

Explanatory notes for preparing quarry FPPs

Quarry FPP process

A quarry FPP will be required for a quarry that is to be operated exclusively in connection with: the establishment of forests; the harvesting of timber; the clearing of trees (as per section 17 of the *Forest Practices Act 1985*). The requirements are detailed in the *Forest Practices Code* and in the *Quarry approval procedure flow chart* (see Appendix 1).

A quarry that is to be used for other purposes as well as in connection with the aforementioned forest practices will be required to have an alternative permit process.

The [Quarry code of practice](#) (EPA, Tasmania) is a key document that should be consulted.

Variations to Quarry FPPs

A variation will be required when:

- extending quarry operation boundaries
- a significant change to the quarry development or rehabilitation sequence is proposed
- the introduction of a crusher is proposed (i.e. intensification of the activity)
- moving from level 1 to level 2 production volumes is proposed
- extending the period of a quarry FPP.

Notes:

1. The varied (or submitted) FPP must be referred to the EPA for approval/assessment, as the case may be.
2. Where the EPA has deemed that the activity can be managed under the FPP and does not require assessment and no EPN is issued, regulatory oversight rests with the FPA.
3. Where the EPA determines that a full assessment is required and an EPN is issued, the FPA will revoke or expire the FPP and the quarry is regulated by the EPA.

Completing Quarry FPP Forms

Cover Page

- The Cover Page must be completed online as per other FPPs.
- The 'Plan Type' will be Quarry.
- The 'Coupe Name' field will be used for the 'Quarry Name'.

General

- All the dot points in the general section will be included in the quarry FPP.
- Person or organisation assuming primary responsibility for management of forest practices under this plan – this person or organisation must be nominate.

Boundaries

- Describe the FPP and Operational boundaries for the quarry and how they will be marked / identified in the field.

Previous disturbance

- List the extent and type of any previous disturbance to the site.
- Was topsoil stockpiled? If yes, estimate the volume in m³, where it is and if there are any management requirements.
- Indicate any ongoing drainage and erosion problems. (Specify intended measures under water quality and erosion control measures section below.)

Planned quarry development

Road Access Development:

- If a road is to be built, include a roading section in the FPP with all the necessary prescriptions for road construction and maintenance.
- Specify the proposed length and road class as per the *Forest Practices Code*, whether gravelled or not for class 3 and 4 roads, and proposed clearing width.
- Refer to map numbers or names if required.
- Avoid direct line of sight of the access road into the quarry.

Timber harvesting or vegetation clearing from the quarry site:

- Specify the area to be cleared of vegetation, and how the boundary of the clearing is to be determined or marked.
- Prescriptions for harvesting will be in the plan as per a harvesting FPP.
- State how vegetation debris cleared from the site that is not to be removed is to be managed or disposed (e.g. burning, mulching etc).
- Ensure trees are removed within one tree length of the quarry operating area.

Planned sequence of operation:

- Describe how the site is to be operated including the sequence (timing) of each major activity.
- Describe or note on site plan topsoil and subsoil stockpiling for rehabilitation purposes.
- With progressive rehabilitation, estimate the maximum area of disturbance.

Maximum anticipated bench/face height:

- Specify the maximum bench/face height, e.g. three steps of 5m each with consideration of visibility, stability & progressive rehabilitation on the site plan.
- Maximum operations face height should be less than 15 meters.
- Maximum vertical face height post rehabilitation should be 5 meters.

Estimated life of quarry:

- Estimate the life of the quarry in years.

Conservation of natural and cultural values

- Include prescriptions to manage, avoid or minimise disturbance to flora, fauna, geomorphic, cultural heritage, landscape, and soil and water values.
- The *Biodiversity evaluation sheet for quarries 2019* will be used when preparing quarry FPPs. All Quarry FPPs are to be notified to the FPA Biodiversity Program due to FPA requirements for clearance and conversion operations.
- The final agreed prescriptions for natural and cultural values must be included in the FPP.

Flora:

Include prescriptions to manage flora values, including communities and species of high conservation significance, and to manage weeds (see the [Tasmanian washdown guidelines for weed and disease control](#)).

Fauna:

Specify measures to protect species and habitats of high-conservation significance.

