Memo

Date: October 5, 2017

To: Nigel Fisher (New Gold)

From: Matt Evans (Amec Foster Wheeler)

cc: Sheila Daniel, Dave Simms (Amec Foster Wheeler)

Ref: TC170506A

Re: **Rainy River Project, Tait Quarry Proposed Reclamation Approach**

1.0 INTRODUCTION

Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited (Amec Foster Wheeler) was retained by New Gold Inc. (New Gold) to assist in preparing reclamation plans for the Rainy River Project (RRP) Tait Quarry, with a goal that the quarry will eventually provide habitat for Eastern Whip-poor-will, as per conditions of the RRP Endangered Species Act 17(2)(c) Overall Benefits Permit.

The RRP site is within the Township of Chapple, approximately 65 kilometres (by road) northwest of Fort Frances within northwestern Ontario. The RRP is currently in the development phase and other construction activities are ongoing at the site.

The Tait Quarry was in production from 2015 to 2017 and closure activities will commence in October of 2017. Through discussions with the MNRF in 2013 and 2014, it was decided that the reclamation process to be implemented at the Tait Quarry will attempt to produce suitable whip-poor-will habitat that is similar to the habitat found at the New Gold aggregate pit near Roen Road. Prior to disturbance, the Tait Quarry was not considered to be whip-poor-will habitat as it was densely forested, lacked open rocky outcrops, and lacked suitable open areas (with forest edge) for foraging. Reclamation activities at the Tait Quarry will aim to produce viable whip-poor-will habitat. Future monitoring efforts will assess and report on the success of these activities.

Amec Foster Wheeler Environment & Infrastructure
160 Traders Blvd. E., Suite 110
Mississauga, Ontario, L4Z 3K7
Tel: (905) 568-2929
Fax: (905) 568-1686
amecfw.com

The RRP Closure Plan (AMEC 2014a, Amec Foster Wheeler 2015a), the Tait Quarry Aggregate Permit, and Section 7.5 of the RRP Endangered Species Act Permit provide certain requirements with respect to reclamation of the Tait Quarry. This memo outlines New Gold's 2017 and 2018 proposed reclamation activities that are intended to satisfy reclamation and closure conditions in all three of these documents and attempt to provide future Eastern Whip-poor-will habitat in the reclamation area.

1.1 Background - RRP Endangered Species Act Permit

In November 2014, the Ontario Ministry of Natural Resources and Forestry (MNRF) approved an *Endangered Species Act* 17(2)(c) Overall Benefits Permit (ESA, 2007) for the RRP (Permit #FF-C-001-14). Within the permit is the requirement that New Gold conduct whip-poor-will research as outlined in Eastern Whip-Poor-Will Habitat Enhancement and Restoration Experimental Study - An Overall Benefits Component for Endangered Species Act Permitting (Amec 2014b). One of the research components outlined in this document is to conduct a whip-poor-will habitat reclamation study with the closure of Tait Quarry. Some of the research questions that will be studied during the reclamation of the Tait Quarry include the following:

i. How can reclamation activities in the Tait Quarry successfully result in the production of suitable Eastern Whip-poor-will habitat?

ii. How quickly can individual Eastern Whip-poor-will be induced to colonize the reclaimed quarry?

iii. Can we decipher enough information that can be used to optimize the process of reclamation of Eastern Whip-poor-will habitat during progressive reclamation in 2027 and at closure in 2033?

The research study will also take into consideration data on species utilization of the New Gold aggregate pit site on Roen Road (formerly operated by the Ministry of Transportation) prior to the re-activation of the pit. Results from this study could provide valuable information to be used in the development of the Habitat Management Plan for Eastern Whip-poor-will Overall Benefit Areas and the overall Eastern Whip-poor-will Site Rehabilitation Plan, both of which are requirements of the RRP Endangered Species Act Permit.

Ultimately, the proposed reclamation at Tait Quarry will provide valuable information to be used in management plans with the goal of leading to:

- An increase in the quality and amount of suitable habitat for the species;
- An increase in the number of breeding pairs located within the RRP footprint, post-closure; and
- An increase in the local distribution of the species, around the Project site post-closure.

