

June 2013

Discussion Paper:
***Current and Future Challenges in Meeting DEPI's
Increased Planned Burning Access, Preparation,
Support and Rehabilitation Works Requirements***



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Purpose

- Describe DEPI's current works delivery models;
- Examine DEPI's ability to deliver an increased Planned Burning target using current models of works delivery;
- Identify opportunities and weaknesses in current models of delivery;
- Discuss current industry trends and their consequences on DEPI's business objectives and emergency management obligations;
- Propose options for reforming DEPI's model of works delivery to meet the organisation's obligations.

Scope

This paper includes discussion of the following aspects as they relate to the access, preparation, support and rehabilitation works associated with the proposed increased annual planned burning program and the delivery of DEPI's emergency response obligations:

- Current DEPI works delivery and works outsourcing practices;
- Future needs analysis and forecasts for works;
- Market trends and industry availability analysis;
- Contractual tools, panels and internal procurement/contract management skills analysis;
- The role of DEPI plant and crew;
- Risk management for works delivery;
- Opportunities and risks which are impacted by or effect DEPI's emergency response capability;
- Options for development and reform.

Executive Summary

DEPI is in the initial stages of delivering the largest sustained annual Planned Burning program in the State's history. In order to deliver Government's commitment of 390,000 ha or 5% area treated annually, DEPI will need to approximately double the size of the average annual planned burn program.

Delivering a program of this size will require a large initial increase in works involved in preparation of burn unit boundaries and access. Boundary preparation to provide a safe working environment for firefighters and to protect against planned burn escapes will constitute a major time and cost component of the delivery program. There will also be large increases in the requirement for road access upgrades, burn-day machinery support and post burn rehabilitation and make-safe works. Given DEPI's limited internal resource pool of capable machinery and operators, these increases will require extensive reliance on contracted machinery and skills.

Internal limitations to the delivery of such a large increase to the current program include financial constraints, a poorly equipped and under utilised DEPI internal plant fleet, inefficient internal plant and human resource use models, a lack of well developed contract agreements and works specifications, and staff with limited procurement and contractor management expertise. Limitations and risks external to DEPI include a market which is unprepared for the increase, is unfamiliar with the type of works, is experiencing a rapidly declining skills and experience base, and is

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demonstrating changes to available machinery configurations due to significant changes to the timber industry.

A move to increasing outsourced works will provide a range of important and beneficial outcomes to both DEPI and small communities, but will require some modifications to current procurement and contract management practices. These will include formulation of more defined outcome based works specifications, and contractual terms which allow contractors more control over the management of the works while also requiring them to manage more risk. This model provides a less intensive site supervision model and allows DEPI to spread its staff across a number of contractors to manage the extra workload.

Training of DEPI staff in works procurement, contract administration and superintending will be required, and is already underway. Development of appropriate contracts with adequate works specifications based on reliable and consistent standards is also required and underway. The current market should be able to absorb a gradual ramp-up of demand in most Districts due to recent declines in timber industry and civil works demand, but this will not be the case for long as evidence suggests a number of bush contractors are disappearing from the market.

The issues associated with the roll-out of a large program of planned burning preparation and works also expose some weakness in the model of contractor cover currently employed by DEPI for fire suppression. Issues around the availability of suitably equipped and skilled contractors for firefighting are increasing due to the broad scale market contraction around demand for these attributes. In the past DEPI has been able to rely on the support of an active timber industry to provide the training ground, skill and equipment base for its ongoing suppression and burning requirements, however this is a rapidly diminishing convenience. There is no suitable replacement industry with similar requirements, and DEPI will find it increasingly difficult to access these specialist contract services as they continue to disappear.

More active effort will be required by DEPI to ensure that suitably bush-skilled contractors and appropriate equipment are available to meet its planned burning and fire suppression needs. Longer-term strategic contract partnerships which provide reliability of work and a suitable skills-development environment which capitalizes on the current contractor skill base are essential if DEPI intends to continue to utilise contractors for planned burning and suppression activities.

The current DEPI Panel Contract arrangement unfortunately does not offer a secure business environment to contractors, that promotes investment in skills and machinery. For most of the 330 contractor's on the Panel, access to DEPI's work is sporadic, limited and not sufficient to invest in DEPI's quite specific requirements. This is supported by evidence from recent audits which are suggesting 70% non-compliance to the minimum panel specifications for ROPS and FOPS.

Better results can be achieved by having an integrated strategy for the delivery of DEPI's planned burning, civil and emergency response works. Only by recognising that all of these critical activities are mutually supportive of each other can DEPI gain the efficiency of scale and leverage required to develop its own staff and the contract industry it needs to ensure delivery across all delivery areas.

A big picture model of works delivery which involves a number of contracted and internal works delivery options will provide benefits across the board. Steps need to be taken which include forming a number of strategic geographic partnerships with larger contractors who can offer a broader range of quality services over a longer

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term. These "Preferred Contractors" will work alongside a more focussed and mobile DEPI plant and crew resource, who are also supported by a panel of appropriately pre-qualified and skilled contractors, all of whom have been competitively placed on a categorized panel deployment system.

DEPI can also benefit from a review of the currently uncompetitive External Plant Panel system. This will not only provide a better compliance fit with Government purchasing policy, it is likely to lead to better cost and quality outcomes as well. Experience in the USA found that in going from a fixed rate system to a market based competitive system, cost savings in the order of 30-40% were realised, along with a measureable improvement in contractor quality and compliance.

For DEPI, a conscious assessment of the risk of certain activities, tied to a system of contractor pre-qualification and risk-based payment scales could provide even greater financial and OH&S compliance results. Categorising works using risk-weighted criteria can also lead to well developed guidance on the contract or internal models which are most appropriate for its delivery, allowing better District and Regional works scheduling to occur at key annual planning stages.

Through the integration of DEPI's roading and civil works with planned burning, standby, fire suppression and fire-break maintenance activities we can better ensure a viable industry sector of suitably bush-skilled and equipped contractors. It also provides an efficient and reliable platform of similar and transferable skills and environments for the training and development of both contract and internal plant operators working in this field.

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Introduction

DEPI is in the initial stages of delivering the largest sustained annual Planned Burning program in the State's history. This has come about as a result of recommendations from the 2009 Victorian Bushfires Royal Commission, specifically Recommendation 56 which states:

"The State fund and commit to implementing a long-term program of prescribed burning based on an annual rolling target of 5 percent minimum of public land."

In order to deliver Government's commitment to 390,000 ha or 5% public land area treated annually, DEPI will need to approximately double the size of the average annual planned burn program. Analysis of the impacts of such an increase on the works program in every DEPI Region and District is universally significant.