Earth sciences:

- Specify measures to be taken to protect or manage significant landforms present, including geoconservation sites.
- If there are streams upslope and within 100 m, or quarry drainage is likely to flow into streams or table drains of roads, or if the quarry is in limestone or close to karst, special prescriptions are likely to be required. Notify FPA Earth Sciences and Cultural Heritage Program.
- The FPA's Earth Sciences specialist will be notified if caves, springs or fossil assemblages (bones or rock fossils) are located during quarry operations.

Cultural heritage:

- Specify requirements for undertaking surveys for Aboriginal sites where appropriate.
- Specify measures to be taken to protect or manage significant sites or artefacts.

Landscape:

- Describe how the landscape management objective will be achieved.
- Need to address the close proximity impact if there are local residences or passing traffic.

Other environmental prescriptions

Noise:

- Need to address the close proximity impact if there are local residences or passing traffic.

- Include consideration of blasting and other operational activities (times & conditions) for control as the [Quarry code of practice](#) has strict noise limits & times of operation.

Dust:

- Need to address the close proximity impact if there are local residences or passing traffic. Identify methods of control if required.
- Note – Dust is now a major WH&S concern in quarries where silica is present.

Blasting:

- If required, blasting times, advising neighbours, air blast and ground vibration limits in accordance to the [Quarry code of practice](#).
- Distance to nearest house or other sensitive use:
- Specify the distance of the closest point of the quarry to the nearest house (to the nearest 100 metres if closer than 1km).
- If closer than 1km, residents and local government should be consulted regarding the management of noise, dust and visual impact (as appropriate). The distances provided in section 6.1.2 of the [Quarry code of practice](#) are generally consistent with avoiding unreasonable noise impacts.

Truck movements which may affect the public:

- Include the permitted hours of truck movements (consider other traffic e.g. school buses), and the likely number of truck movements per day.
- List the public roads to be used and the likely periods of use.

Notice of Intent to Landowners:

- *For the above environmental issues, consider notifying landowners where the following quarry activities are within the distances provided in section 6.1.2 of the [Quarry code of practice](#)*
- Section 6.1.2 provides the following separation distances, measured from the planned maximum extent of quarry operations to any sensitive use:
 1. where regular blasting takes place: 1,000 metres
 2. where material is crushed only: 750 metres
 3. where vibrating and trommel screens alone are utilised: 500 metres
 4. where no blasting, crushing or screening occurs: 300 metres.

Phytophthora management:

- It is important that quarries are well managed so that Phytophthora is not brought into uncontaminated quarries, and material contaminated with Phytophthora is not taken from quarries to uncontaminated sites. For appropriate controls and prescriptions refer to FPA Flora Technical Note No. 8 – [Management of Phytophthora cinnamomi in production forests](#) and to the [Tasmanian washdown guidelines for weed and disease control](#).

- Be aware that Phytophthora can be introduced by trucks, vehicles and even boots – ensure high standards of hygiene are implemented and followed.
- Identify additional prescriptions to maintain “clear” status & also for weed and waste management e.g. signage identifying status/hygiene requirements & barriers for access restrictions at the quarry.

Water quality and erosion control measures:

- Describe the type and placement of sediment and drainage control structures, and their maintenance, e.g. catch drains around the top side of the quarry, sediment traps and settlement ponds.
- A frequency of inspection for compliance shall be included in the reporting measures.

Weed Management:

- Weeds should be controlled such that quarries do not become a source of weed propagules to construction sites and surrounding areas.
- Describe what measures will be applied to prevent weeds becoming established at & from the quarry.
- Describe what action will be taken if weeds become established in the quarry – eradication measures.

Waste Management:

- Consideration of disposal of waste materials, storage of hydrocarbons and spillage control.
- Consideration of barriers for access restriction to avoid the quarry becoming a dump site.

Planned rehabilitation procedures

- Describe the rehabilitation measures to be incorporated progressively and at final site restoration.
- Rehabilitation should result in a stable site that is well drained, not eroding and in a non-polluting state.
- Vegetation cover will normally be required to achieve this and to reduce the long term visual impact.
- The area must be safe and suitable for the planned final use or rehabilitation objective.
- Specify measures to prevent the site from becoming a rubbish dump. Bund or barriers to prevent vehicle access may be necessary.

Reinstatement of Land:

- Describe the activities that will ensure the stabilisation of all worked out areas to minimise ongoing erosion and minimise visual impact of disturbed areas including any progressive rehabilitation.
- Proposed revegetation activities:
- Specify species and source of seed or planting stock, and planting rate or distribution.
- Topsoil shall be sufficient to establish revegetation in accordance with Forest Practices Code requirements.
- Specify the requirements for monitoring and maintenance of revegetation and weed control to ensure that the revegetation is established and effective over the whole site.