Results obtained from the Tait Quarry reclamation program will guide as applicable, the development of the RRP Eastern Whip-poor-will Site Rehabilitation Plan that will be implemented during progressive reclamation and at closure for the RRP site.

This study proposes to go above and beyond the reclamation and monitoring process at Ontario quarries and mines, by taking a unique experimental approach to reclamation that allows for the testing of questions we currently have; questions related to optimizing habitat conditions that encourage recolonization by whip-poor-will. The Tait Quarry reclamation study will allow New Gold to further assess whip-poor-will habitat selection when birds begin to re-colonize this previously impacted area.

2.0 TAIT QUARRY RECLAMATION (2017 and 2018)

Quarrying and related activities within the RRP Tait Quarry ended in August 2017. New Gold plans to implement earthworks reclamation activities in the fourth quarter (Q4) of 2017 to be followed by revegetation activities in Q2 of 2018, as outlined in Attachments 1 to 4 to reclaim the quarry. The proposed reclamation activities are based on the best available scientific information regarding Eastern Whip-poor-will habitat preferences; using data collected onsite at the RRP from 2010 to present (KCB 2011; AMEC 2011, 2012, 2013, 2014a; MNRF 2013; Rand 2014; Amec Foster Wheeler 2015b, 2016) and from studies conducted elsewhere in North America, where applicable (e.g., Wilson 1985; James and Neal 1986; Mills 1987; Eastman 1991; Palmer-Bell 1996; Cink 2002; Cadman et al. 2007; Wilson and Watts 2008; COSEWIC 2009).

2.1 Earthworks (Q4 2017)

Attachments 1 - 3 provide the detailed earthworks scheduled for different areas of the Tait Quarry footprint in Q4 2017, briefly summarized herein.

The quarry pit (Area 5 in Attachment 2) will be left as a pond after the quarry faces have been reclaimed to an overall slope of ≤2:1. Outside the quarry pit, naturally occurring open bedrock areas (e.g., Areas 1, 2) will be retained and in some cases enlarged as it has been shown in several whip-poor-will studies (summarized in COSEWIC 2009), including studies at the RRP (Rand 2014; Amec Foster Wheeler 2015b, 2016), that this species has a distinct affinity to treed open bedrock habitats. To this end, some rock piles that resulted from quarry works (e.g. piles of oversized material) will be maintained and/or enlarged to provide more bedrock areas scattered throughout the reclamation area.

Rock from Area 8 will be used to create two narrow fingers of exposed rock in Area 3, or will be used to make boulder clusters using six to eight oversized boulders (e.g., boulders >1 m in size). The access road (Area 7) will remain for ongoing post-closure monitoring, but at the completion of monitoring (date to be determined) will be ripped and left to revegetate naturally.

Topsoil (60 to 80% clay, 10 to 15% peat / organic material and 10 to 20% rock) will be placed in specified areas in a thickness ranging from 200 to 300 mm thickness (as per Attachment 3) to support revegetation activities in the Spring of 2018.

2.2 Revegetation (Q2 2018)

Revegetation will include hand planting of tree seedlings and hydroseeding or broadcast seeding using a native seed mixture previously approved by the MNRF for use at the Rainy River Mine Site. General revegetation of the RRP site is readily achievable with current technologies, as demonstrated by revegetation efforts previously employed at other mine sites in Ontario. Vegetation (and wildlife) recovery times will vary depending on the species and/or communities involved.

Through active revegetation programs, early successional plant and wildlife communities would be expected to become established within three to five years. The development of semi-mature aspen and/or spruce woodlands (the most common forest community type currently in the area) would be expected to occur over a period of approximately 30 to 40 years. Intermediate community types would develop during the intervening period. Specifically for Eastern Whip-poor-will, recolonization might be observed within the surrounding undisturbed forest within a few years as the site now provides forest edge next to an open area, typical of habitats used by whip-poor-will for foraging. Recolonization of the revegetated areas within the disturbed footprint will likely be observed 10 to 30 years after the commencement of reclamation activities. By that time, replanted tree cover is projected to reach heights where whip-poor-will could reasonably be expected to begin utilizing developing habitats.