Delivering a program of this size will require a large initial increase in works involved in preparation of burn unit boundaries and access. Boundary preparation to provide a safe working environment for firefighters and to protect against planned burn escapes will constitute a major time and cost component of the delivery program. There will also be large increases in the requirement for road access upgrades, burn-day machinery support and post burn rehabilitation and make-safe works. Given DEPI's limited internal resource pool of capable machinery and operators, these increases will require extensive reliance on contracted machinery and skills.

Planned Burning Works

For DEPI to deliver a planned burning program which is double what has traditionally been delivered will require a number of changes to the delivery of on-ground operations. The traditional works program for planned burning will significantly increase, even with a number of scale efficiencies factored in such as more and larger strategic burn units and increased use of aircraft for ignition.

For example, burn boundary preparation and post burn rehabilitation and make-safe works will likely increase approximately in line with the increased burn area target (ie. double). In the move to larger burn units, proposed as part of the strategy to deliver more planned burning, tracks internal to the burn unit will often be utilised to conduct the burn over a number of stages. These internal tracks will require some, albeit lower intensity preparation to provide firefighter access and to remove hazards for lighting crews. Even where the internal tracks are not utilised for burning, they must be treated as a part of the post burn make-safe works prior to the area being declared safe for public access.

Of the 390,000 ha annual planned burn target it is realistic to assume that over 95% of burns will require the use of heavy fire machinery in some or all of the preparation, day of burn, burn patrol and rehabilitation phases.

Heavy Vehicle Access Limitations

Absolutely essential to the conduct of all burn works with large machinery is the ability to transport that machinery to the site of the burn. Machinery used in preparation works is typically large, heavy, over-dimensioned and not designed for long transport distances under its own steam. Large floats are required to transport such machinery any significant distance. Access along DEPI's road network for this configuration of vehicle is still relatively limited, mainly by the presence of load limited

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crossings, steep grades, carriageways overgrown with vegetation and tight road corners incapable of providing an adequate turning radius for the float.

At this stage, approximately 45% of the public land estate can be accessed safely, efficiently and reliably by heavy machinery. With pressure to access larger areas of the estate in order to expand to the 390,000 ha target, more work to improve access for large machinery will need to be undertaken. Forward access improvement works will be required prior to the preparation of many planned burn boundaries, especially in the more isolated areas of the state. Such road and crossing improvement works typically require a lead time of up to two years to complete.

Typical Planned Burning Works

Operations for Planned burning typically occur in four phases:

1. Boundary and access preparation works

Planned burning boundary preparation works are variable in nature, having regard to the location, topography, fuel types, assets and other variable risks associated with the conduct of the intended burn. Their objective is consistent however, that is to provide a platform for the operation which will, as far as is practically possible, provide a safe working environment for firefighters and the public, and to contain fire within the planned burn unit. In most cases preparation requires the modification of vegetation at the boundary by either or a combination of removal of the flammable low-level materials (mineral earth, slashing or rolling of elevated vegetation) and the removal of hazardous overstorey elements. In the vast majority of cases these works are most efficiently achieved by using skilled operators and large machinery which is appropriately equipped for works in a forest environment.

These works are extensive, typically requiring numerous heavy machinery hours to conduct, especially where no previous preparation or maintenance has occurred in recent years. Burn boundary trails often need to be constructed through undisturbed bush, and where private property adjoins public land and needs to be tracked for access or to protect private assets including fences. New tracks are often required to be built for either slip-on or tanker access which can require significant vegetation removal, side-cutting of the landscape and construction of temporary stream crossings and turn-around points along their length.

Established forest roads which are used as burn unit boundaries often need significant works to clean the road surface of overgrown vegetation and fallen debris. There is also a need to remove dangerous trees and lighter "flash" fuels on the road verges adjacent to firefighters and equipment in order to create a safe work site. Conducting these works thoroughly prior to ignition provides a number of worksite safety and fire containment benefits on the day of burn, and also reduces the amount of time required to patrol, make-safe and rehabilitate the sites after the burn.

A significant portion of **Heavy preparation** and boundary access works can be conducted years in advance of a burn. Activities such as treating a boundary for hazardous trees or constructing new access tracks have long term benefits which degrade slowly. These activities are slow to conduct and can take weeks on larger burn units. **Light preparation** works such as slashing or scalping finer fuels need to be conducted within 12 months of the burn due to the subsequent fine fuel growth and accumulation rates, but they are relatively quick to conduct and rarely hamper the burn program.

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2. Day of burn works

On the day or days of ignition there are a significant number of diverse resources that may be required at the burn. These resources almost always include firefighters, slip-on units and tankers, and the need for one or multiple heavy items of plant (dozers or excavators) to support the operation. Burns are rarely conducted without the support of large plant, and they are often available at the site or at a strategic location near the site for immediate deployment as required.

Support from heavy plant is required to deal with unsafe or hazardous trees which may have been missed during preparation works, preferably prior to them catching on fire but sometimes after they are alight. Burning trees present a number of risks to the operation including significant burn escape risks and risks to firefighters who can not safely work underneath them once they are on fire.

In the event of an escape of fire from the burn unit, the use of heavy machinery to support crews in minimising the extent of the fire escape is critical in keeping the size to a minimum, thus protecting the community and firefighters from the consequences of bushfire originating from a planned burn. The effectiveness of containing an escape is significantly increased with the support of heavy plant constructing mineral earth containment lines when compared to the use of fire fighters alone.

3. Patrol and make-safe works

Patrol and make-safe works after the burn has been ignited are a critical component of the operation. This part of the operation can continue for days or even weeks after the ignition of the burn depending on the forest type and the size of the burn unit. Typically the time required, the effort involved and the risk of the works to make a burn unit safe are reduced by attention to good pre-burn preparation works as identified above.

Dry stags and stumps can continue to burn for weeks and sometimes months after ignition, and under dry, hot and windy conditions can pose a threat to escape either by embers or by falling over the burn boundary. Spring burns leading into Summer are especially risky in this respect.

Previously stable trees which have burnt at their base or in dry heads and are adjacent to tracks then pose a safety risk to staff and public road users as their structural integrity has often been seriously affected. Many can drop limbs or fall down weeks or months after the burn, and hence need to be made safe by removal. The removal operation is often too dangerous to be done by hand-falling and is instead done with an excavator or dozer.

4. Rehabilitation works

At the completion of a burn, when there is no further requirement for ongoing patrol, DEPI is obliged to rehabilitate the site. This may include installing or reinstating drainage to permanent roads and tracks which were affected by the operation, replacing any damaged infrastructure such as signs or fences, and clearing access along internal tracks and roads which may have trees which have fallen on them. Temporary tracks and crossings constructed for the burn may also need to be blocked off and drained to ensure that ongoing environmental damage and waterway pollution is mitigated, and that they are not accessed by the public for recreational or other activities which would cause ongoing damage.

