

# Paris Pit CAP

October 30, 2012



# Agenda

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Welcome

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Minutes from Last Meeting

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Dufferin Paris Pit - General Update

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Review of Paris Pit site plan

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- Overview of license

- Today's standards

- Phases of extraction and rehabilitation

- Below water table extraction

- Improving the Paris Pit Site Plan

- Today's standards – permits and approvals

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Next steps

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General Discussion

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# Dufferin Update - Communications Since Last CAP Meeting

- *Re-location of site entrance*: Ministry of Natural Resources (MNR) provided approval on October 29, 2012 for the entrance re-location. This approval confirms that the Paris Pit Site Plan meets **today's standards**.
- *Permit To Take Water Application*: Ministry of Environment (MOE) requested a site visit and we hosted them on October 17<sup>th</sup> and 25<sup>th</sup>. The purpose of these meetings was a pre-brief on the PTTW process
  - ▶ Provided confirmation on the Pit licence
  - ▶ Gained understanding of site features



# The Paris Pit Site Plan – Operating at Today’s Standards

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While our license was obtained in 1974, Dufferin Aggregates will operate the Paris Pit based on **TODAY’S standards.**

## *It is the law and regulation:*

- Ontario Aggregate Resources Act:  
[http://www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_90a08\\_e.htm](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90a08_e.htm)
- Ontario Water Resources Act:  
[http://www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_90o40\\_e.htm](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90o40_e.htm)
- Ministry of Environment- Permit to Take Water:  
[http://www.ene.gov.on.ca/environment/en/industry/assessment\\_and\\_approvals/water\\_taking/STDPROD\\_075554.html](http://www.ene.gov.on.ca/environment/en/industry/assessment_and_approvals/water_taking/STDPROD_075554.html)
- Ministry of Environment – Environmental Compliance Approval:  
[http://www.ene.gov.on.ca/environment/en/industry/assessment\\_and\\_approvals/environmental\\_approvals/index.htm](http://www.ene.gov.on.ca/environment/en/industry/assessment_and_approvals/environmental_approvals/index.htm)
- Ministry of Natural Resources - Endangered Species Act:  
[http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/STEL01\\_131232.html](http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/STEL01_131232.html)
- Technical Standards and Safety Authority - Fuel Storage Standards:  
<http://www.tssa.org/regulated/fuels/default.asp>

As any new rules and regulation take effect, we are required and we will comply with any new standards and regulation. It is the law and how we do business..

# The Paris Pit Site Plans

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- Current Provincial Standards specify the details to be illustrated on the site plans. A minimum of three separate drawings must illustrate:
  - ▶ **Existing Features** – details include reflection of the condition of the site at the time the licence was issued. Information includes boundary of area to be licensed, boundary of area to be extracted, topography, existing buildings and entrances, elevation of the established water table, zoning and land uses, location of existing tree cover on and within 120 m of site, existing water courses on and within 120 m of site
  - ▶ **Operations** – details include sequence and phasing of operations, details on stripping of topsoil and overburden, berm and stockpile locations and heights, location of processing plants, fuel storage, final depth of extraction, tree screens, hours of operation, internal haul roads, entrance locations, scrap storage location, equipment to be used on site
  - ▶ **Progressive and Final Rehabilitation** – details include sequence and direction of progressive rehabilitation, details on how topsoil and overburden will be used, how slopes will be established, details on importing soil, details on type of vegetation to be established, final grades
  - ▶ **Cross Sections** – details included existing grades, final grades, berm designs
- Refer to the *Aggregate Resources Act Provincial Standards* for all of the required details.

# Paris Pit – MNR Approved Site Plans – Site Environment



# Paris Pit – MNR Approved Site Plans – Site Environment




## DRAWING INDEX

- 1 of 5 Site Environs
- 2 of 5 Existing Features
- 3 of 5 Operational Plan
- 4 of 5 Operational Plan
- 5 of 5 Progressive Rehabilitation and Final Rehabilitation Plan

This site plan is prepared for submission to the Ministry of Natural Resources in conjunction with an application and is accordance with Section 59(3) under the Aggregate Resources Act and Regulations.

Source of aerial photography: Mill 2010.

## Legend

-  Licensed Boundary
-  Limit Of Extraction
-  Proposed Entrance/Exit  
Monitored and regulated by a gate (minimum of 1.2 metres high) which will be locked at all times when the pit is not in operation and will remain through Phases 1-8
-  Municipal Boundary
-  Existing Field Entrance



