြိမ်တိုင်းတာရမည်
အချိန်ကာလ	စီမံကိန်းကာလတစ်လျှောက်
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှ တစ်နှစ် ၅ သိန်းခန့် ကုန်ကျမည်
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ - ဆူညံသံတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

စွန့်ပစ်အမှိုက် ထိန်းသိမ်းရေး

ရည်ရွယ်ချက်	စွန့်ပစ်အမှိုက်ထွက်ရှိမှုလျှော့ချရေးနှင့် စွန့်ပစ်အမှိုက်ကြောင့် ပတ်ဝန်းကျင်ညစ်ညမ်းမှုကို လျှော့ချရန်
လိုက်နာရမည့်စည်းကမ်း	➢ **ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅)** ➢ **National Waste Management Strategy and Action Plan (Draft 2018)**
စီမံခန့်ခွဲမှုအစီအစဉ်	➢ စက်ရုံမှ မည်သည်စွန့်ပစ်ပစ္စည်းမှ မြစ်၊ ချောင်း၊ အင်း၊ အိုင် အတွင်းသို့ မစွန့်ပစ်ရ ➢ စက်ရုံတွင် စွန့်ပစ်ပစ္စည်းများကို ပြန်လည်အသုံးပြုနိုင်သောပစ္စည်း(ဆိုးဆေး၊ စက္ကူဖာ၊ ပလက်စတစ်၊ စသည်ဖြင့်) များကို ပြည်တွင်းဝယ်ယူသူများထံ ပြန်လည်ရောင်းချခြင်း ➢ စွန့်ပစ်ရန်ပစ္စည်း(လုပ်သားများမှစွန့်ပစ်ပစ္စည်းနှင့်မီးဖိုချောင်ထွက်ပစ္စည်းများ)ကို မြို့တော်စည်ပင်သာယာရေးအဖွဲ့အစည်း ကို နေ့စဉ်ခေါ်ယူပြီး သိမ်းဆည်းစေခြင်း ➢ အန္တရာယ်ရှိပစ္စည်း (စက်ဆီအဟောင်းများ၊ လျှပ်စစ်ပစ္စည်းအပျက်များ၊ သံထည်ပစ္စည်း) များကို ဝယ်ယူသူထံမှပြန်လည် သိမ်းဆည်းစေခြင်း ➢ စက်ရုံတွင် အမှိုက်စွန့်ပစ်ရန် အတွက် အမှိုက်ပုံးများကို စီမံထားခြင်း ➢ စက်ရုံဝန်းထမ်းအားလုံးကို စနစ်တကျ အမှိုက်စွန့်ပစ်ရန် တိုက်တွန်းနှိုးဆော်ထားခြင်း

စွန့်ပစ်အမှိုက် ထိန်းသိမ်းရေး

စောင့်ကြည့်ရေးနှင့် မှတ်တမ်းပြုစုခြင်း	➢ နေ့စဉ် အမှိုက်သိမ်းဆည်းမှုကို စစ်ဆေးရန် ➢ အမှိုက်စွန့်ပစ်မှု စာရင်းကို စနစ်တကျပြုလုပ် မှတ်တမ်းတင်ရန်
အချိန်ကာလ	စက်ရုံလုပ်ငန်းလည်ပတ်နေစဉ်ကာလတလျှောက်လုံး
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှတစ်နှစ်ကို ၁၅ သိန်းခန့် ကုန်ကြေမည်
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	➢ မန်နေဂျာ - စက်ရုံအတွင်းသန့်ရှင်းရေးအတွက်စီမံခန့်ခွဲရန်တာဝန်ရှိသည် ➢ အမှိုက်စွန့်ပစ်မှု ပုံမှန်ပြုလုပ်ရန်နှင့် စွန့်ပစ်ပစ္စည်းသယ်ယူသူများကို ပုံမှန်ပြုလုပ်ရန် တာဝန်ယူဆောက်ရွက်ရန်