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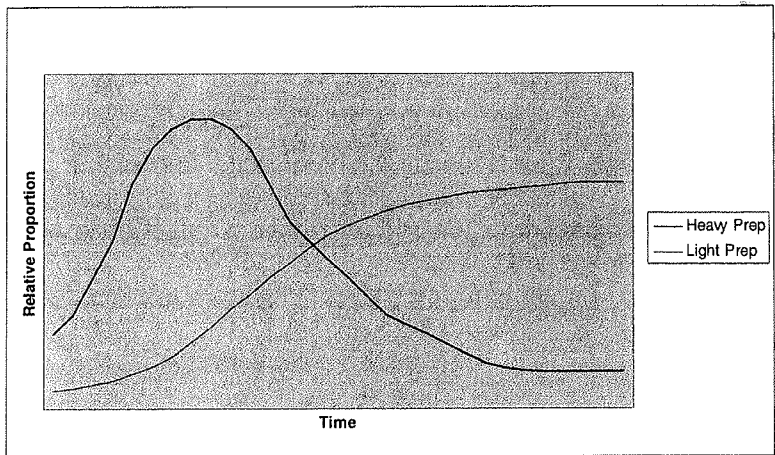
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The use of large machinery is essential in this part of the operation also. Moving large trees to either clear roads and tracks or to create barriers to public access, pull felled material over disturbed soil and construct drainage for erosion control can only be done with the use of specialised machinery. Excavators with log grabs and small dozers are ideal for this type of operation.

Volume and Value Estimates

The move to a rolling 390,000 ha target of more strategically placed and larger permanent burn units across the public land estate will require significant burn preparation works initially in order to adequately prepare the access and burn unit boundaries for safe burning operations. It is estimated, based on an analysis of typical perimeter to area ratios and knowledge of current boundary condition, that the boundary perimeter requiring works for 390,000 ha of treated area is approximately 16,500 km.

Figure 1: Estimated Relative Change in the Type of Works Over Time



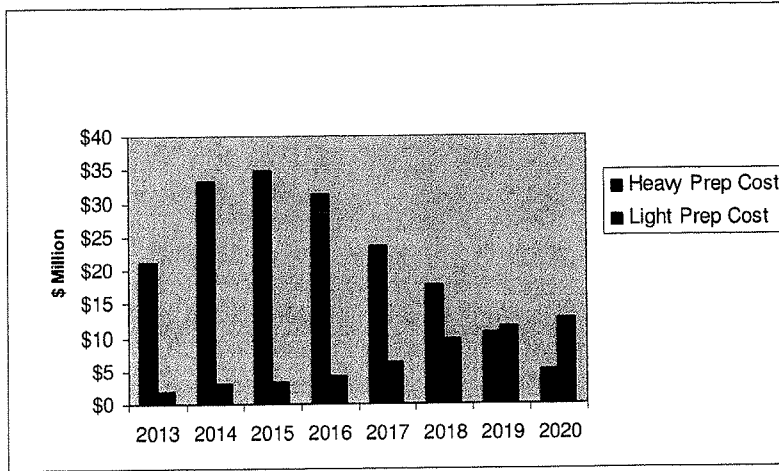
Initially, around 80% of those works will require heavy preparation and about 20% light prep. The heavy prep program will need time to ramp up to full capacity, and will then drop off relatively quickly as the works are completed. The relative proportions of heavy to light prep works are expected to change over time to reflect the long

term benefits of the heavy prep works as shown in the graph. The amount of light prep works will increase relative to the heavy prep works over a number of seasons as maintenance begins to replace the need for heavy prep where it has already occurred. It is also worth noting that the low hanging fruit has already been picked and the amount of heavy prep in the additional burn area targets is a greater proportion than in the current program.

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Figure 2: Estimated Relative Change in the Cost Of Works Over Time



Estimating the cost of the works is difficult at this stage without the benefit of the “Cost of Burning” analysis which is currently underway. Average costs of works across the state will vary with the various conditions encountered, however based on costs captured recently heavy prep works are averaging around

\$2500/km and light prep works around \$900/km. Using these figures the following estimates of burn boundary preparation costs over the next seven years can be drawn.

Table 1: Estimated Relative Change in the Cost Of Works Over Time

Year	Heavy Prep Cost	Light Prep Cost	Total
2013	\$21,250,000	\$1,912,500	\$23,162,500
2014	\$33,150,000	\$2,983,500	\$36,133,500
2015	\$34,807,500	\$3,281,850	\$38,089,350
2016	\$31,326,750	\$4,266,405	\$35,593,155
2017	\$23,495,063	\$6,399,608	\$29,894,670
2018	\$17,621,297	\$9,599,411	\$27,220,708
2019	\$10,572,778	\$11,519,294	\$22,092,072
2020	\$5,286,389	\$12,671,223	\$17,957,612

It needs to be pointed out that these estimates are for boundary preparation only, and don't include access upgrades, day of burn support, make-safe or rehabilitation costs.

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Options for Delivery

Current Delivery Models

Options for the delivery of planned burn preparation and support works are relatively limited. There are two basic methods used currently, both of which rely on DEPI supervising and directing the works intensively, and accepting a significant proportion of the risks associated with the works delivery.

Currently, delivery is primarily by either using in-house supervisors, plant and operators to conduct all of the works, or by using contracted operators under direct DEPI supervision. Often a combination of DEPI supervision, DEPI internal plant and resources supplemented by supervised contractors is used.

Staff have listed the benefits to these arrangements as including being in control of the work and the outcome, ease of getting works done compared to complex procurement processes, cheaper final products, internal plant and crew viewed as a "free" resource compared to the difficulty in getting money for contracted services, building expertise and skills in staff and crew, and local knowledge.

They have also identified a number of cons to the model including lack of internal resources to implement the program, competition for those resources, restrictive HR rules limiting the efficiency of internal programs and machinery use (short days, limited camping), and a declining base of skilled staff and internal operators. Many of our own trained operators are moving to jobs in higher paid industries.

Emergency response can have a large impact on DEPI works programs, with a single large campaign fire affecting the resources available to deliver the planned burning preparation program right across the state. In the recent 2012/2013 season, large fires in Portland, Gippsland and the North East had significant impacts on the planned burn preparation program in the Orbost District, which had no large fires to contend with, due to the need to send crews and resources across the state to the fire fight. These events are not uncommon, and they regularly have major impacts on the ability of DEPI to deliver the planned burning and road maintenance program state wide.

There is a general consensus in Regions where burn targets are increasing dramatically that delivery will not be able to be met by expanding on the current methods of delivery. DEPI resources have limited capacity to expand to deliver a large increase to the program due to current methods being labour intensive and requiring a significant portion of DEPI staff time. Without a large increase in DEPI staff and internal plant numbers, such a delivery model will be unable to meet the expected demand. Government has made it clear that this delivery model will not be supported and large scale staff increases will not occur.