## KEY PLAN

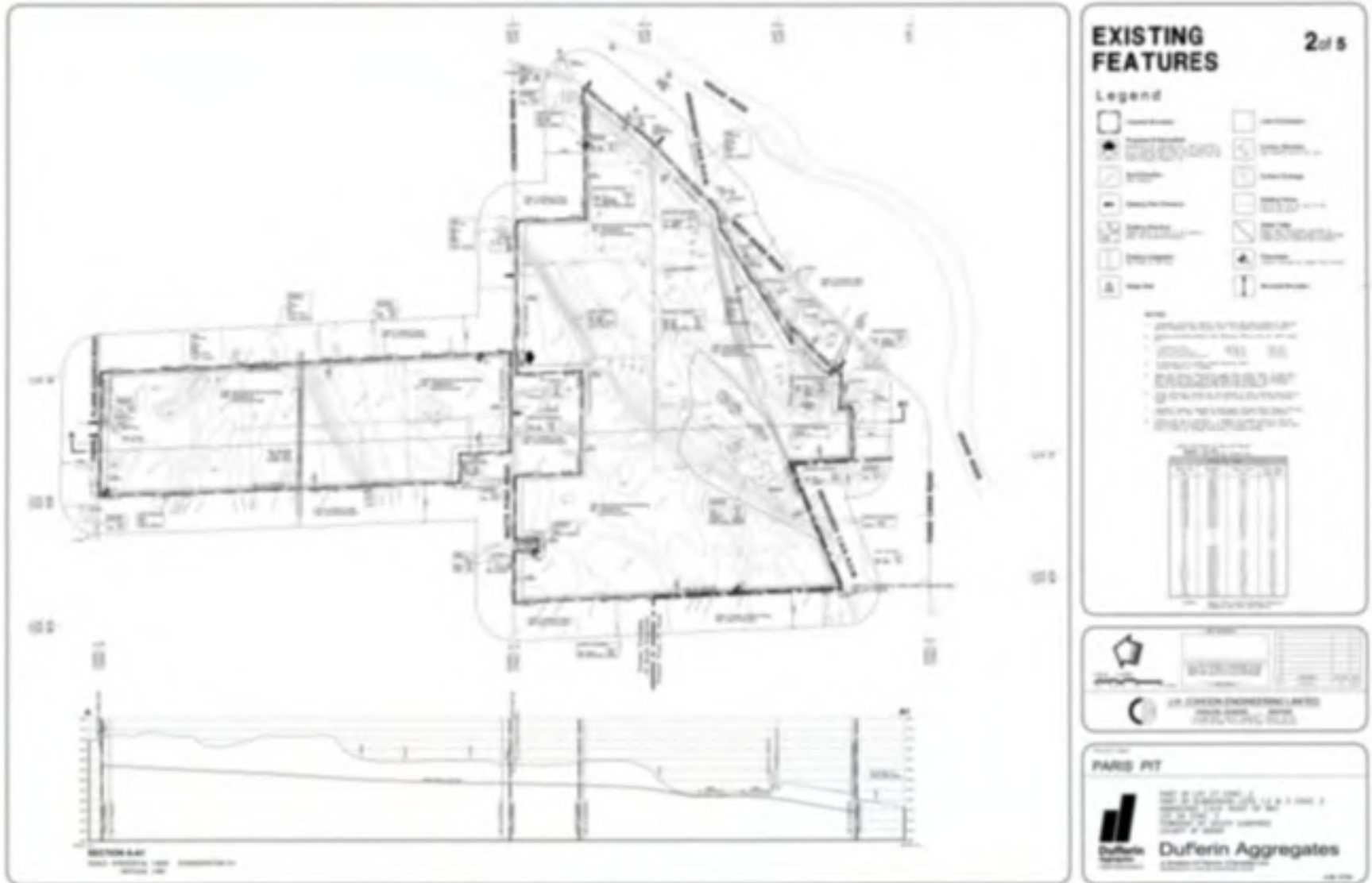
 Subject Property

Scale 1"=1 mile



















# Paris Pit MNR Approved Site Plans – Existing Features



# Paris Pit MNR Approved Site Plans – Existing Features

## Legend

	Licensed Boundary		Limit Of Extraction
	Proposed Entrance/Exit Maintained and regulated by a gate (minimum of 1.2 metres high) which will be locked at all times when the pit is not in operation and all access through Phases 1-8		Contour Elevation Feet (Metres) Above Sea Level
	Spot Elevation Feet (Metres)		Surface Drainage
	Existing Field Entrance		Existing Fence Feet & Miles (at the time of the original site plans)
	Existing Structure Left as shown on plan for all buildings within the Licensed Boundary.		Water Table Water table information provided by Jagger Hires Limited based on piezometer monitoring and existing well inventory
	Existing Vegetation See notes on this plan		Piezometer Location provided by Jagger Hires Limited
	Water Well		Municipal Boundary

## NOTES:

1. Topographic information obtained from existing site plans prepared by "Marshall Macklin Monaghan" dated February 1973. All available information is shown.
2. Boundary information obtained from "MacAulay, White & Muir Ltd." dated August 2011.
3.

Licensed Area	248.81 ha	(615 Ac)
Area of Extraction	207.68 ha	(513 Ac)
Existing Disturbed Area	1.75 ha	(4.32 Ac)
4. All dimensions are in metres unless otherwise noted. Contour interval is 5' (1.524m)
5. Water well locations obtained from Jagger Hires Limited, 1990. All wells within 300 metres are shown. Onsite piezometers will continue to be monitored for water level data and quality at least three times annually. This monitoring program will continue throughout the life of the pit operations.
6. Zoning information obtained from the township of South Dumfries Zoning By-law 40-88 (June 1988) and the Town of Paris Zoning By-law No. 2794 (October 1989).
7. Vegetation inventory completed by MacNaughton Hermesen Britton Clarkson Planning Limited July 23, 1991. Height and composition based on visual estimation.
8. Existing land use is agricultural. In addition, the eastern portion of the site (future Phase 8) may be used on an interim basis, for golf course related uses (not to include any buildings, structures or storage facilities).

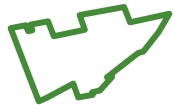
# Paris Pit MNR Approved Site Plans – Existing Features

UNLESS NOTED BELOW ALL WELLS ARE DRILLED  
 INDICATES A DUG WELL  
 INDICATES A HALF DUG HALF DRILLED WELL

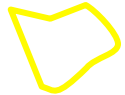
WATER WELL TABLE			
Water Well No.	Elevation (m)	Water Found (m)	Static Water Level (m)
1158	259.1	48.8	27.4
2265	262.7	14.6	9.1
1304	252.4	22.9	19.2
1578	249.9	--	--
2369	248.0	13.1	7.3
1150	231.6	15.2	1.5
1151	231.6	13.7	2.7
1152	231.6	13.7	2.7
1153	231.6	18.6	2.7
1155	245.4	20.4	12.2
1156	246.3	20.4	11.3
1157	246.0	20.4	11.6
1*	--	8.4	8.4
2*	--	12.6	12.6
3°	--	9.1	9.1
4°	--	--	--
5	246.0	--	--
P1	272.1	15.7	15.7
P2	262.8	12.8	12.8
P3	254.8	8.6	8.6
P4	251.8	15.1	15.1
4A-1	251.5	18.4	18.4
4A-2	251.5	15.2	15.2
P5-1	255.2	11.2	11.2
5-2	254.8	10.8	10.8
5A	255.1	18.7	18.7
P6	240.9	5.2	5.2
1154	231.6	7.9	1.8

SOURCE: Jagger Hims Limited Consulting Engineers  
 registered MOE Water Well Records.

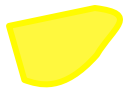
# Paris Pit Site Map – Phases of Extraction