Notifications:

In reference to flow charts in Appendix 1 on Quarry Approval Procedures and other statutory regulations, the following notifications may be required for a quarry FPP-

EPA

- *A new level 2 FPP proposal for determination*
- *A level 2 FPP variation proposal*

MRT

- *Construction Materials Registration Form*

Worksafe Tasmania

- *Initial appointments and any change in appointment of the Mine Operator & Site Senior Officer*

Council

- *Notification of blasting*

Landowner

- *Refer to Notice of Intent to Landowners above*

Monitoring and reporting:

- Section 25B of the *Forest Practices Act 1985* gives the FPA the ability to request monitoring/progress reports in addition to compliance reports. It is suggested that the quarry FPP contains a prescription for regular compliance reporting during the life

of the plan, whether or not the quarry is operational. Suggest minimum frequency of annual monitoring/progress reports.

- Regularly used quarries will have regular monitoring associated with ongoing operations, which is a normal requirement of EMS and safety management systems.
- Where quarries are used infrequently, monitoring and progress reporting will be carried out annually as a minimum to address developing issues such as weed invasion or failing sediment control structures.
- The FPA's Earth Sciences specialist will be notified if caves, springs or fossil assemblages (bones or rock fossils) are located during quarry operations.
- If a quarry is not used for a period of two years, eagle nest searches should be carried out before operations re-commence.

Map/site plan

- The [Mining plan mining and extractive industries applications and transfers proforma](#) issued by MRT with sample site plan provides guidance as to the minimum standard and detail required of a site plan (see next page).
- To assist in understanding the staging of operations & planned rehabilitation procedures, a final end of life quarry plan should also be provided.
- Maps/site plans:
 1. Locality map: A locality map (generally at 1:25,000) is required to place the quarry site in context with the surrounding area and features.
 2. Site plan: This is a detailed plan of the quarry site showing the proposed location of quarry activities and features.
 3. Cross section(s): Include cross section diagrams (generally two at right angles to each other) showing the profile of the quarry at commencement of the plan and after final rehabilitation. A three dimensional drawing may be desirable in some circumstances to clarify how the quarry is to be operated.

Signatures

- An acknowledgement form must be completed by the land owner(s) which meets requirement of s. 18 (4)(b) in the Act.
- The Quarry manager will sign [Form 2: Acknowledgement of persons or organisations with primary responsibility for management of forest practices](#)
- Each page of the FPP, including maps and site plans, should be initialled and dated by the landowner, applicant and certifying FPO.
- Only an FPO (Planning) with delegation from the FPA to certify quarry FPPs may certify the plan.