Contract Administration or Contractor Supervision

In general contractors working in this sphere for DEPI are engaged on a payment for service basis, rather than being utilised in a more managerial capacity. Contractor Supervision is the model used almost exclusively by DEPI, where a contractor is engaged on hourly rates to provide a service under the direct supervision of a DEPI job supervisor. The works are not well specified, relying on the DEPI supervisor to interpret needs on the site and the end product is not subject to any warranties or assurances of quality or conformance by the contractor. All risks associated with the works are accepted and managed by DEPI, with some limited exceptions including

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services such as traffic management which are at times outsourced to a separate contractor.

Contractors have a desire to work their machinery for an average of 8 hours per day, and longer during the summer months. These averages consider their return on investment requirements and business profitability. Problems contractors have raised with the DEPI supervision model include the need to wait for DEPI supervisors/crew before they can begin work, and then having to stop work when DEPI crew stop. This limits the number of hours per day they can run their machines to as little as 4 or 5, especially where long travel times are required. Currently DEPI is unable to provide crew and resources to work regular 10 hour days or to camp at worksites as many contract businesses do. This is due to a number of cultural and also HR issues. These issues can work against contractors engaged by DEPI under this model, as they end up running those jobs at a loss. DEPI is also losing due to significant reductions in daily contractor productivity.

In general, works contracts and outcome based performance agreements can be set up for the type of works involved in planned burning preparation. These contracts require the contractor to manage all significant risks in the conduct of the operation and their performance is measured against a number of quality and performance criteria including environmental and safety management criteria. The contractor is accountable to deliver a specified product rather than merely take directions, and their incentive to perform is based in an appropriately developed price for product, rather than charging for hours on a machine.

Administration of these types of agreements is much more hands-off by the DEPI Contract Administrator, allowing them to spread their time over many more active sites. Good specifications, contractual terms and selection processes, works hold points and audits go a long way to managing the risks associated with handing over control of an outcome to a contractor. The contractor is better able to understand the methodology of the works, the limitations of their machinery and work systems, and is in a better position to manage the risks of the worksite than DEPI. Trust of contractors by agency staff is a key issue to be overcome for broad scale adoption. However where relationships with principal contractors have been established and are strong the model works well.

This model can better meet the demands of scalability that will be required in the delivery of an increased planned burning program when compared to current supervisory models. It will also arguably provide a better model for risk management than those currently utilised.

Opportunities and Threats

Opportunities for Integration

There are many similarities between DEPI's forest roading works and burn preparation works. Burn preparation works adjacent to an established road are significantly the same as those works which would be undertaken to maintain the road to an acceptable and safe standard for public access. Maintaining traffic access, vegetation modification and slashing from the road verge, and the removal of hazardous trees which pose a danger to DEPI staff, industry and the driving public are all consistent activities between the two operations. As such, there are significant efficiencies and cost advantages in the integration of the road and burn preparation program which go beyond the efficient utilisation of DEPI staff across the fire and roading portfolios.

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Integration of DEPI's roading and planned burning functions at a structural level within the organisation also ensures that the programs are not delivered in isolation. Planning and works scheduling for these works in an integrated fashion can deliver large efficiencies with little to no extra input. At an operational level there have been many stories about machines passing each other on DEPI roads, one on a roading job, the other on a planned burning job.

Benefits to Integrated Contracts

Works contracts for road works are currently in development and can be modified for use in undertaking planned burning works. A significant issue for contractors working for DEPI in both the roading and fire functions is the lack of continuity and regularity of work. Large machinery and operator skills are expensive to maintain, and especially so if there is no regular market offering work for their services. Timber industry decline over the past 10 years has reduced the market available to the type of contractors DEPI relies on and this has manifested in a noticeable reduction in the numbers and quality of both machinery and operators available to DEPI in the market.

DEPI has an opportunity through the increased planned burning program to offer a number of strategic integrated road and fire works contracts on a competitive and longer term basis to the market. Integrating larger scale road maintenance responsibilities on the DEPI Strategic Fire Access Network with planned burn preparation and support, emergency standby and emergency response enables DEPI to package works contracts with year-round requirements and obligations. There is great potential for contracts, tendered on a competitive basis, which offer 3-5 year security and provide DEPI with strategic geographic risk coverage.

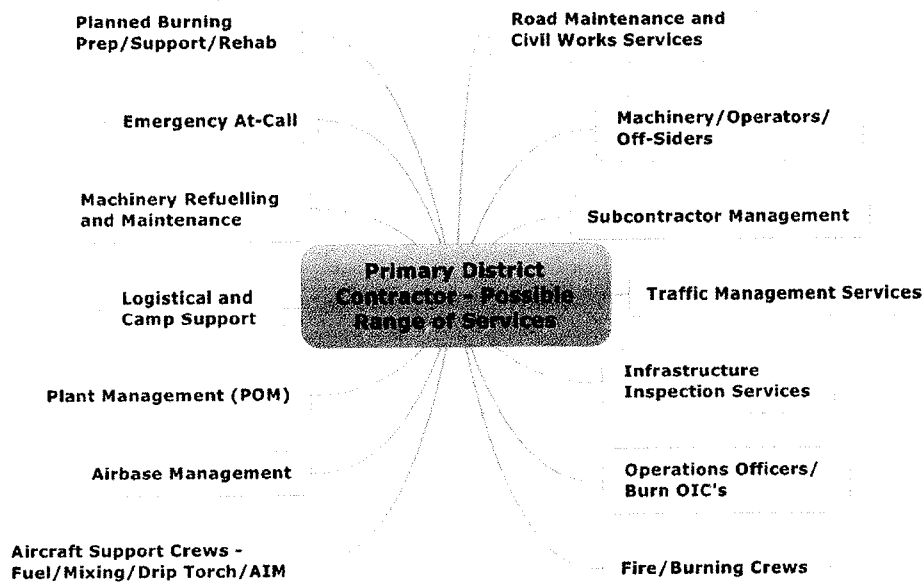
This presents opportunities for contractors who, if successful, will have the security of a long term works contract providing regular turn-over for their business thus improving viability. DEPI can then expect contractors to invest in DEPI's needs through the purchase and fit-out of quality bush-capable machinery, investment in training and retention of skilled operators and the provision of a higher level and variety of services.

Based on the services DEPI currently acquires either via contracted arrangements with various companies and labour hire agencies, consultants and casual staff agreements, it is not unrealistic to expect that some companies could provide a wide range of managed services for a variety of situations. Indeed, through recent discussions with both District and Regional staff and various contractors around the state, there appears to be a growing appetite for this type of diversification from both within and external to the organisation. This model is used widely in the USA and Canada.