Licence  
Boundary



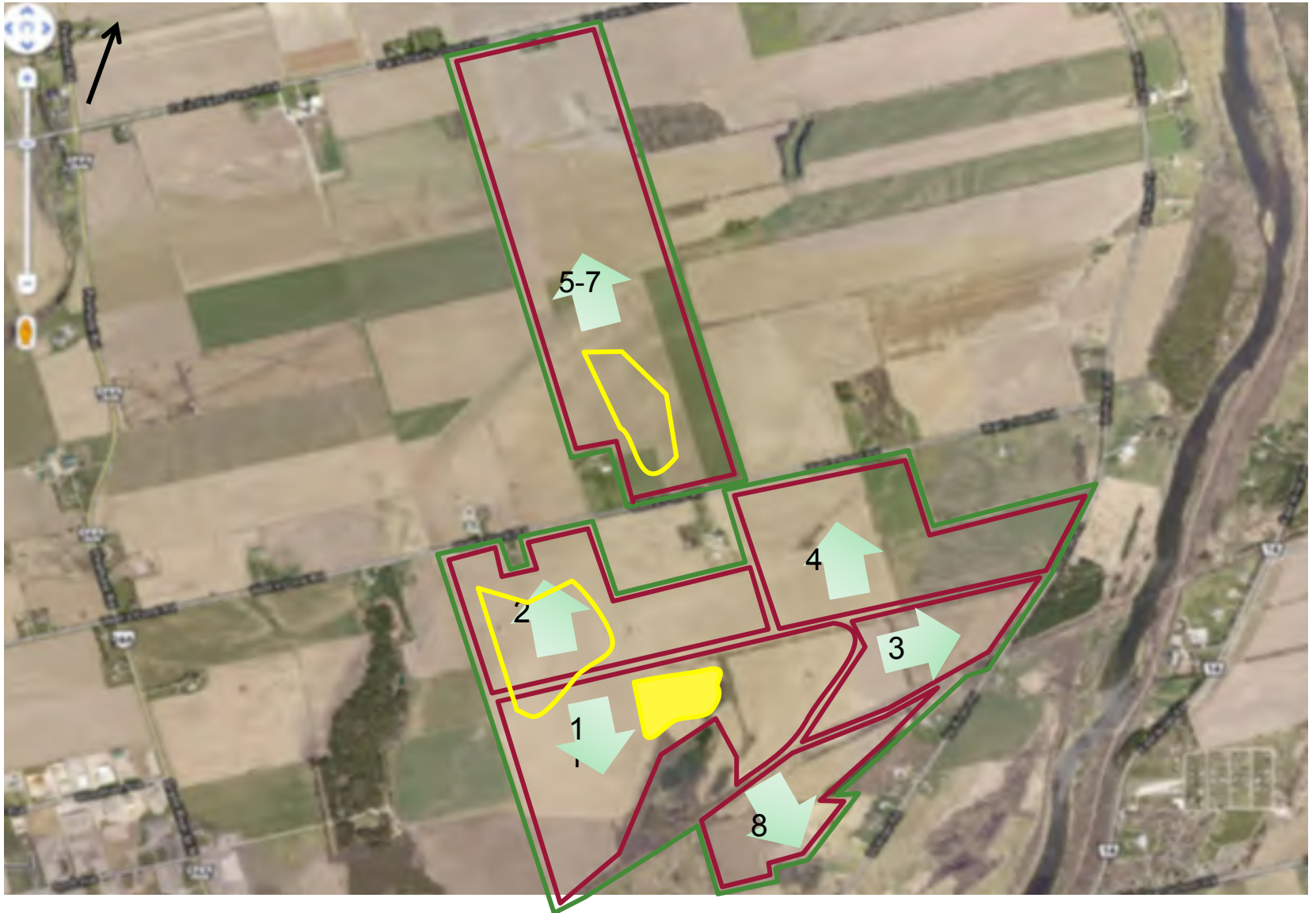
Below water  
Extraction



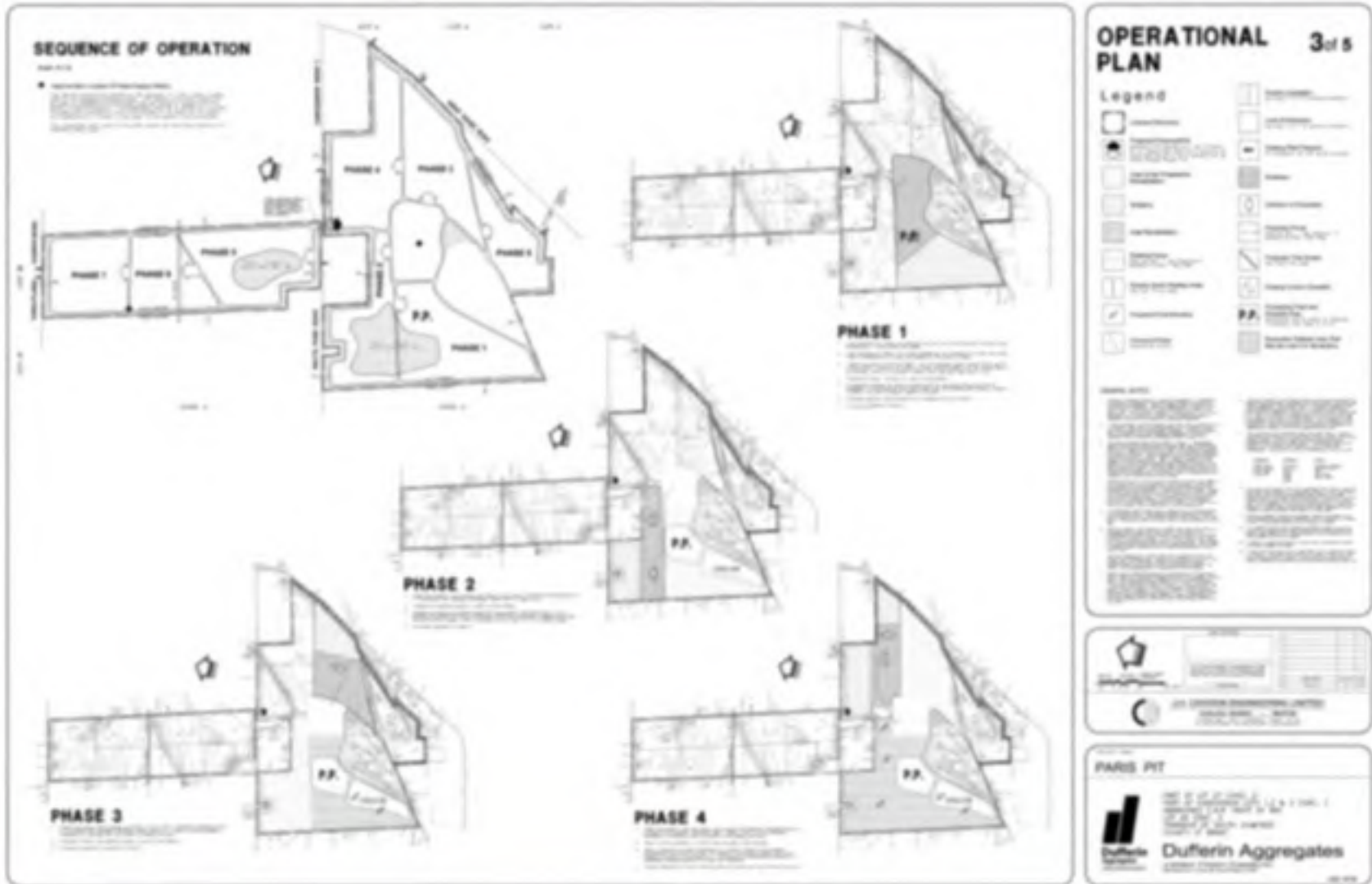
Processing  
Area



Direction of  
Extraction &  
Phasing



# Paris Pit Site Plan – Phases of Extraction and Progressive Rehabilitation



# Paris Pit Site Plan – Phases of Extraction and Progressive Rehabilitation

## Legend



Licensed Boundary



Proposed Entrance/Exit  
Accessed and regulated by a gate (minimum of 1.2 metres high) which will be located at all times when the pit is not in operation and will remain through Phases 1-6.



Area Under Progressive Rehabilitation



Stripping



Area Rehabilitated



Existing Fence  
This and Note 1 See Description of Operation & Note 7 Site Page



Nursery Stock Planting Areas  
See Note 10 Site Page



Proposed Final Elevation



Conveyor Route  
Approximate location



Existing Vegetation  
See page 2 of 5 for detailed description



Limit Of Extraction  
See page 2 of 5 for detailed description



Existing Field Entrance  
For emergency and site service purposes



Extraction



Direction of Excavation



Proposed Fence  
This and Note 1 See Description of Operation & Note 7 Site Page



Proposed Tree Screen  
See note 8 this page



Existing Contour Elevation



Processing Plant and Stockpile Area  
Approximate area as shown on Description of Operation (Site page) at 12 No.