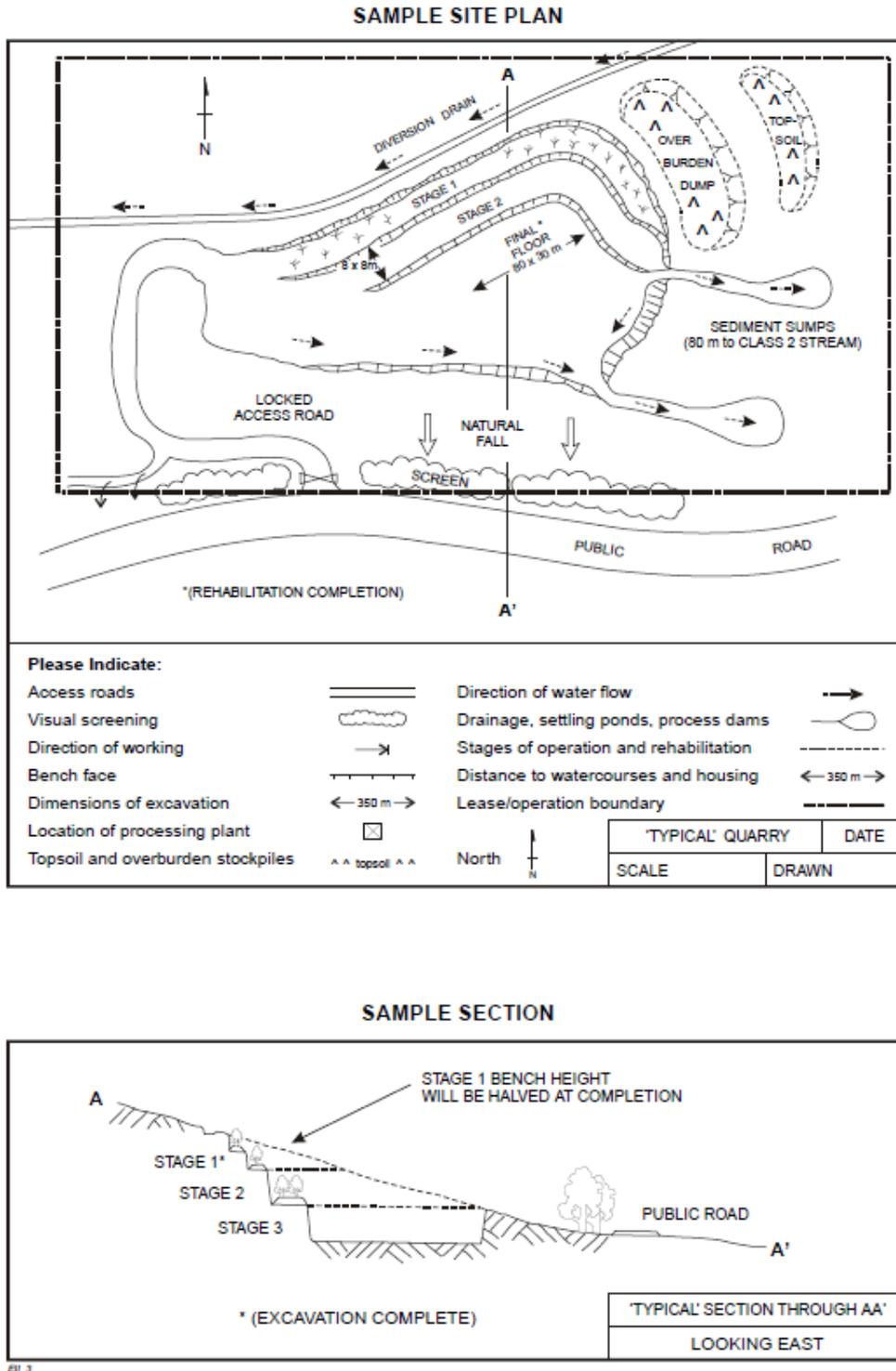