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Figure 3: Primary District Contractor – Possible Range of Services



A move to incorporate more outcome driven pricing structures for works, where the contractor is paid for the delivery of a specified product, and the incorporation of a robust and workable performance management regime which is written into the contracts will provide much greater incentives for contractors to deliver quality works and services to the satisfaction of DEPI. This can be combined with schedules of rates for the provision of ad-hoc services.

Another significant benefit is in passing core obligations on to contractors so that they are responsible for their delivery. For example, responsibilities for the delivery of a program of road maintenance, road upgrades or planned burn boundary preparation will continue under the control of a contractor even if an emergency requires DEPI staff to attend. If contractors are also required to attend, the contractor may still be obliged to continue the works under contractual obligation, either by utilising their own resources or by hiring extra gear or services and managing them via subcontract arrangements. This provides better insurance that works programs can be delivered in the face of DEPI's emergency management obligations with impacts on delivery only significantly affected where fires are impacting the works sites.

Threats Associated with Budget Risk

Key to the ability of DEPI to leverage the benefits of longer term higher value contractual arrangements is the ability for DEPI to be confident in funding those arrangements for periods greater than the traditional 12 month budget cycle. For companies to invest in machinery, infrastructure, skills, management and administrative support they will require documented commitments, usually signed contract documents, in order to satisfy financial institutions into lending capital to invest.

Performance based contracts with provisions for pricing and scope review, and a combination of lump-sum with provisional rates need to be extended to cover a 3-5 year timeframe in order to provide industry security. These contracts would of course contain termination provisions for issues such as consistent poor performance or illegal conduct as a way of managing DEPI's risk exposure.

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Potential Conflicts with DEPI Plant and Crew

At present there are various reviews underway around the state which aim to better understand the role and need for DEPI internal plant and also where efficiencies can be made in the fleet make-up and use. The initiation of these reviews reflect the consensus that at present DEPI has a number of internal plant items that are working less than optimally in terms of their operational efficiency, resulting in risks to program delivery, poor value for money and return on investment. The reviews are likely to recommend changes to DEPI's internal plant management business including better defining where DEPI has a demonstrated need to purchase and run its own gear, systems which demonstrate the actual cost to District staff, and how to change internal practices in order to be able to get good value from it. Consideration of the ability for contractors to provide competitive services in the same operational business areas should also be considered in the reviews.

Issues including DEPI's first attack capability, current market availability for certain services/gear, the need to provide adequate training and firefighting competency opportunities to both staff and contract operators, and analysis on value per unit cost will determine an appropriate mix of DEPI and contracted machinery and operator needs.

With such a large program of works to deliver in coming years, combined with the 49,000 km DEPI extended road network maintenance responsibilities, there will always be enough work for both DEPI crew and contract providers. It will be essential and necessary to use those combined resources in managing the critical delivery responsibilities that DEPI has.

Threats in Obtaining Skills and Equipment - Impacts of Timber Industry Change

DEPI's planned burning and road works, especially the removal of overstorey, constructing temporary creek or gully crossings, and the construction of side-cut tracks are relatively unique to the environments that DEPI works in. They are also high risk activities given the nature of the hazards, and the compounding effects of potentially steep, rocky and unstable terrain, dead and unstable overstorey, and the requirement to work close to fire and in the dark in some cases. This high risk and regularly required work has no parallel in any other industry.

The skill sets and the equipment required to undertake these works are relatively unique to these operations, with the closest similar industry being the timber harvesting industry. In the past, especially in our most fire prone environments, access to the skills and equipment suitable for these works has been readily available in nearby timber operations. DEPI has a long history of managing fire, planned burning and roading in partnership with the timber industry and industry participants.

Planned use of fire has always been an integrated part of the timber regeneration and silvicultural cycle, and has always been utilised with the assistance of timber industry contractors. Those same contractors were the first line of attack for bushfire response as well, and as stakeholders in the protection of their local communities combined with their interests in the protection of the standing timber resource, were always available to assist. The decline in recent years of the native forest timber industry in Victoria and of the number of contractors working in the bush has been

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dramatic. This is evident in all areas of the state, from the red gum forests along the Murray to the forests of the Otways, Midlands, North east and East Gippsland.

Presently, most of the state's native timber harvesting operations are concentrated in the tall Ash forests of the Central Highlands. The current international market conditions for timber products, driven significantly by a sustained high Australian dollar, are putting continued pressure on demand for Australian sourced timber and wood fibre materials. As a result, key customers including South Eastern Fibre Exports (SEFI) in Eden NSW have significantly reduced their purchase requirement from VicForests, who have also had to reduce their contracted timber harvesting workforce in response. Over the last 10 years in East Gippsland, timber harvesting contractors have declined from over 80 employees working for 25 companies to around 45 employees working for the remaining 12 contractors. Some of those past industry participants have transitioned into civil works for VicRoads and Shires, many have disappeared all together. This trend is forecast to continue and the decline in the timber industry is not expected to improve over the long term.

Changes in the timber industry have also had an influence on the configurations of machinery preferred by harvesting contractors. A move towards more thinnings operations in the east and plantation timber harvesting in the west has seen contractors invest in machinery including harvesters, forwarders and skidders over the traditional large dozer with tree pusher and excavator with log grab attachment. The resulting issue for DEPI is that the availability of appropriate heavy firefighting machinery is reducing, along with the skills of the operators who use it. Those machines being kept by contractors for firefighting roles are typically ageing, get little use and subsequently little investment in their maintenance or upgrades. There is a short term opportunity for DEPI to influence this declining market.

DEPI Plant Panel

Current Usage Arrangements

DEPI currently manages a panel of contractors for the provision of both civil and fire fighting services. It is a listing of over 330 contractors with over 2500 items of plant across the state ranging from large dozers, excavators and graders to water carts, vehicles and trailers. In order to gain acceptance to the panel for use in fire suppression or prevention works a contractor needs to apply to the Panel Manager with various details of their business, plant and operators. Upon acceptance and verification of those details to minimum requirements, including machinery standards and operator competence, the firm and it's machinery are included on the panel. The firm is also able to nominate an interest in the conduct of general civil works, although it is noted in the Panel Contract that the main focus of the Panel is for fire works. As such, there is a relatively limited assessment of a contractor's skills or expertise in various civil works for inclusion on the Panel.

All contractors on the Panel sign a Standing Offer contract for services which is perpetual, although there are requirements for maintaining up to date licences, insurances and other relevant items. Work through the Standing Offer Agreement is paid for by reference to pre determined rates for various plant, operator and support configurations, which also consider stand-by arrangements and wet/dry hire. The rates are only for the use of machinery in a "fire suppression" environment, with all other works to be determined by normal Government procurement and competition policy (number of quotes as per standard thresholds of value).