Excavation Setback Area That May Be Used For Stockpiling

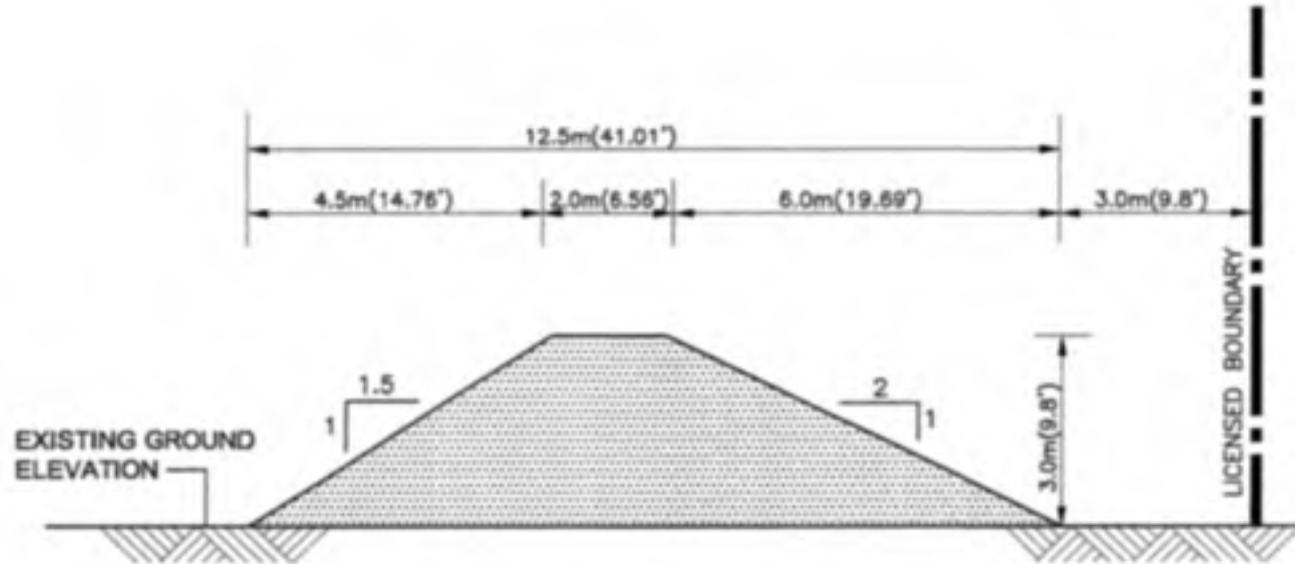
## GENERAL NOTES:

- Sequence of stripping, extraction, progressive rehabilitation and reclamation to be completed and allowed to close the ground between and around all existing and reclamation. Storage capacity, layout and extent will be revised, finally to agree with the final rehabilitation or closure in the phase notes. Some temporary boundary of road/hailed or the oil floor (depending on if access for it) will be required allowing an amount of soil and site suitable for progressive rehabilitation.
- A full assessment of the soil profile to each area will be carried out prior to allowing. Where there are identifiable layers of fossil and other, they will be stripped and stored/transported separately. At least one area will be retained for use in the progressive rehabilitation of the site in accordance with the progressive rehabilitation table on page 5 of 5.
- The normal processing plant will be installed in Phase 1. The associated settling areas will be excavated below the water table with the maximum depth of 1 metre and then that low settled to the grade will be stored or required. Settling and flow will be used in the progressive rehabilitation of various soil of flow. That soil suitable in the study of the processing plant will not exceed 15 metres in height. There is no preliminary design condition for the processing plant. For 5: striping, settlement 1: a soil condition to provide any other regarding sand, silt or silts or in the form the plant will require. When the plants are determined, they will be constructed like the plant. The storage will be above ground, located in the study of the processing plant, and concrete within or between structures designed to hold 100% of the soil stock capacity.
- Excavation will occur in one (1) and the majority of the site. The height of the excavation will vary depending on the topography. Additional the may be required to some portions of the site due to topography and the requirement to create conditions of material being fed to the plant. Heavy road and access will be used to transport soil and feed the material to the existing processing plant. As the operation moves further from the plant and as it becomes feasible, a concrete system will be established. Once the concrete system is established, the majority of the material will be moved to storage from the active phase to the processing plant.
- A temporary primary road may be required prior to the establishment of the processing plant. Temporary processing equipment may also be used throughout the life of the operation and would be located in the active phase. The concrete system may also include a transfer of soil to the site.
- With the completion of the extraction of settling areas, they will be in no position above the water table and Phase 5. The result of the hydrogeological monitoring will be reviewed by the licensee prior to the start of Phase 5. Extraction in Phases 1-7 will range at least 1 meter above the water table (see cross-section page 2 of 5 for location of water table). The proposed steel structure shown if the rehabilitation plan do not represent a maximum depth of activities but do include the representation of up to 1 metre of soil.
- Any area including from earth activity will be removed areas of the study of the processing plant. Soil will be removed from the site or in nearby areas. An area will be required over the site for storage. In-situ material and concrete may also be temporarily stored in the study of the processing plant for incorporation into this process.
- Timing south of White Pond Road will be avoided prior to the start of Phase 1 and will be maintained throughout the life of the operation. Timing north of White Pond Road will be avoided prior to the commencement of Phase 3 and maintained throughout Phases 4, 6, 7 and 8. The sequence of operations (this page) for details on existing and proposed settings. The timing of timing elements a condition of completion 10 (under separate provisions) will be provided for by regulation 10 (1). Timing may be offset from the licensed boundary where required to progress work operations. The license boundary will be marked with white 1.5m high poles where there is no fence.
- Licensee adjacent to the license boundary along with flow flow have been agreed to their retention of property in the license boundary with other agreements. The operation is not to be allowed through the site and immediate protection of the 4.5km. It agreed a period. The activities will be progressively removed to be used with suitable offset grade on a side of 10 meters, not necessarily at least but are not will give for a period of more than 1 operation season. As more than 10 meters (maximum) will be allowed at any one time prior to settling to the license 100. These the processing will be approved the pattern and settlement positions of the site and operations and plant.
- The flow areas will be established before and during Phase 1 using 30 centimetres high settling in an approximate capacity of 1,000 tonnes/phase (licensee preferred). The flow areas will include approximately 400 centimetres and 500 centimetres flow to be extracted from the flow area. Once all are removed, excavated and removed in the license area (during one or in existing beds). This rehabilitation in the site will include material of varying depth (depending to include large low volume form 500, equipment loading) dependent around the slight water level in most phases.
- Approved operations including the license, nursery stock planting and, some materials and progressive rehabilitation will be conducted in a timely manner. Immediate planting will be required at license.
- It is required that all surface drainage of surface through the pit flow in the pit to prevent any surface water will be directed towards any existing water settling ponds. Settling storage area and being the pit will be shown in 10 in a plan.
- It is required to provide provided by the site plan, of appropriate process, not being operation and safe.
- It is required that all water may be located within the area defined in Phase 1 or Phase 2. The license has been from the gate to White Pond Road and is required (shown in plan). Once timing has been and will be shown at license to occur the pit flow and during processing plant and.