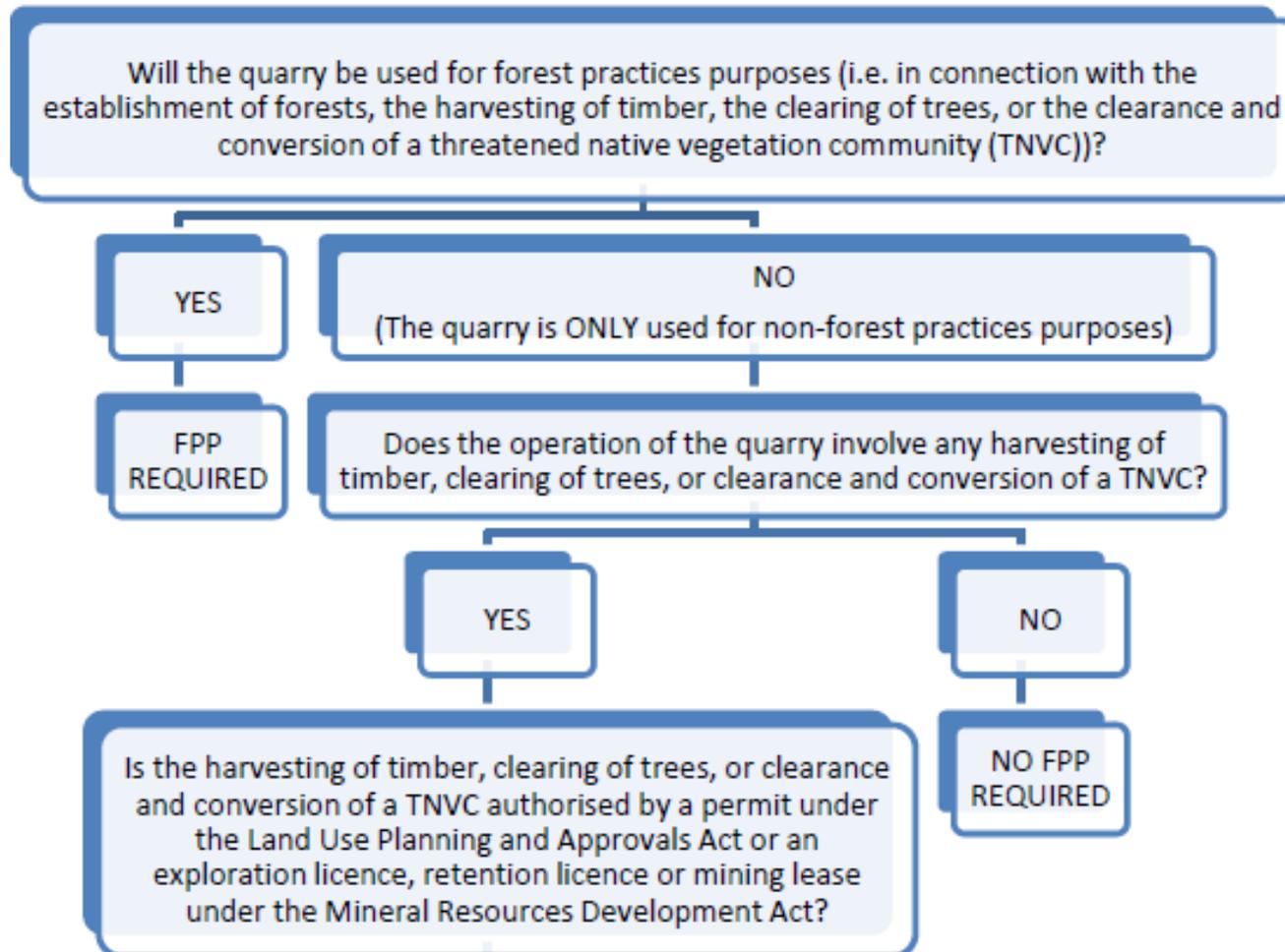