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The current Panel arrangement has many benefits to the previous arrangements which operated without a pre-qualified panel, including:

- Mitigation of some important risk elements by specifying operator and machinery minimum standards;
- Rapid engagement through the pre-qualified contractor database and application of pre-determined rates;
- Agreement to rates with contractors prior to engagement provides certainty in "fire suppression" engagements;
- System of rates and RCTI payments ensures a rapid payment system for contractors.

By any measure, it is by far a better system than existed prior to its implementation, but it can be improved.

Issues with Current Format

There are a number of issues with the current system which will need to be addressed if DEPI is to maintain access to bush skilled operators and fire equipped machinery into the future. This requirement is absolutely essential to an increased planned burning program.

1. *No Incentive for Investment* – The current system leaves everyone guessing at who might get the available work. In some respects this is the nature of fire fighting, however there are many aspects to DEPI's business which can be forecast and included in works contracts. Ad-hoc and short engagements provide no security for the contractor, and as a result they have no incentive to invest in their equipment, their operators, or a business model which services a unique client like DEPI. As a result, combined with a retraction of contractors from the timber industry, DEPI faces a real risk that its ongoing needs will not be met.
2. *Passive Development of the Panel Resource* – Currently DEPI is passive in the selection and development of Panel resources. There is no strategy to encourage certain types of machinery, operator skills, geographic placement or succession through the sector which services us in our most important obligations. The Panel currently develops and populates itself by way of open market mechanisms, and as a result DEPI is at the mercy of the larger and more regular market participants, namely the civil construction, native timber and plantation industries. Changes in those industries directly and significantly impact on DEPI's access to contractors around the state.
3. *Compliance to High Standards Not Being Achieved* – Recent compliance audits on Panel contractors have indicated an enormous amount of non-compliance (>70% estimated) with regard to machinery guarding and protection standards. Much of this protection requires retro-fitting at large expense by contractors to older machinery, and even with newer machinery it is often not supplied as standard by the manufacturer. The requirement for these "extra" protective measures is a function of the hostile environments in which DEPI operates, however they are not standard requirements for many machines operating in the civil construction industry.
4. *Panel Rule Implementation Issues* – The Panel Contract and associated rates are not able to be used for planned burning purposes. Panel rules prohibit the use of pre-determined rates, the RCTI system of payment, and also the advantage of engagements without the need for multiple quotes for any

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situation other than at a wildfire, and only prior to the UC2 classification¹. This severely limits the benefits of the Panel for planned burning works and introduces areas of inconsistency between fire response and planned burning practices in the way DEPI pays for what are essentially very similar works. This rule has also been seen to contribute to an IMT's decision to keep a fire UC1, as declaring a fire UC2 introduces the hassle of having to re-negotiate rates and changing contract arrangements with contractors mid-event – which incidentally is rarely done.

5. *Uncompetitive Selection Processes* – The DEPI Plant Panel is essentially an uncompetitive system when it comes to the selection of which contractor on the panel gets the available work. Since there are no ranking features in the process for gaining access to the Panel, DEPI staff are not selecting a contractor for works using a transparent and justifiable process. There is a demonstrable skew towards very few of the 330 contractors on the panel who benefit from DEPI which exposes DEPI to some risk in terms of explaining how Government competition policies are being implemented. Panel data indicates that annual Panel payments can range from \$3.3M to over \$43.8M depending on the fire season. It is estimated that around 20% of contractors are engaged for over 80% of the available works in most years.

¹ "Fire suppression" works are defined as "suppression and support works associated with restricting the spread of wildfire" – *Fire Plant Management Operating Guidelines v9 Oct 2010*

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Pathway to Delivery: An Integrated approach to Planned Burning, Civil and Emergency Response Works

There are various improvement areas which are worth considering in an effort to deal with the issues identified in this paper. Most of these suggestions will not only improve ongoing access to contractors with specialized skills and equipment in a difficult industry environment, but will provide a more robust mechanism for DEPI to manage the risk around what are arguably the most dangerous aspects of its portfolio of works and responsibilities. For a visual representation of the model, please refer to Appendix A.

Preferred Contractors on Individual Long Term Contracts

In order to manage the many issues associated with the lack of industry stability in DEPI's sector, a move to competitively tendered long term works agreements at the Regional or District level is necessary. These contracts would operate outside the current Panel contract, but would be complimentary in many ways.

They will provide stability to the market through continuity, consistency and dedicated integration of DEPI fire and civil works. They will provide DEPI a platform to actively shape and develop the industry, and promote innovation in service delivery. The agreements will act as a transitional pathway for innovative civil and timber industry contractors, and will attract the best the market has to offer in the areas of planned burning support, emergency response and bush road maintenance. They will provide a platform which allows contractors to develop and offer diverse services and products, and to invest in their business and DEPI as a valued client.

The agreements would be formulated to transfer more responsibility to contractors in meeting DEPI's business outcomes and business continuity objectives, even in the face of large fire/burning seasons. Contractors would be free to manage works using the most efficient means at their disposal, and would be measured against well defined specifications and outcome based performance indicators. They would be encouraged to sub-contract to other local and DEPI Panel contractors to manage their variable workload requirements, and in doing so will provide an important training ground and sub-contracted surge capacity to DEPI in times of need.

A Risk Based Focus for DEPI Panel Contractor Pre-Qualification

The current Panel is an extensive listing of both contractors and their machinery. All contractors on the Panel are essentially subjected to the same pre-qualification requirements, audits and processes, which results in a very large listing that can be filtered by geographic location and machinery configuration. However the Panel list offers no significant analysis or comparison between any two contractors based on their capabilities or ability to manage the risks of any proposed operation. All Panel contractors and their machinery are expected to be able to comply with standards which are based on the highest risk works in DEPI where they have elected to be considered for fire works. Compliance issues to these high standards are significant across the Panel as shown in recent audits of machinery compliance to ROP, FOP and OPG standards.

The Panel can be strengthened by implementing a system which categorises contractors based on skills and equipment capabilities, and provides guidance on the type of works they are suitable for. DEPI already employs an example of risk weighted works definition and resource categorisation through fire fighter training and

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fitness assessments. Through this system, fire fighters are assessed for their ability to handle the risks associated with various categories of fire fighting, and are placed in a pre-determined risk based deployment category. A risk based system for contract resources would act similarly, based on machinery configuration and operator competency, and could be applied across all relevant DEPI works. A system which defines a simple segregation of works based on risk (high, medium or low for example) can then define minimum pre-qualification criteria for those different categories. All operators and machinery on the Panel can then be put into various risk categories based on their machinery configuration and operator skill level.