Condition	Setback	Depth
1000 Tonne	10m	1000mm
500 Tonne	5m	500mm
250 Tonne	2.5m	250mm
100 Tonne	1m	100mm



# Paris Pit Site Plan – Phases of Extraction and Progressive Rehabilitation



## Typical 3.0m Berm Detail

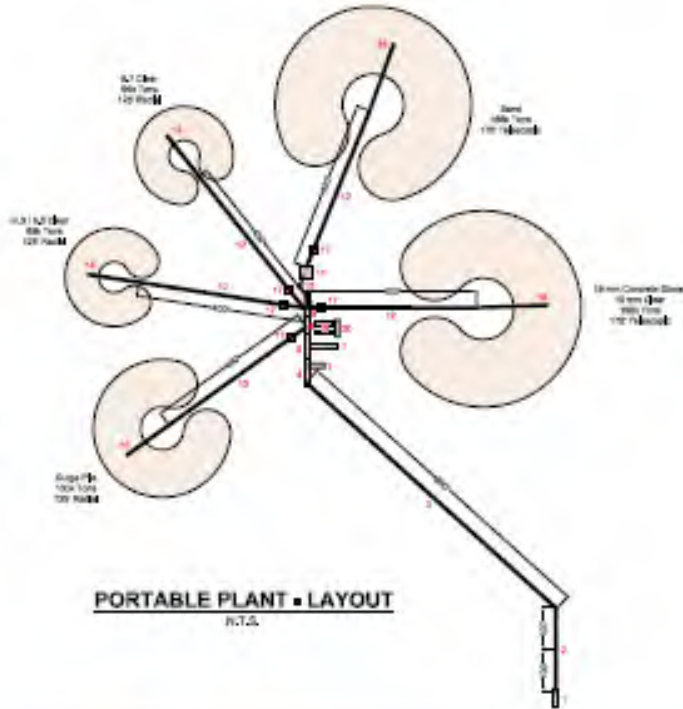
SCALE: Hor. 1:150  
Vert. 1:150

This detail will be varied along the length of proposed berms so that the berm configuration (location and height) will be varied to create a more natural looking screen. 3.0m is an approximate height. The actual height will vary depending on topsoil or overburden storage requirements, but would normally range from 2–4 metres and the slope exposed to the licence boundary may vary from a minimum of 2:1 to a maximum of 4:1.

# Processing Plant Examples

## Legend

- 1 - Four (4) side grizzly w/ face
- 2 - Two (2) 100' x 30' primary feed conveyors
- 3 - 800' x 30' ground conveyor from site
- 4 - Portable jaw crusher with feed conveyor
- 5 - Feed bin for stone same
- 6 - 8' x 20' deck w/ screen
- 7 - Secondary cone crusher
- 8 - Feed bin for surge pile
- 9 - 7' x 20' 3-deck w/ screen
- 10 - Storage bin
- 11 - Sand plant pipeline & transfering system(s)
- 12 - Four (4) 400' x 30' ground conveyor/ to stock pile (bottom to produce)
- 13 - One (1) 400' x 30' ground conveyor to surge pile
- 14 - Two (2) 120' x 30' road portable rubber shaker
- 15 - One (1) 120' x 30' road portable rubber shaker
- 16 - Two (2) 120' x 30' road portable rubber shaker
- 17 - Five (5) gravel bins
- 18 - One (1) linear water pump (not shown on drawing)
- 19 - Control tower & buffer pit/area/ surface/ water pipe, tower
- 20 - Plant generator