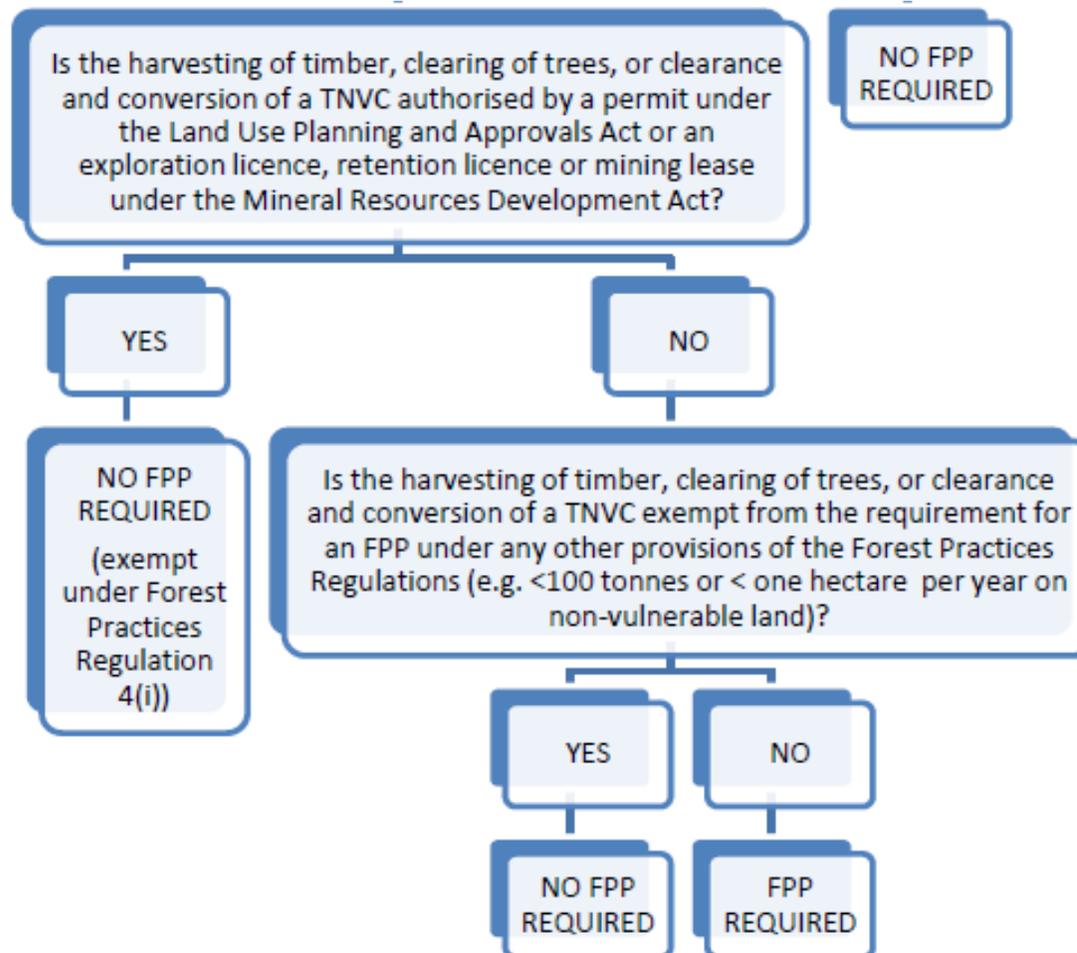
Figure 1. - MRT Mining Plan p.13

Appendix 1: Quarry FPP flowcharts

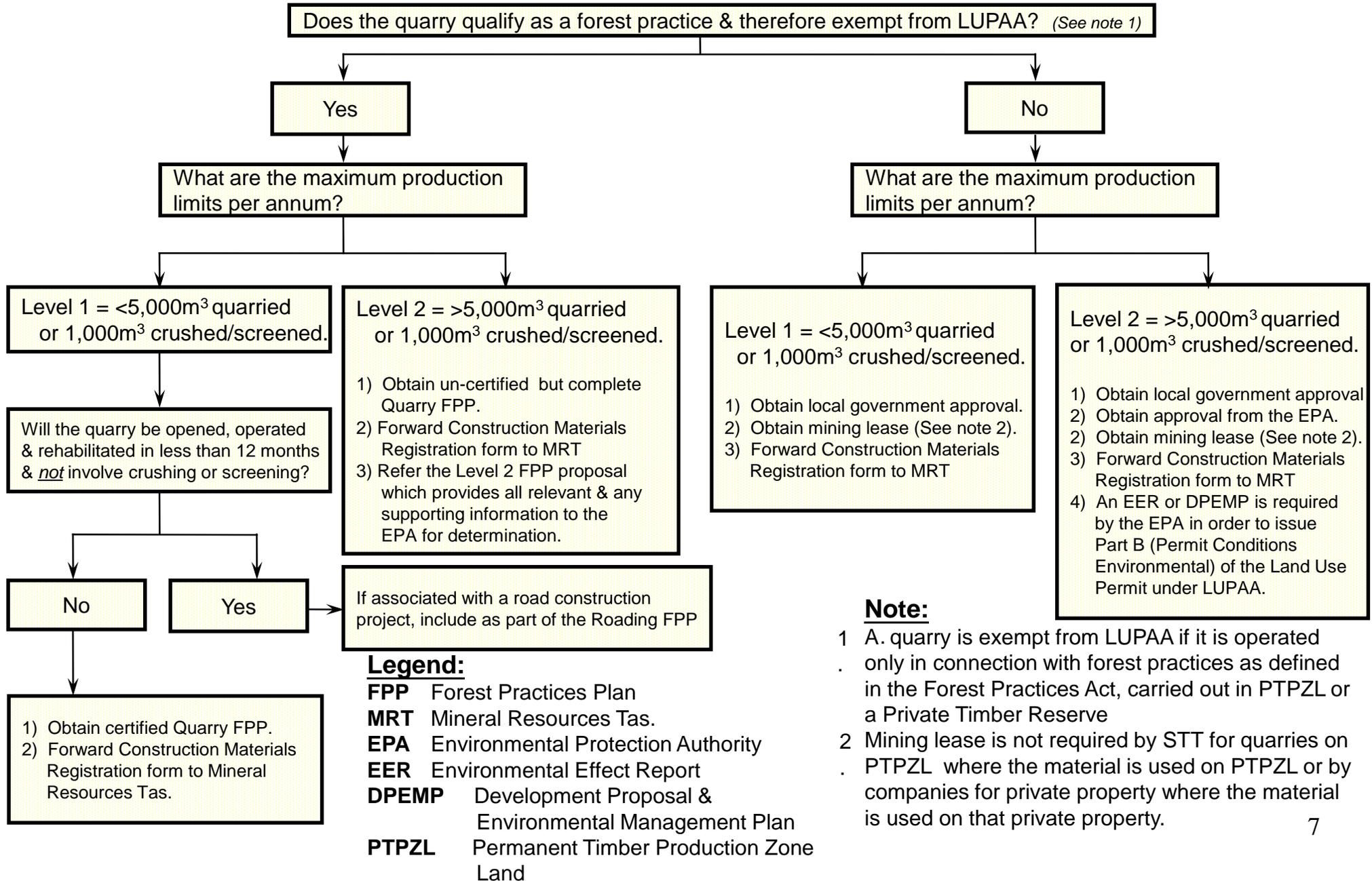
When is an FPP required for a forest quarry?