ရေဆိုးစွန့်ပစ်မှု ထိန်းသိမ်းရေး

ရည်ရွယ်ချက်	**မြေပေါ်ရေနှင့် မြေအောက်ရေ ညစ်ညမ်းမှုမဖြစ်စေရေး**
လိုက်နာရမည့်စည်းကမ်း	➢ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅) ➢ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)
စီမံခန့်ခွဲမှုအစီအစဉ်	➢ စက်ရုံရေမြောင်းများနှင့်မိလ္လာစနစ်ကို စနစ်တကျ သန့်ရှင်းအောင်ထားရှိခြင်း လုံလောက်သည့်အတိုင်းအတာ ပမာဏရှိခြင်း ➢ မိလ္လာစနစ်ကို ပုံမှန်စစ်ဆေးပြီး လိုအပ်သကဲ့သို့ ထိန်းသိမ်းပြုပြင်ခြင်း ➢ စက်ရုံရေမြောင်းအတွင်းတွင် ပိတ်ဆို့မှုမရှိစေရန်နှင့် အနှံ့ဆီးများမထွက်စေရန်စီမံခြင်း
စောင့်ကြည့်ရေးနှင့် မှတ်တမ်းပြုစုခြင်း	စက်ရုံရေမြောင်းနှင့် မိလ္လာစနစ်ကို ပျက်စီးမှုမရှိစေရေး စောင့်ကြည့်ရန်
အချိန်ကာလ	စက်ရုံလုပ်ငန်းလည်ပတ်နေစဉ်ကာလတလျှောက်လုံး
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှတစ်နှစ်ကို ၄ သိန်းခန့် ကုန်ကျမည်
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	မန်နေဂျာ - စွန့်ထုတ်ရေအရည်အသွေးတိုင်းတာရန် (ThirdParty) ဖြင့်ညှိနှိုင်းဆောင်ရွက်ရန်

မြေအောက်ရေသုံးစွဲမှု

ရည်ရွယ်ချက်	စွမ်းအင်နှင့် ရေ သုံးစွဲမှုလျော့ချရေး
လိုက်နာရမည့်စည်းကမ်း	The Underground Water Act (1930)
စီမံခန့်ခွဲမှုအစီအစဉ်	➢ စွမ်းအင်အသုံးနည်းသော Lighting စနစ်တပ်ဆင်ခြင်း ➢ ရေအသုံးပြုမှု သိရှိနိုင်သော မီတာတပ်ဆင်ခြင်း ➢ စက်ပစ္စည်းနှင့် Lighting အသုံးပြုမှုကို စောင့်ကြည့်ထိန်သိမ်းရေးစနစ်ထားရှိခြင်း (ဥပမာ-အသုံးမပြုပဲမီးဖွင့်ထားခြင်း၊ စက်ဖွင့်ထားခြင်းမျိုး မရှိစေရန်) ➢ ဝန်ထမ်းများအား အသိပညာပေးခြင်းနှင့် လိုက်နာဆောင်ရွက်ရန် တိုက်တွန်းခြင်း
စောင့်ကြည့်ရေးနှင့် မှတ်တမ်းပြုစုခြင်း	နှစ်အလိုက် သုံးစွဲမှုပမာဏ စာရင်းပြုစုရန်
အချိန်ကာလ	စက်ရုံလုပ်ငန်းလည်ပတ်နေစဉ်ကာလတစ်လျှောက်လုံး
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှတစ်နှစ်ကို ၅ သိန်းခန့် ကုန်ကြမည်
တာဝန်ယူရမည့် ပုဂ္ဂိုလ်	မန်နေဂျာ ➢ စွမ်းအင်နှင့်ရေ အသုံးပြုမှုစာရင်း စစ်ဆေးခြင်း ➢ ဝန်ထမ်းများလိုက်နာဆောင်ရွက်မှု စစ်ဆေးခြင်း