Attachments 2 to 4 provide detailed revegetation activities scheduled for Q2 2018 as briefly summarized here. Areas that are to be replanted with trees (Areas 1, 3 to 5, and 8 to 10; see Attachment 3) will receive locally sourced mixed trembling aspen and black or white spruce (or species consistent with those cleared, as available) at a density of 1,000 stems per hectare, in order to establish a mixed forest with a density known to be preferred by whip-poor-will. This specified density takes into account the fact that some hand-planted seedlings may fail and that some natural regeneration will occur.

Ground cover (e.g., herbaceous plants) will be established in open areas (Areas 2, 4, 5, 8 to 10; see Attachment 3) by seeding with a native upland seed mixture (Attachment 4) that has previously been approved by the MNRF.

2.3 Relevance to Future Mine Closure Activities

New Gold is committed to encouraging and, as practical, restoring the RRP site to productive, naturalized vegetation communities on cessation of mining activities. This will involve the active revegetation of peripheral tailings management area areas, the mine rock stockpiles and the remaining portions of the overburden stockpile, as well as the general mine site area. Progressive reclamation such as proposed in this memo for the Tait Quarry are designed to provide valuable information that can help ensure revegetation success at closure. While the Tait Quarry, 2017 and 2018 reclamation activities are designed to provide species-specific habitat, namely for Eastern Whip-poor-will, the knowledge gained from will be support future closure activities for the RRP.

3.0 REFERENCES

AMEC. 2011. Rainy River Gold Project Species at Risk Report for 2011.

AMEC. 2012. Rainy River Gold Project Species at Risk Report for 2012.

AMEC. 2013. Rainy River Gold Project Species at Risk Report for 2013.

AMEC. 2014a. Rainy River Resources Ltd., Volume 2: Final Environmental Assessment Report (Environmental Impact Statement), Version 2, Rainy River Project, Township of Chapple, Ontario.

AMEC. 2014b. Eastern Whip-Poor-Will Habitat Enhancement and Restoration Experimental Study - An Overall Benefits Component For Endangered Species Act Permitting.

Amec Foster Wheeler. 2015a. Rainy River Project Closure Plan.

Amec Foster Wheeler. 2015b. 2015 Rainy River Project Species at Risk Monitoring Report.

Amec Foster Wheeler. 2016. 2016 Rainy River Project Species at Risk Monitoring Report.

Cadman, M.D., D.A. Sutherland, G.G. Peck, D. Lepage and A.R. Couturier. 2007. Atlas of the Breeding Birds of Ontario, 2001-2005. Bird Studies Canada, Environment of Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto.

Cink, C.L. 2002. Whip-poor-will (Caprimulgus vociferus). In The Birds of North America, No. 620 (A. Poole and F. Gill, eds.). The Birds of North American, Inc., Philadelphia, PA.

Committee on the Status of Endangered Wildlife in Canada (COSEWIC). 2009. COSEWIC Assessment and Status Report on the Whip-poor-will Caprimulgus vociferus in Canada. Committee on the Status of Endangered Wildlife in Canada, Ottawa, Ontario.

Eastman, J. 1991. Whip-poor-will, pages 252-253 In Brewer, R., G.A. McPeek, and R.J. Adams Jr., Eds. The Atlas of Breeding Birds of Michigan. East Lansing, Michigan. Michigan State University Press, East Lansing, Michigan. 594 pages.

James, D.A. and J.C. Neal. 1986. Arkansas Birds: Their Distribution and Abundance. University of Arkansas Press, Fayetteville, Arkansas.

Klohn Crippen Berger. 2011. Rainy River Gold Project Species at Risk Baseline Report 2008-2010.