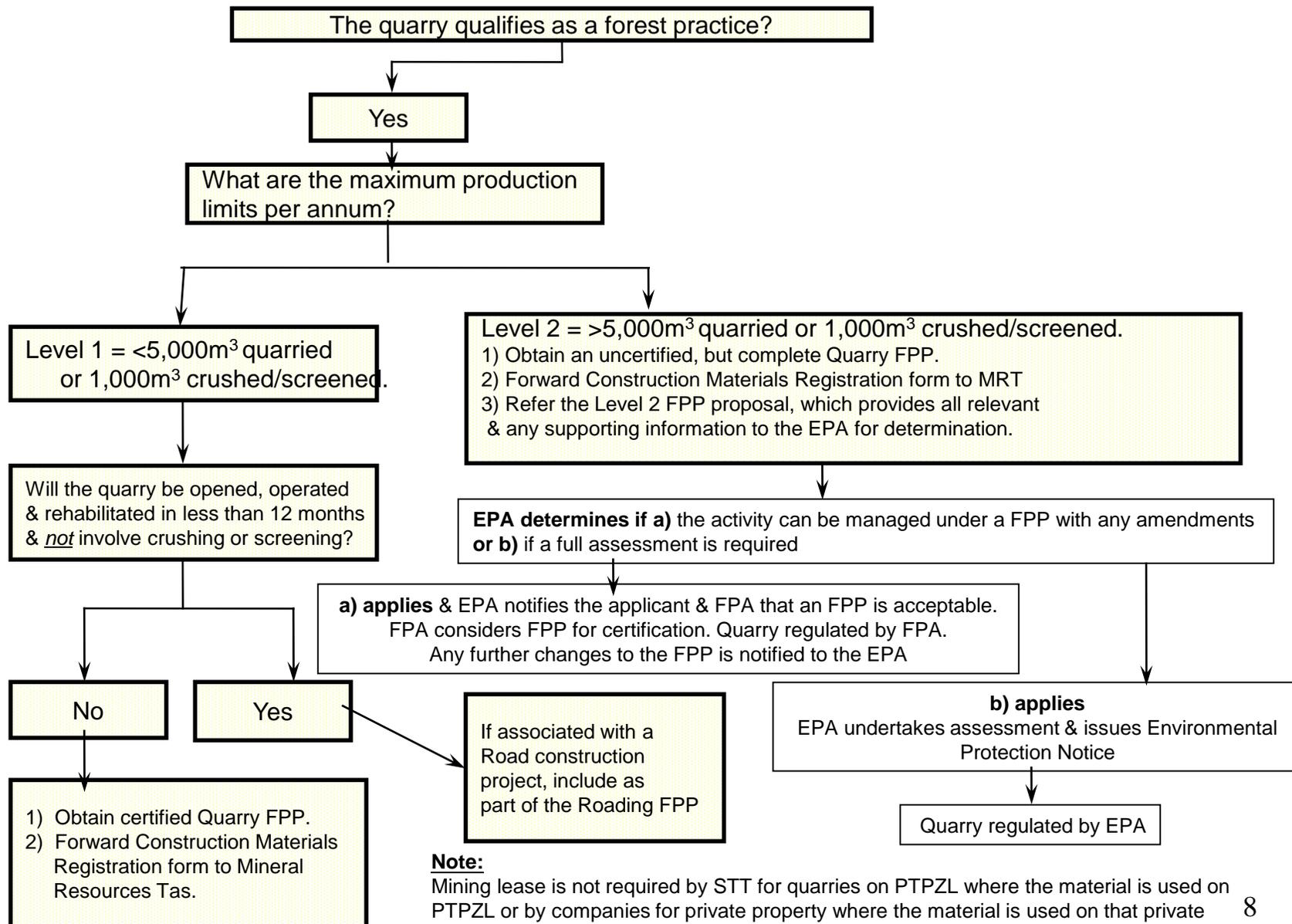
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QUARRY APPROVAL PROCEDURE FLOW CHART