**PORTABLE PLANT - LAYOUT**  
N.T.S.



**PHOTO #1 - Primary Jaw Crusher**



**PHOTO #3 - Secondary Cone Crusher**



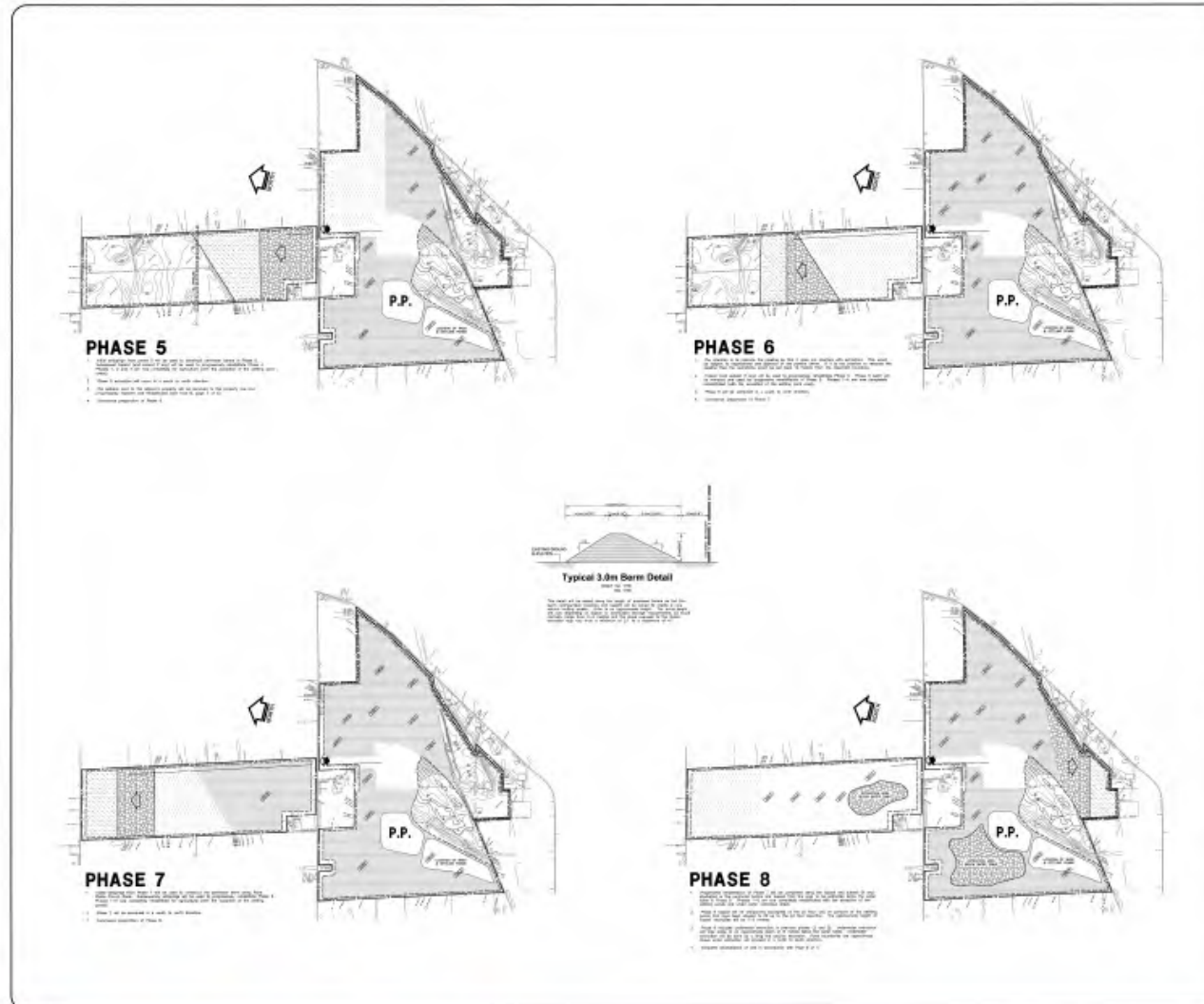
**PHOTO #2 - Screen Deck**



**PHOTO #4 - Sand Plant**



# Paris Pit Site Plan – Phases of Extraction and Progressive Rehabilitation



## OPERATIONAL PLAN 4 of 5

### Legend

- License Boundary
- Proposed Extraction Pit
- Area Under Progressive Rehabilitation
- Striping
- Area Rehabilitated
- Nearby Block Planting Area
- Proposed Final Elevation
- Contour Lines
- Limit Of Extraction
- Existing Vegetation
- Excavation
- Direction of Extraction
- Proposed Tree Screen
- Final Contour Elevation
- Processing Plant and Storage Area
- Excavation Setback Area That May be Used for Stockpiling

**SITE PLAN OVERVIEW**

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMITTING	10/30/2012
2	REVISED TO REFLECT COMMENTS FROM THE BOARD OF DIRECTORS	11/15/2012
3	REVISED TO REFLECT COMMENTS FROM THE BOARD OF DIRECTORS	11/15/2012
4	REVISED TO REFLECT COMMENTS FROM THE BOARD OF DIRECTORS	11/15/2012

**J.H. COHOON ENGINEERING LIMITED**

1000 SHEPPARD AVENUE EAST, SUITE 100, SCARBOROUGH, ONTARIO M1S 1T7  
 TEL: (416) 291-1111 FAX: (416) 291-1112  
 WWW.JHCOHOON.COM

**PARIS PIT**

**Dufferin Aggregates**

is a division of Holcim (Canada) Inc.

PART OF LOT 37 CONC. 2  
 PART OF SUBDIVISION LOTS 1, 2 & 3 CONC. 2  
 ADJACENT C.N.R. RIGHT OF WAY  
 LOT 29 CONC. 3  
 TOWNSHIP OF SOUTH DUMFRIES  
 COUNTY OF BRANT