Mills, A.M. 1987. Whip-poor-will, pages 224-225 In Cadman, M.D., P.F.J. Eagles and F.M. Helleiner, Eds. Atlas of the Breeding Birds of Ontario. University of Waterloo Press, Waterloo, Ontario. 617 pages.

Ministry of Natural Resources and Forestry (MNRF). 2013. Technical Assessment of Whip-poor-will Occupancy at Rainy River Resources' Proposed Gold Mine Site. Unpublished Technical

Analyses Provided to Rainy River Resources by the Ontario Ministry of Natural Resources and Forestry, Fort Frances District, Ontario.

Palmer-Bell, B.L. Jr. 1996. The Kentucky Breeding Bird Atlas. University Press of Kentucky, Lexington.

Rand, G.J. 2014. Home Range Use and Habitat Selection of Eastern Whip-poor-wills (Antrostomus vociferous) at the Northern Edge of their Range. M.Sc. Thesis, Trent University, Peterborough, Ontario, Canada. 40 pages.

Wilson, M.D. and B.D. Watts. 2008. Landscape Configuration Effects on Distribution and Abundance of Whip-poor-wills. The Wilson Journal of Ornithology, 120:778-783.

Wilson, S.G. 1985. Summer distribution of Whip-poor-wills in Minnesota. Loon, 57:6-8.

4.0 CLOSING

We appreciate the opportunity to be involved with New Gold in this leading research.

Prepared by:

<Original signed by>

Matt Evans, Ph.D.,
Senior Ecologist

Reviewed by:

<Original signed by>

Sheila Daniel, M.Sc., P.Geo.
Principal, Mining Environmental

ATTACHMENTS

Attachment 1

Aggregate Resource Act Permit

Reclamation Plan for Tait Quarry

DISTRICT OF RAINY RIVER
TOWNSHIP OF TAIT
NEW GOLD TAIT ROAD QUARRY

SCALE
1 : 2000

0 20 40 60 80 100 200

DECLARATION OF PURPOSE

THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A PERMIT, CATEGORY 12

A. PROGRESSIVE REHABILITATION - CATEGORY 12 QUARRY

1. Progressive revegetation of the Tait Quarry site is not proposed, as the duration of quarry use is expected to be short (likely less than one year). Instead the site will be revegetated following the completion of all quarrying activities.
2. As the limit of extraction is reached, for a category 12 operation, the operator will either extract to the limit of extraction and back fill to produce a 2:1 slope with available overburden, or extract less material and use in-situ material to produce the 2:1 slope. (See sections on this page).
3. All available overburden, topsoil and organic matter will be applied to the slopes and quarry floor, with some areas having greater depths.

B. FINAL REHABILITATION

1. Revegetation of the Tait Quarry will be integrated with habitat manipulation of the immediate area surrounding the Tait Quarry site to develop habitat that is expected to be utilized by Eastern Whip-poor-will, consistent with Endangered Species Act Permit Number FF-C-001-14 requirements. This will include providing a suitable soil base for supporting a patchy forest structure dominated by a mixture of Trembling Aspen and Black Spruce, together with a ground cover consisting of native grasses, herbs and shrubs. Ground cover will be developed using a native seed mixes, pending availability, together with possible use of a nurse crop. Shrubs are expected to invade the site naturally. Tree seedlings (Trembling Aspen and Black Spruce) will be planted in a patchwork format. A detailed habitat restoration plan will be developed in consultation with the MNRF, prior to implementation.
2. Equipment, plants, buildings and aggregate stockpiles will be removed from the site. Roads may remain to access the back of the property.
3. Overburden and topsoil stockpiles and berms will be utilized in progressive and final rehabilitation.
4. Drainage will be contained within the rehabilitated quarry with a discharge point located at the northwest corner of the extraction zone to allow for storm events to safely drain from the workings if required. Uneven ripping and depths of soil replacement will provide for localized areas that may be wetter than others providing for habitat diversity. Where extracting advances below the watertable, these areas will be allowed to flood and be deemed as final rehabilitation.
5. The anticipated final end use is a rural, naturalized area.