အရေးပေါ်အခြေအနေတုန့်ပြန်မှု

ရည်ရွယ်ချက်	**စက်ရုံတွင်းမတော်တဆထိခိုက်မှု လျော့ချရေး**
လိုက်နာရမည့်စည်းကမ်း	**အလုပ်အကိုင်နှင့် ကျွမ်းကျင်မှုဖွံ့ဖြိုးတိုးတက်ရေးဥပဒေ (၂၀၁၃), ILO guide to Myanmar Labour Law (2017)**
စီမံခန့်ခွဲမှုအစီအစဉ်	➢ အရေးပေါ်အခြေအနေဖြစ်သော (မီး၊ ငလျင်၊ ရေကြီးရေလျှံမှု) တို့အတွက် စက်ရုံတွင် စီမံခန့်ခွဲထုရခြင်း ➢ စက်ရုံ၏မီးသတ်စနစ်များကို ပုံမှန်စစ်ဆေးခြင်း ➢ ရေးဆွဲထားသော အရေးပေါ်တုန့်ပြန်ရေး အစီအစဉ်များကို ဝန်းထမ်းများ အကျွမ်းတဝင်ဖြစ်စေရန် စီမံထားခြင်း ➢ လောင်စာသိုလှောင်နေရာများ၊ လျှပ်စစ်ဖြန့်ဖြူးရေးနေရာများကို အဓိကထားပြီး စောင့်ကြည့်စစ်ဆေးခြင်း၊ ပြုပြင်မွန်းမံခြင်း ➢ ပုံမှန်မီးဘေးကာကွယ်ရေး၊ ငလျင်လှုပ်ခတ်လျှင် ပြုလုပ်ရမည့်ပုံစံများ၊ ရေကြီးရေလျှံမှု အခြေအနေထိန်းသိမ်းရေး အစီအစဉ်များ၊ ရှင်းပြုစုခြင်းသင်တန်းများကို ပုံမှန်လေ့ကျင့်မှုများ သင်ကြားမှုများ ပြုလုပ်ခြင်း ➢ အရေးပေါ်ဆက်သွယ်ရန် ဖုန်းနံပါတ်၊ လိပ်စာများ၊ အများသူငါမြင်သာစေသောနေရာများတွင် ကပ်ထားခြင်း ➢ စက်ရုံတွင်း မီးသတ်အဖွဲ့ငယ်၊ အုန်ရာယ်ကင်းရှင်းရေး စောင့်ကြည့်ရေးအဖွဲငယ်များထားရှိပြီး လစဉ် ဆွေးနွေးတိုင်ပင်ခြင်း လေ့ကျင့်ခြင်းများ ပြုလုပ်ခြင်း

အရေးပေါ်အခြေအနေတုန့်ပြန်မှု

စောင့်ကြည့်ရေးနှင့် မှတ်တမ်းပြုစုခြင်း	➢ မီးသတ်ဆေးဘူး၊ မီးသတ်ပိုက်၊ မီးသတ်ရေကန် အပါတ်စဉ်စစ်ဆေးခြင်း ➢ မတော်တဆထိခိုက်မှုနှင့် လေ့ကျင့်ရေးအစီအစဉ်များမှတ်တမ်းထားရှိခြင်း
အချိန်ကာလ	စက်ရုံလုပ်ငန်းလည်ပတ်နေစဉ်ကာလတစ်လျှောက်လုံး
ခန့်မှန်းကုန်ကျစရိတ်	ပျမ်းမျှတစ်နှစ်ကို ၃၀ သိန်းခန့် ကုန်ကြမည်
တာဝန်ယူရမည့်ပုဂ္ဂိုလ်	Manager and EHS officer ➢ မီးသတ်သင်တန်းများ ၃ လတစ်ကြိမ်ပြုလုပ်ရန်စီမံပေးခြင်း ➢ အရေးပေါ်အခြေအနေနှင့် မတော်တဆထိခိုက်မှုမရှိစေရေး စောင့်ကြည့်စစ်ဆေးခြင်း