JCB 9738

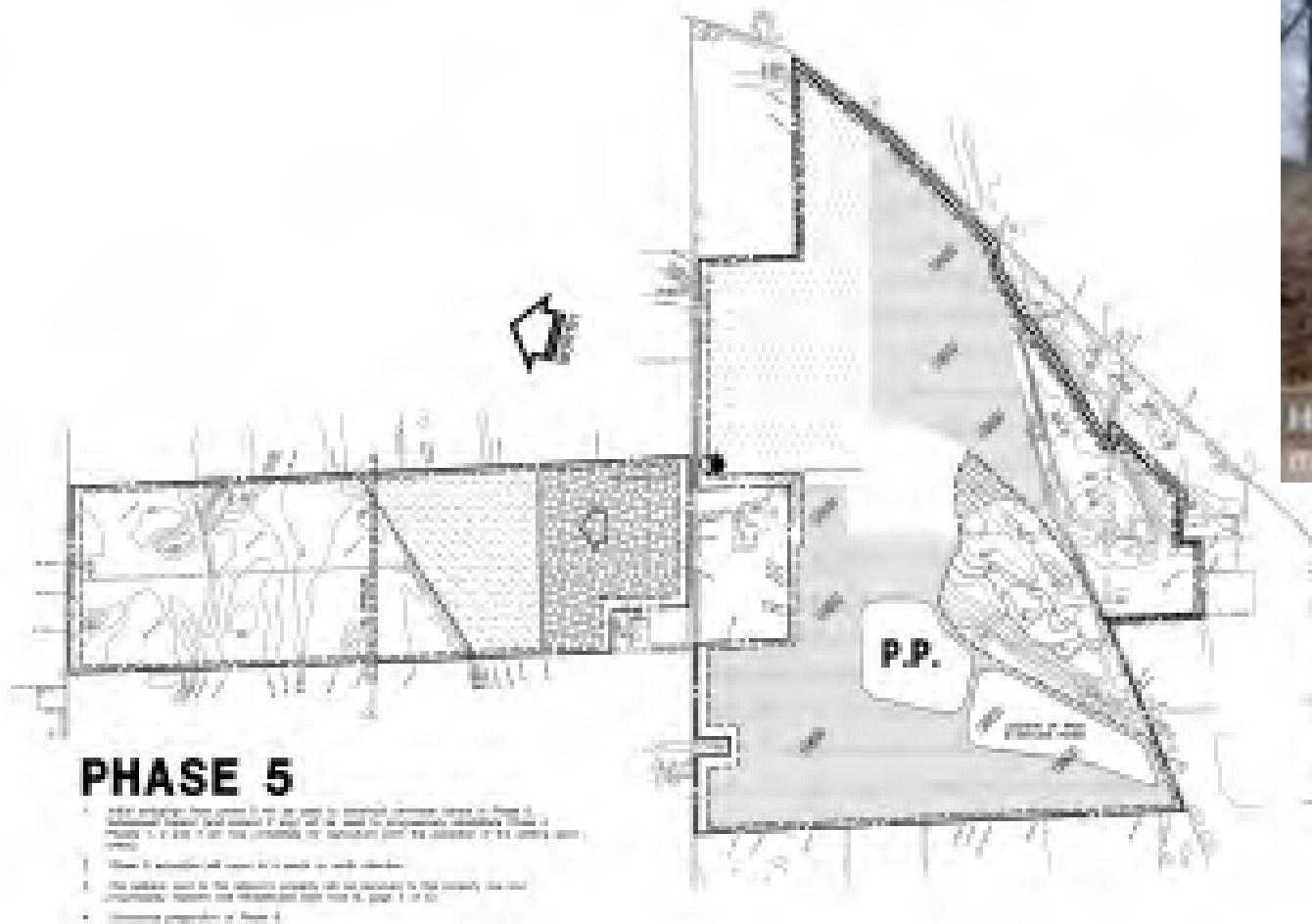


# Extraction Below the Water Table

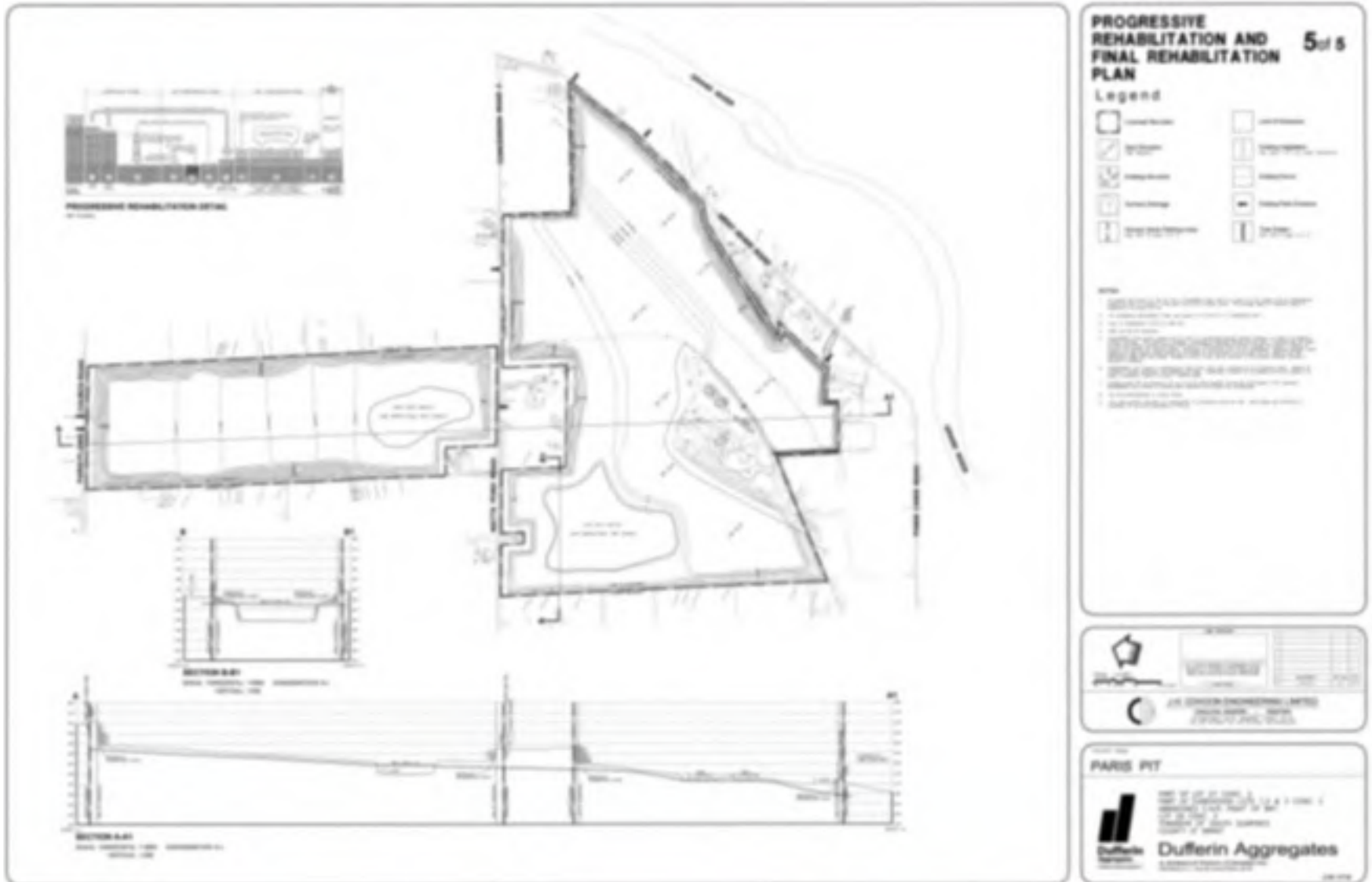
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- The site plan includes the approval to extract below the water table in two locations. The design of the phasing is for this to occur as the last phase – more than 20 years in the future.
- Prior to the below water extraction occurring:
  - ▶ Source pond development for the PTTW will occur outside the Well Head Protection Area
  - ▶ Ground water monitoring will be continued as a check and balance against our PTTW and ARA license commitments
  - ▶ Source Water Protection plans will have been approved by MOE and will be implemented
  - ▶ Ongoing 3<sup>rd</sup> party monitoring by the MOE, County, GRCA
- We are committed to drinking water source protection and protection of the natural environment. Extraction at the Paris Pit will not impact the available quantity of water nor the water quality.

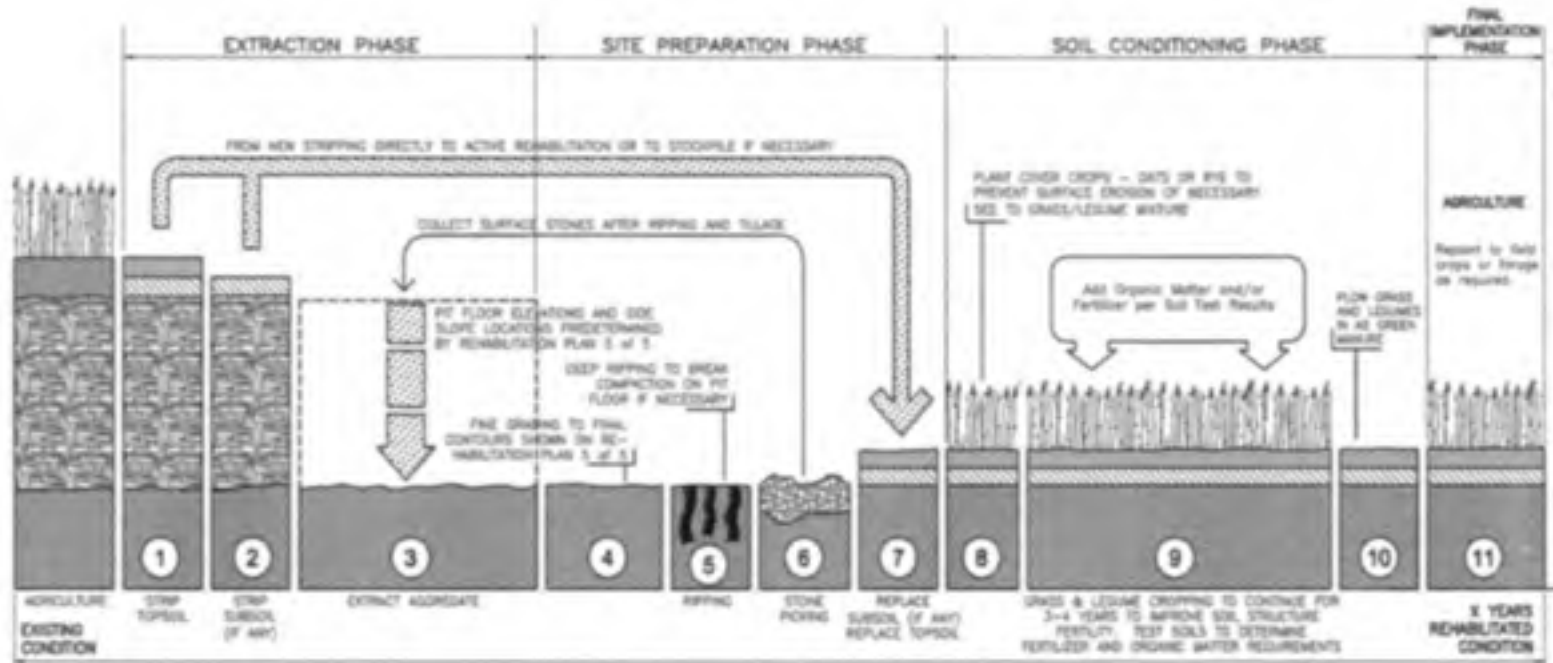
# Paris Pit Site Plan –Progressive and Final Rehabilitation