Horizontal Datum
North American Datum 1983 (NAD 83) CSRS
6 Degree Universal Transversal Mercator
(UTM) Grid Coordinates. UTM Zone 15
Referenced from HCM 00819980376 &
IB.
The survey was conducted using a Trimble
R8 RTK GPS in Kinematic mode.

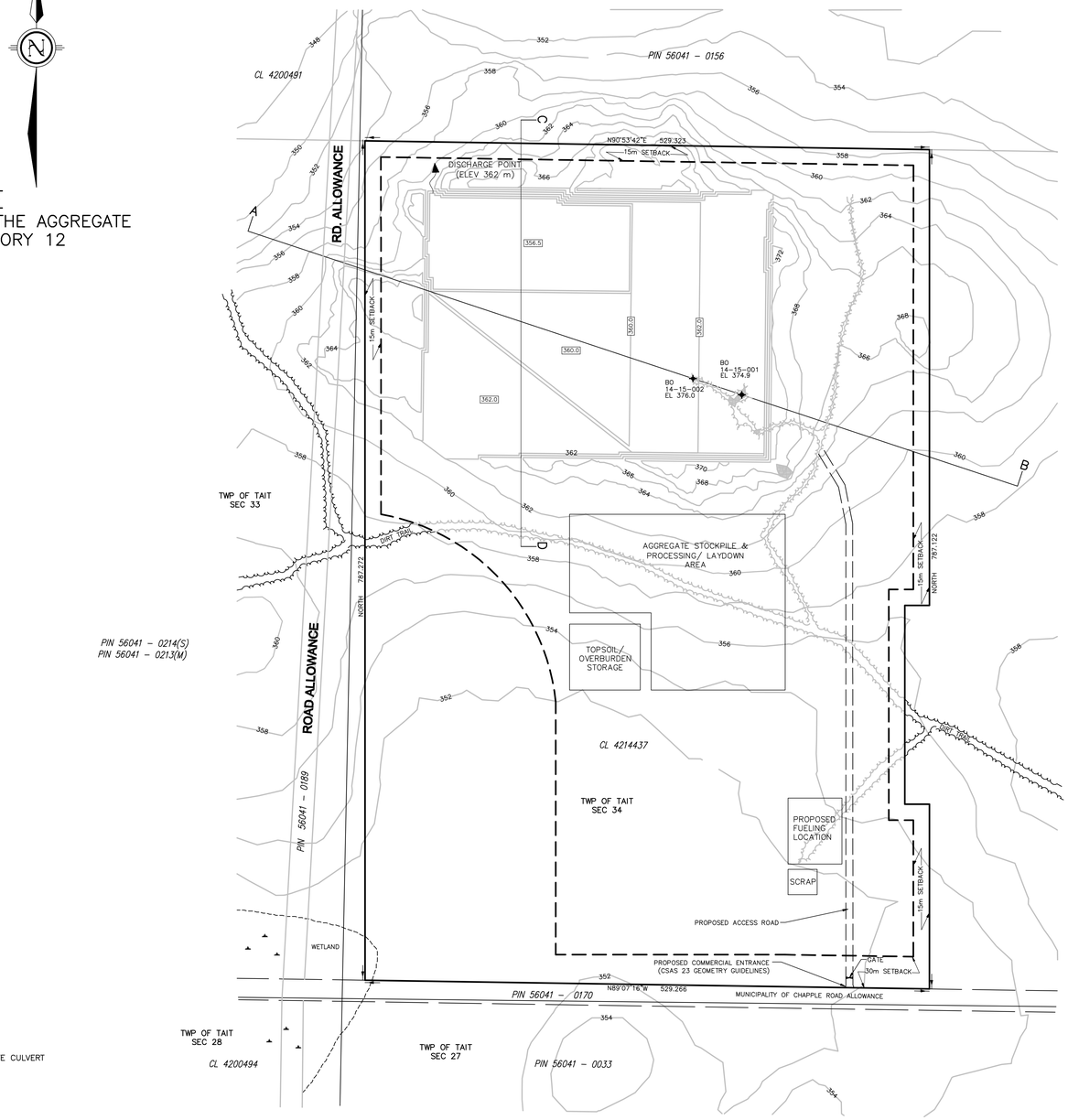
N- Value	E- Value	Elev.	
5408429.419	432697.478	372.626	HCM 00819980376
5409578.654	426316.716	364.532	IB