Risk categories could be defined based on terrain, weather conditions, proximity to active fire, type of vegetation, ground conditions and a range of other criteria which indicate the risk involved in the work, and the stress placed on operator and machinery. Machinery configurations and operator skill level for different risk categories can be defined appropriately and in-line with acceptable risk management practice. This also provides pathways for operator development on lower risk DEPI works. (See Figure 4 below)

Promoting Competition through Risk Based Rates and Evaluations

Implementing a system which categorises Contractors based on their ability to manage a range of risk weighted works also allows DEPI to seek better value for money. Competition is an important factor in ensuring value for money, and ensures that all pre-qualified market participants have an equal chance to access available works. Hourly operating rates are set under the current Panel rules for various contract machinery configurations, labour and other items. The rates are generous, and the rules around the payment of the rates are complex and not well understood by staff and contractors alike. In many cases DEPI is paying extremely generous rates for what would otherwise be considered ordinary low to medium risk civil works, by applying a high rate structure to all works associated with fire suppression, no matter where that work occurs in relation to the highest risk works at a fire operation. As a result DEPI often receives poor value for money from this arrangement.

Competitive risk based rates can be used for anything from fire suppression at the front line to fallbacks on flat grassy terrain, and for planned burning prep and support to road maintenance or general civil works. Each task simply needs to be defined within a works risk category to determine the appropriate rate. Categories should be clearly definable which will allow contractors to provide a scale of rates for each category, and for each of their resources.

One of the significant developments of the current Panel is the web portal for contractors, which allows them to keep details of their business, insurances, operators and machinery up to date on a DEPI database. It would be a relatively simple process to get them to provide rates for their machinery and services as well. Rates could be provided by the contractor, possibly via an annual process, for the various risk-based categories that DEPI would define. Presumably, the market would value high risk works with higher rates than low risk works. Contractors can then be easily separated and ranked by the system on a competitive pricing basis, guiding DEPI staff to the best value for money options and ensuring that the market is allowed to determine cost for services. Contractor skills, performance and assessments on the quality of their machinery should also be used and weighted in the system's ranking process.

Figure 4: Idealistic Model for Contractor Pre-Qualification and Selection Based on a Risk Weighted Works System

Works Risk	Fire Suppression	Planned Burning	Civil/ Road Works	Contractor Selection
Type 1 Risk	Difficult line construction, steep and rocky, swampy heath, active fire, first attack, high stag density, tall forest, adverse weather forecasts, night work	Difficult line construction, steep and rocky, swampy heath, active fire, day of burn, high stag density, tall forest, adverse weather forecasts, high probability of escape, night work	Complex designs/ works, difficult terrain, large value, extensive traffic management issues, multiple hazards, significant site management and values protection	Type 1 Risk compliance category: Very skilled and experienced operators who are regularly used by DEPI, highest pre-qualification standards, fully bush-equipped machinery, highest risk works, highest rates for use.
Type 2 Risk	Moderate slopes or works mainly on established tracks, moderate stag density or pre-treated areas, medium to low height forests, low fire danger periods, black-out and rehab works easy access and egress, day works only	Tricky line construction, works mainly adjacent to established tracks, moderate slopes and terrain, pre-treated areas for burn support, rehab of areas post burn, low fire danger, low risk of escape, easy access and egress	Tricky but not overly complex designs or construction requirements, moderate slopes, few obstacles or site risks, simple traffic management, moderate value works, relatively straight forward site management and risks	Type 2 Risk compliance category: Skilled operators with moderate relevant experience, often used in DEPI activities, lower level of machine pre-qualification, moderate risk works, lower rates.
Type 3 Risk	Distant from active fire, fallback construction/ maintenance, moderate slopes, few hazards, low stag density, low height forest, benign weather, day work only	Distant from active fire, simple line construction/ maintenance, moderate slopes, few hazards, low stag density, low forest, benign weather, day work only	Simple construction/ maintenance, low value, few hazards, DEPI direction with no significant site management required	Type 3 Risk compliance category: Unskilled operators under tuition or mentoring, lowest level of machine pre-qualification, lowest rates.

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Strategic Use of Major Capital Works and Minor Works Contracts

As a tool in an integrated works delivery model, the use of strategic capital works contracts (aggregating similar works to values of >\$1 million) using AS2124 Construct or AS4300 Design and Construct contract forms will be best coordinated and delivered by specialist staff at either the State or Regional level. These contract forms are intensive in their administration, require an elevated level of procurement and contract management expertise, are associated with detailed and at times complicated specification development, and carry a high risk of contractual exposure. DEPI's risks in delivering these works and using these contract forms are better managed by staff with the appropriate training and skills, and with regular contact and experience in using these types of agreements. This is recognised by DEPI's APU, who have recently rolled out a training and accreditation hierarchy for contract management which reflects this situation.

Minor Works contracts are also available for use, and can be used in the delivery of low risk/low value minor infrastructure upgrades, maintenance and site preparation works. Standardised technical specifications are currently in development for activities including planned burn boundary preparation, road maintenance, minor culvert installation, vegetation management and noxious weed control. These works will similarly benefit from some aggregation of smaller jobs into values of \$50k-\$100k to gain efficiencies of scale and provide an attractive offer to the market. They would be used as an enhanced risk management and delivery tool in areas without a Primary Contract, and would be delivered by trained staff at the Regional or District level.

Both of these contract forms provide the benefits of contractor managed sites, contract insurances and securities, contract completion obligations regardless of DEPI emergency management or burning resource competition, and warranties on the works. They can be managed with a relatively low DEPI site presence, allowing for a more efficient use of DEPI resources, and will be taken to the market on a competitive tender basis to comply with all Government procurement policy and probity requirements. Contractors will need to be pre-qualified to either the National Prequalification System for Civil (Road and Bridge) Construction Contracts for major works (administered in Victoria by VicRoads as an approved Government Panel), or the DEPI External Plant Panel for minor works.

DEPI Crew and Plant

DEPI crew and plant are an integral part of DEPI's works delivery model. They contribute significantly to the planned burning preparation and delivery program, have a large role in the maintenance of DEPI's road network, and generally provide the first attack role at fires. Due to the prioritisation of these resources (including operators) for emergency response and planned burning delivery operations, it is often the case that DEPI's Heavy Strategic road maintenance and planned burn preparation programs will struggle to get access to these resources. As a result, DEPI's obligations in these high priority deliverables can be better met with dedicated outsourced resources, independent of the emergency response and planned burn delivery pressures.

DEPI plant and crew can be predominantly and more appropriately tasked to the Medium and Light Strategic road network, where assured access is of a lower priority and standard. This separation of areas provides a clear distinction in the expectations for delivery through both Regional and District works programs, and will lead to a more accountable model of prioritised works. There have also been some

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Regional discussions about the location and sharing of DEPI plant and operators as a truly mobile Regional or even Statewide resource which are worth investigating. All of these options allow for the continued development of DEPI crew as an experienced resource for bush works, fire fighting and planned burning.