ပတ်ဝန်းကျင်ဆိုင်ရာစောင့်ကြည့်မှု

ကဏ္ဍ	အမျိုးအစား	နေရာ	ကြိမ်နှုန်း	တာဝန်ရှိသူ
ဆူညံမှု	ဆူညံမှု ပမာဏ	စက်ရုံလုပ်ငန်းခွင်အတွင်း	တစ်နှစ်နှစ်ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာအကြံပေးနှင့် ပူးပေါင်း၍ (စက်ရုံတာဝန်ရှိသူ)
စွန့်ပစ်ရေ	BOD, COD, TSS, pH, Temp, Arsenic	ရေဆိုးသန့်စင်စက်မှုသန့်စင်ပြီးရေ	တစ်နှစ်နှစ်ကြိမ်	ပတ်ဝန်းကျင်ဆိုင်ရာအကြံပေးနှင့် ပူးပေါင်း၍ (စက်ရုံတာဝန်ရှိသူ)
စွန့်ပစ်ပစ္စည်း	စက်ရုံမှထွက်သည့် အမှိုက် ဝန်ထမ်းစွန့်ပစ်အမှိုက်	စက်ရုံတွင်ယာယီစွန့်ပစ်သည့် နေရာနှင့် ပြင်ပသို့စွန့်ပစ်သည့် စစ်တမ်း	တစ်ပတ်နှစ်ကြိမ်	စက်ရုံတာဝန်ရှိသူနှင့်သက်ဆိုင်ရာစည်ပင်သာယာရေးကော်မတီပူးပေါင်း၍
လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး	စစ်တမ်းကောက်ယူမှု	စက်ရုံအတွင်း	လစဉ်	စက်ရုံတာဝန်ရှိသူ
စွမ်းအင်	လျှပ်စစ်စွမ်းအင်၊ ရေအသုံးပြုမှု၊ လောင်စာအသုံးပြုမှု	စက်ရုံအတွင်း	နေ့စဉ်	စက်ရုံတာဝန်ရှိသူ

လူမှုအကျိုးတူပူးပေါင်း ပါဝင်မှု

Bo Da (Myamar) Fashion Co.,Ltd. တွင် CSR အတွက် အမြတ်ငွေ၏ ၂% ကို ကျန်းမာရေး၊ ပညာရေးနှင့် နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေးတို့ အတွက် အသုံးပြုသွားမည် ဖြစ်ပါသည်။

ကျန်းမာရေး	ဝန်ထမ်းများ ကျန်းမာရေး စောင့်ရှောက်မှု	၀.၈ %
ပညာရေး	ပညာရေးကဏ္ဍ မြှင့်တင်ရေးနှင့် လူ့အခွင့်အရေး အသိပညာပေးခြင်း	၀.၈ %
နယ်မြေဖွံ့ဖြိုးတိုးတက်ရေး	ဒေသတွင်း လိုအပ်သကဲ့သို့ လှူဒါန်းခြင်း	၀.၄ %

Thank You for Your Patient Attention!

APPENDIX E
Fire Safety Training

11/09/2019

博达工厂消防演习
BO DA Factory Fire Drill
BO DA (MYANMAR) FASHION CO.,LTD

2019.07.20

消防演习前会议及培训
Pre-fire drill meeting & training

员工集合点按组及部门安排妥当
Employees assembly points are arranged by group and department

员工听到警铃，迅速有序前往集合点
The employees heard the alarm and quickly went to assembly point

员工到达集合点

Employees arrive at assembly point

集合点就位

The assembly point is in place


消防局领导发言

Address by the Director of the Fire Department


消防员及急救员
Fire fighter and first-aider


灭火演习准备工作
Preparation of fire-fighting drill


- 消防局领导亲自指导
- Fire department leader personally guide

消防器材的指导使用
Guidance and use of fire fighting equipment


灭火演示
Fir extinguishing demonstration