Vertical Datum

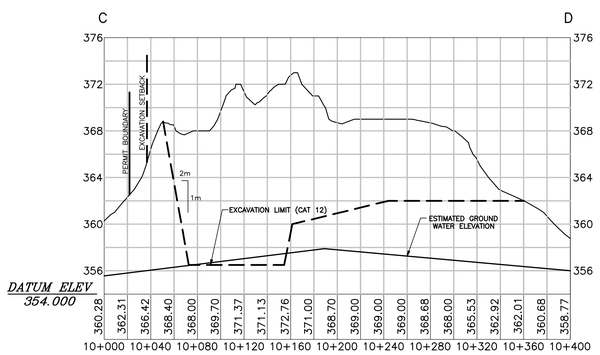
Elevations are ORTHOMETRIC derived from
GBM 00119S3U587K Elevation = 365.596 TABLET IN CONCRETE
CULVERT

N- Value	E- Value	Elev.	
5408787.960	432725.354	365.596	BM 365.596 TABLET IN CONCRETE CULVERT

NOTE:
BEARINGS AND DISTANCES AS SHOWN ON THIS PLAN ARE GRID.
ELEVATIONS AS SHOWN ON THIS PLAN ARE ORTHOMETRIC.
DISTANCES AND ELEVATIONS AS SHOWN ON THIS PLAN
ARE IN METRES.



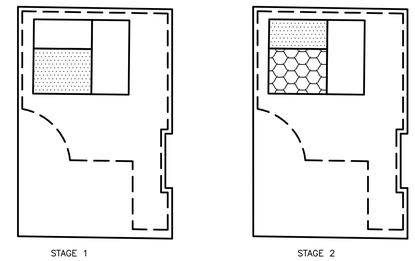
CROSS–SECTION A–B



CROSS–SECTION C–D

PERMIT SIZE = 41.23 ha
EXTRACTION AREA = 30.64 ha

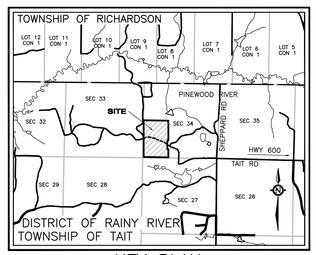
PLAN 3 OF 3



PROGRESSIVE REHABILITATION
FOR PIT/QUARRY
N.T.S.

LEGEND

- BUSH LINE
- ROCK OUTCROP
- DDH 5 06-JM-1007 — DIAMOND DRILL HOLE LOCATION
- 26 — SLOPE DIRECTION AND GRADE
- BM — BENCHMARK
- GRAVEL SURFACED ROADS
- STREAMS WITH FLOW DIRECTION
- SIB — STANDARD IRON BAR
- LOT/CONCESSION LINE
- PERMIT BOUNDARY
- EXCAVATION SETBACK AREA
- GATE
- WETLAND
- BERM
- 341.5 — ESTIMATED FINAL GRADE ELEVATION
- AREA NOT BEING EXTRACTED
- PREPARATION FOR EXTRACTION
- AREA OF EXTRACTION
- AGGRESSIVE REHABILITATION
- FULLY REHABILITATED



KEY PLAN
SCALE 1 : 50,000

IS APPROVED BY THE MINISTRY OF NATURAL RESOURCES PURSUANT TO SECTION 8 (4) OF THE AGGREGATE RESOURCES ACT TO PREPARE AND CERTIFY SITE PLANS.

SIGNATURE DATE

CATEGORY 12

APPLICANT NAME: New Gold Inc.