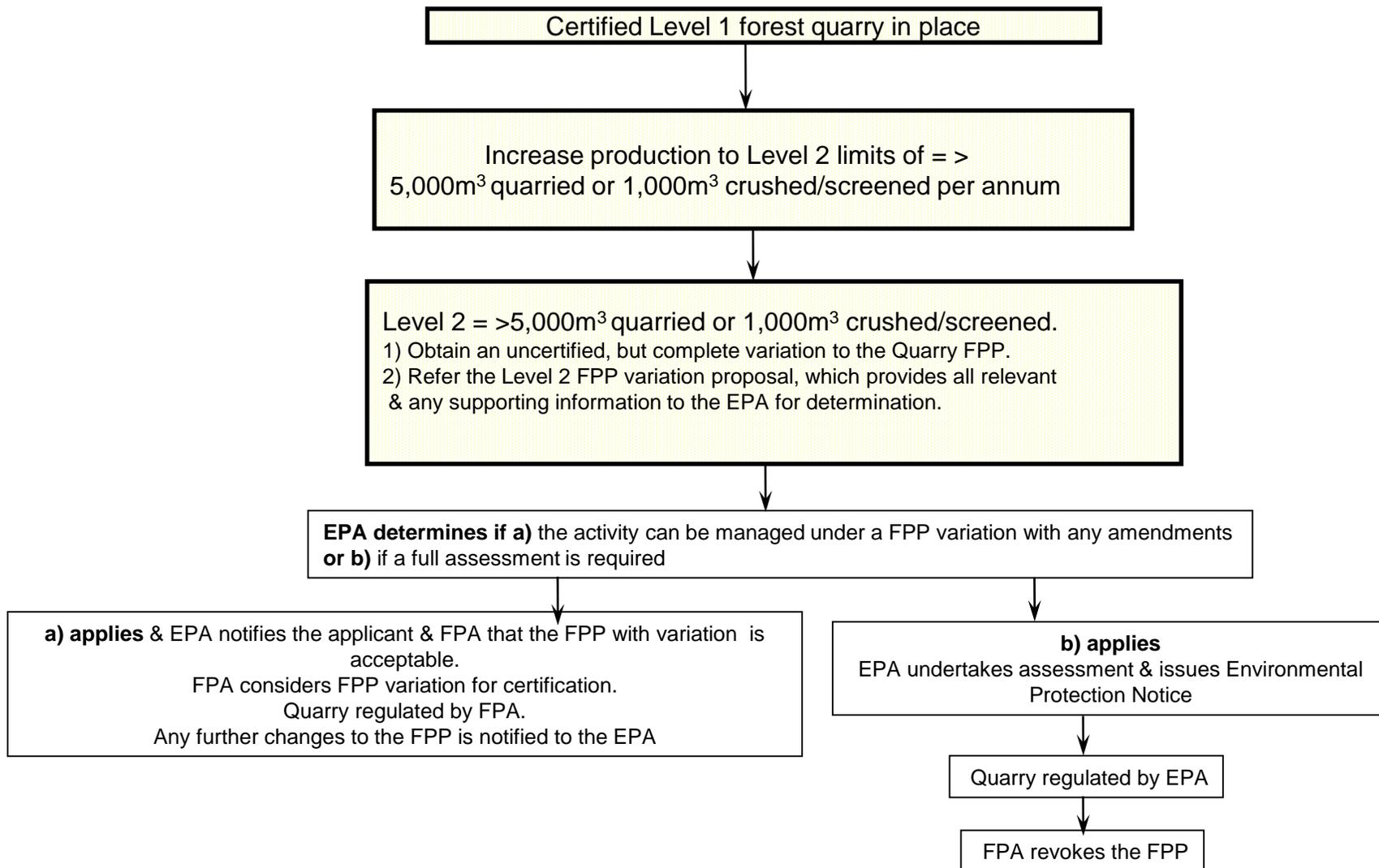


QUARRY APPROVAL PROCEDURE FLOW CHART



Note:
Mining lease is not required by STT for quarries on PTPZL where the material is used on PTPZL or by companies for private property where the material is used on that private property.
4. Referral of Level 2 proposal is in accordance to Section 27(1) of EMPCA

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