# Paris Pit Site Plan –Progressive and Final Rehabilitation



# Paris Pit Site Plan –Progressive and Final Rehabilitation



## PROGRESSIVE REHABILITATION DETAIL

NOT TO SCALE

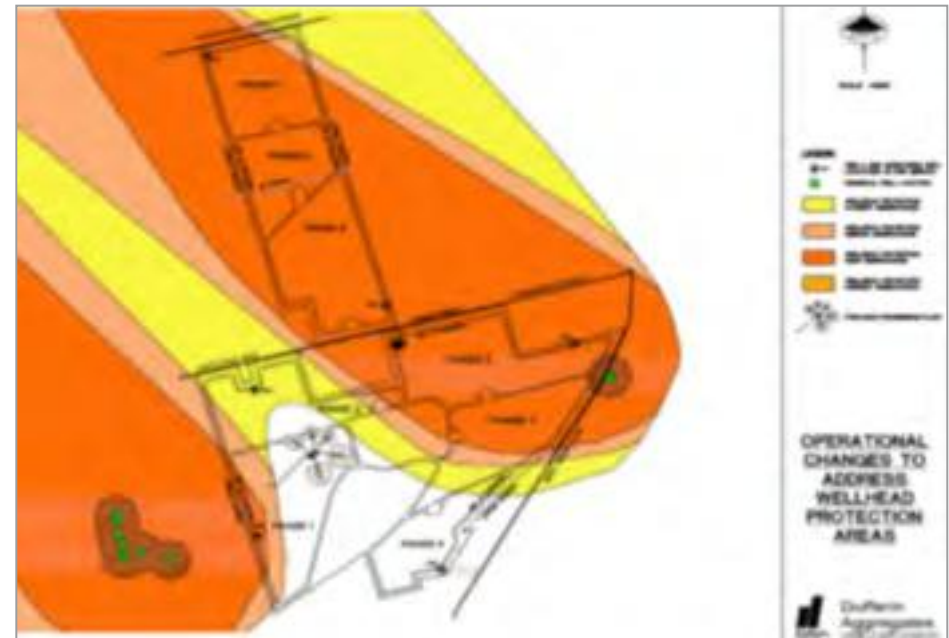
# Making Improvements to the Paris Pit Site Plan and Operation

- In preparation for the commencement of operations, Dufferin Aggregates applied for the following license amendments to redesign the site plan:
  - ▶ Minor amendment to the ARA to move the plant location outside the Wellhead Protection Area – *approved February 2012*
  - ▶ Major amendment to the ARA to re-locate the site entrance in order to minimize the number of trucks that will pass our neighbours' properties – *approved October 29, 2012*



# Making Improvements to the Paris Pit Site Plan and Operation

- There have been concerns raised that since the licence for the Paris Pit was approved in 1974, it will not meet the current standards. Dufferin is required to and is committed to meeting the current standards.
- We are moving forward carefully:
  - ▶ Ongoing communications with the CAP, public, County, First Nations, GRCA, MOE, MNR
  - ▶ Conducting technical studies using current standards
    - Archaeology
    - Hydrogeology
    - Ecology
    - Transportation
  - ▶ Strong baseline monitoring data with continuous monitoring programs



# Today's Standards – Permits and Approvals

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Dufferin will be applying for the following permits, approvals and compliance, ***“in addition to approvals provided by this site plan, all applicable provincial and federal legislation will apply.”*** (See Site Plan Page 3, note 13):

- **Existing Licence Condition – Spills Plan Implementation**

- ▶ Spills prevention and remediation plan
- ▶ Licence condition by MNR with approval from MOE

- **Permit To Take Water (PTTW)**

- ▶ In order to wash aggregates, a PTTW is required. Washing is required to remove fines to produce some aggregate products to the approved specifications
- ▶ The PTTW is issued and regulated by the MOE
- ▶ Dufferin will be filing a PTTW application for the Paris Pit
- ▶ Dufferin will carry out pre-consultation with MOE, GRCA, County, CAP, First Nations and CCOB prior to formally filing

- **Aggregate Washing – Environmental Compliance Approval (ECA isw)**

- ▶ An ECA (isw) for the source water and settling pond associated with the PTTW
- ▶ The ECA (isw) is issued and regulated by the Ministry of Environment (MOE)



# Today's Standards – Permits and Approvals

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Dufferin will be applying for the following permits, approvals and compliance, ***“in addition to approvals provided by this site plan, all applicable provincial and federal legislation will apply.”*** (See Site Plan Page 3, note 13):

- **Processing Plant – Environmental Compliance Approval (ECA air)**
  - ▶ An ECA (air) is required to operate a processing plant
  - ▶ The ECA (air) is issued and regulated by the Ministry of Environment (MOE)
  - ▶ The processing equipment to be used will have an ECA (air) and the requirements of the ECA (air) will be implemented
  - ▶ New approvals are posted on the Environmental Bill of Rights registry (EBR). If a contractor is used, they will already have an ECA (air).
  
- **Ministry of Natural Resources - Ecology**
  - ▶ Dufferin will continue with the ecology review/monitoring in 2012
  - ▶ To date no significant features or species have been identified
  - ▶ The 2012 work will include a review of the MNR Species at Risk list for Brant County
  
- **Technical Standards and Safety Authority (TSSA)**
  - ▶ The TSSA regulates the handling and storage of fuels
  - ▶ Fuels and lubricants are the only chemicals that will be used in operations
  - ▶ All Dufferin operations and employees are trained on spill prevention, handling and remediation. Dufferin has an Environmental Management System to implement these activities.
  - ▶ Fuel storage will be in double walled above ground tanks located on an impervious pad

# General Discussion

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- We understand that there are concerns from the community that certain questions are not getting answered by Dufferin Aggregates
  - ▶ We are committed to answering any and all questions we receive and ongoing dialogue with the community
- Today, you have the opportunity to ask any question you feel hasn't been answered clearly. We will:
  - ▶ Try to answer the question today as effectively as possible
  - ▶ Develop a FAQ following the CAP meeting containing all questions and answers
- We've tried to answer the questions and concerns as we understood them.

# Next Steps

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- Schedule pre-consultation meetings with various agencies for PTTW application
- Continue to listen to community concerns
  - ▶ Next public meeting will be scheduled in the new year
- Continue to liaise with public through Community Advisory Panel
  - ▶ Next CAP meeting: 2013
    - Topics could include:
      - Cornerstone Standards Council (SERA/AFO)
      - PTTW consultation



**Dufferin**  
**Aggregates**

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