ADDRESS: Rainy River Project Office
1111 Victoria Avenue East
Thunder Bay, ON
P7C 1B7

SIGNATURE OF OWNER REPRESENTATIVE — 02/02/2015 DATE

PROGRESSIVE AND FINAL REHABILITATION PLAN

PROJECT NO. 13-251-13	REVISION #1
DATE: JANUARY 30, 2015	SCALE: 1:2000
DRAWN: L.B.	CHECKED: C.Z. APPROVED: S.P.

TBT ENGINEERING CONSULTING GROUP

TBT ENGINEERING
1918 YONGE STREET THUNDER BAY, ON P7C 6T9
TELEPHONE (807) 624-5160 FAX (807) 624-5161

Attachment 2

Numbered Areas in the Tait Quarry, with Numbers Corresponding to

Closure Treatments Outlined in Attachment

94°3'5"W 94°3'0"W 94°2'55"W 94°2'50"W 94°2'45"W 94°2'40"W

48°49'6"N 48°49'3"N 48°49'0"N 48°48'57"N 48°48'54"N 48°48'51"N 48°48'48"N 48°48'45"N 48°48'42"N 48°48'39"N 48°48'36"N

5407800 5407700 5407600 5407500 5407400 5407300 5407200 5407100 5407000 5406900

422900 423000 423100 423200 423300 423400

1 2 3 4 5 6 7 8 9 10

TAIT QUARRY RECLAMATION

JUNE 2017 AERIAL IMAGERY (KBM)

Area ID	m²	ha
1	66,901.87	6.69
2	32,336.40	3.23
3	38,245.30	3.82
4	21,533.15	2.15
5	26,984.68	2.70
6	2,425.14	0.24
7	11,549.73	1.15
8	8,239.70	0.82
9	4,279.02	0.43
10	14,072.17	1.41
	226,567.17	**22.66**

North American Datum (NAD)
1983 Universal Transverse Mercator (UTM) Zone 15N

0 25 50 100 150

Metres

newgold™

Rainy River Project

GIS GROUP, THUNDER BAY

Attachment 3

Closure Treatments for Each Designated Areas within the Tait Quarry

- Numbers Correspond to Those Shown in Attachment 1

Area # (as per Attachment 1)	Name	Size (ha)	Earthworks and Revegetation Works Planned	Material Quantities	Timing
1	Cleared original ground	6.69	• Rip road along east edge of quarry and place topsoil (60-80% clay, 10-15% peat and 10-20% rock) up to 300 mm thickness to support revegetation works in 2018. • Replant with locally sourced mixed poplar and black or white spruce trees (or species consistent with those cleared, as available) at a density of 1000 stems per ha.	• 6,690 stems	• Fall 2017 • Spring 2018
2	Cleared original ground (rock)	3.23	• Retain existing trees and leave open bedrock areas. • Utilize rock pile on east side of Area 2 for quarry reclamation (Area 5). If a rock base remains after rock pile removal, place topsoil (60-80% clay, 10-15% peat and 10-20% rock) to a depth of 200 mm over 60-70% of the slopes. • Seed with upland seed mix (see Attachment 3) and replant trees consistent with Area 1	• 53 kg of upland seed	• Fall 2017 • Fall 2017 • Spring 2018
3	Cleared original ground (open area)	3.82	• Develop two rock fingers with oversized material; dozer out material. Alternatively, place boulder clusters (e.g. 6 - 8 large oversized boulders (>1 m) per cluster)). • Replant with locally sourced mixed poplar and black or white spruce (or species consistent with those cleared, as available) at a density of 1000 stems per ha.	• 3,820 stems	• Fall 2017 • Spring 2018
4	Topsoil dumps	2.15	• Utilize topsoil for reclamation of other areas and then regrade consistent with original topography. • Seed with upland seed mix (see Attachment 3) and replant trees consistent with Area 1.	• 35 kg of upland seed and 2,150 stems	• Fall 2017 • Spring 2018
5	Quarry	2.7	• Reclaim quarry faces to an overall slope of ≤2:1; upper 1 - 2 m of rock face may be left exposed to open up understorey. • Quarry floor to be left as pond, after faces have been resloped. • Place topsoil mix (60-80% clay, 10-15% peat and 10-20% rock) to a depth of 200 mm over 60-70% of the slopes.		• Fall 2017 • Fall 2017 • Fall 2017

Area # (as per Attachment 1)	Name	Size (ha)	Earthworks and Revegetation Works Planned	Material Quantities	Timing
			• Seed with upland seed mix (see Attachment 3) and replant trees consistent with Area 1.	• 33 kg of upland seed and 2,000 stems	• Spring 2018
6	Rock piles	0.24	• Build up both existing rock piles with oversized material to a height of approximately 3 m above grade.		• Fall 2017
7	Access road	1.15	• Maintain an access road for ongoing monitoring and inspections with an appropriate turn around area. Running width of the road should be suitable to support access by a dozer and rock trucks and the road surface should support light vehicle use. • On completion of monitoring, rip road and leave area as opening in forest to support foraging activity. Secure access with berm and/or dense tree planting near Hwy. 600.		• Fall 2017 • Dependent on reclamation success and monitoring outcome
8	Oversized rock	0.82	• Use rock to achieve requirements for Area 5. • Remaining oversized material will be used to form two rock fingers or multiple boulder clusters in Area 3. • If needed, place topsoil (60-80% clay, 10-15% peat and 10-20% rock) to 200 mm thickness to support open understorey. • Seed with upland seed mix and replant trees consistent with Area 1.	• 14 kg upland seed and 820 stems	• Fall 2017 • Fall 2017 • Fall 2017 • Spring 2018
9	Processed rock	0.43	• Use rock to achieve grades on slopes in Area 5. • Cobble sized material to be blended with topsoil mix (Brenna clay and peat) to support open understorey. • Place topsoil (60-80% clay, 10-15% peat and 10-20% rock) to 200 mm thickness to support open understorey. • Seed and replant trees consistent with Area 1.	• 7 kg upland	• Fall 2017 • Fall 2017 • Fall 2017 • Spring 2018

Area # (as per Attachment 1)	Name	Size (ha)	Earthworks and Revegetation Works Planned	Material Quantities	Timing
				seed and 430 stems	
10	Crusher area and entrance	1.41	• Remove rock / aggregate material or pile (via a dozer) as required based on material. Balance ground conditions to create rock piles similar to Area 6 but with mixed rock. • Place topsoil (60-80% clay, 10-15% peat and 10-20% rock) to 200 mm thickness to support open understorey. • Seed and replant trees consistent with Area 1.	• 23 kg upland seed and 1410 stems	• Fall 2017 • Fall 2017 • Spring 2018

Attachment 4

Upland Seed Mixture to be Used for Reseeding Ground Cover at the Tait Quarry

Upland Seed Mix (Application Rate 16.5 kg/ha)

Common Name	*Species*[1]	*Seed Species Composition*[2] *(%)*
Big Bluestem	*Andropogon gerardii*	22
Canda Wild Rye	*Elymus canadensis*	42
Fowl Bluegrass	*Poa palustris*	22
	Total Grasses	**88**
Thimbleweed	*Anemone virginiana*	2
Common Evening Primrose	*Oenothera biennis*	4
Black-eyed Susan	*Rudbeckia hirta*	4
Blue Vervain	*Verbena hastata*	2
	Total Forbs	**12**

Notes: 1 All shrub species were removed from the seed mix due to lack of availability. Additional species removed from the seed mix per MNRF comments received on May 6 and 21, 2015 include Virginia Wild Rye (*Elymus virginicus*); Rice Cut Grass (*Leersia oryzoides*); Showy Tick Trefoil (*Desmodium canadense*); Purple Prairie Clover (*Dalea purpurea*); Ox-eye (*Heliopsis helianthoides*) and Marsh Milkweed (*Asclepias incarnata*). Thimbleweed (*Anemone virginiana*) and Common Evening Primrose (*Oenothera biennis*) were selected as alternative substitute species. Additional species diversity is expected through natural colonization. [2] Seed species composition may vary from the table above based on commercial availability of seed at the time of construction.