Recently there has been some dedicated effort in a few DEPI Regions to review the composition of the plant fleet. These reviews have been based primarily on usage statistics, and assume that hours on machines over time is a basic indicator of organisational need for those particular items of plant. Although these analyses have exposed some areas of very low return on investment based on low plant usage statistics, they have not answered the question of value for money with regard to the product output for those resource units that have moderate usage statistics (eg. cost versus value of finished product for road maintenance using various plant items, value of DEPI plant as an at-call first attack resource for emergency response). Until this work is done, value for money product and service comparisons and analysis can not be made.

Experiences from Overseas

The USA has a long history of utilising contracted plant and human resources to supplement its agency fire fighting resources. Contracted resources provide a flexible and cost effective supplement to agency resources for both wildland fire fighting and planned burning activities. Contract resources have been gradually increasing in proportion to the agency resources since the early 1980's as a result of heavy agency budget cuts over that period, where now around 40-50% of firefighting crews, plant and support services are externally sourced federally. The National Wildfire Suppression Association is the peak industry body for contract emergency response businesses, representing over 150 member companies nationally.

Although not a federal system, many of the Canadian Provinces also rely heavily on externally contracted fire and planned burning resources. In Ontario, their resources are categorised into Type 1 (first attack) which are generally agency resources, and Type 2 (extended attack and mop up) which are predominantly contracted resources. This is essentially a risk weighted works system, identifying works based on risk exposure and assigning resources appropriately.

In 2005 the US Forest Service was audited on its use of Emergency Equipment Rental Agreements (EERA's)². EERA's operated in a very similar fashion to the current DEPI External Plant Panel standing offer. There were no limits to the number of contractors to be signed up, there were minimum pre-qualification levels set for machinery and operators, rates for resources were fixed by the agency, and there was no system for selection of resources for deployments.

Problems with their system were identified and bear some similarities to those which are now faced by DEPI. They identified issues including lack of competition and questions of value, inequitable work distribution, inadequate pre-season inspections and performance evaluation feedback systems, and problems with short-term engagement timeframes.

² "Audit Report, Forest Service Emergency Equipment Rental Agreements", U.S. Department of Agriculture, Office of Inspector General Western Region, Report No.08601-40-SF July2005

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The audit recommendations in brief were:

1. Use a competitive pricing system and sign up only those resources that are reasonably expected to be used;
2. Conduct pre-season checks on machinery and operators;
3. Conduct a best-value analysis of contractors which considers equipment quality, past performance and price;
4. Develop an automated database which ranks contractors for selection based on best-value principles.

As a result of the audit, reform in the US Forest Service's utilisation of contracted resources has been significant over the intervening years. All of the audit report's recommendations have been accepted and implemented. The most significant improvement they have reported is in price and contractor quality, with higher quality contract operators and machines now available to the agencies at a 30-40% cost reduction of previously set rates.

DEPI's Role in Training and Skills Development for Contractors

DEPI is a unique organisation with regard to the type of works it performs. Bushfire management including the conduct of planned burning is a niche industry which DEPI and its NEO partners fill almost exclusively in Victoria. The skills of machinery operators working in these demanding and dangerous conditions are extremely important to both the effectiveness of the operations, and to the safety of themselves, fire fighters and communities.

In the past there has been a reliance on the timber industry to provide the sort of skills required to operate safely and effectively in planned burning and bushfire operations, however this is a luxury that is gradually diminishing along with a protracted reduction in the size of the industry. There are no dedicated or structured training courses or components of courses, which are available to the civil or timber industries to develop or enhance the skills of operators in fire fighting with machinery. Even DEPI machine operators learn their craft by following more experienced operators from operation to operation and learning on the job, good skills and bad. Without a structured training system our operators will not experience many situations until the heat of the moment when they are under significant pressure. For example, DEPI crew do not operate their machinery in steep rocky conditions at night, until the situation arises at a fire or planned burn escape. One could hope that they may be under the supervision of an operator that has been there before, but that is rarely a luxury that we have.

The major flaw in any non-structured learning system which relies on the passing of learned skills from individual to individual is in ensuring that a comprehensive and appropriate skill set is being passed on. Non-structured teaching and assessment systems allow potentially bad and unsafe habits to continue being taught. Currently there are no minimum competencies or assessments which verify an operator's skill level outside of the standard fire fighter training modules, and no real way of determining a contract operator's experience level other than a knowledge of their past. Contract machine operators, whilst expected to have completed the online Basic Wildfire Awareness course, are not expected to undergo the minimum training that is required of a general fire fighter which is inconsistent with DEPI's mandatory training for internal plant operators. Quite often the skills of contract operators are accepted at face value with little verification.

For such an important and demanding role on the fire line this is inadequate. It is a major weakness in DEPI's management of the risks associated with planned burning

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and fire fighting operations, and has been identified as such by a number of parties over a long period.

Without the support of a large pool of experienced timber industry operators, DEPI will need to take a much more active role in the structured development and training of both its internal staff and externally contracted operators. Courses need to be developed in partnership with industry peak bodies and training providers to fill the important training gap that is fire fighting with heavy machinery. Planned burning, bush roading and suppression operations provide an excellent opportunity for structured practical training and assessment of operators, combined with an appropriate amount of theory on fire behaviour and control strategy, environmental awareness and safety of operations in bush environments.



**Appendix A:
Integrated Civil Works and Emergency Delivery Model**

Integrated Civil Works and Emergency Response Delivery Model

DEPI Crews and Plant

Works Type

First and extended attack for emergency response
Used to manage Med/Light strategic road network
Pre and support for burning operations
Other civil jobs put up by District Operations team

Plant Sharing Model

Plant area a mobile Regional resource, able to be reallocated between Districts
May be mobile with working crew, or without
Composition of fleet based on analysis of Regional Works Requirements
Standards of emergency cover and a contract market development strategy
Location based on Regional review of District works plans, can be flexible over the year
Location based on analysis of local contract capacity
Districts are charged real working costs of internal plant on an hourly hire basis

Works Type

Fire and Burning
Used only after local Primary Contractors exhausted
May subcontract to Primaries
Released first, Primaries last
No obligation to respond, but may alter panel position through performance assessments

Works Type

Civil
Hourly rates under direct DEPI supervision
Rates as per risk based assessment of works
Selection guided by system order

Procurement Process

Annual RFT and price adjustment opportunity
Competitive hourly rates locked in for 12 months
Evaluation also rates non price and performance criteria for ranking
Performance assessments affect ranking at all times
Engagements by purchase order

Works Type

Major Capital or Upgrade Works
Construct Only or Design and Construct model
No standby or fire response obligations within contract
Contractor manages work sites and risks

Procurement Process

Standard Competitive Procurement Processes
VicRds National Pre Qualification
Mainly Lump Sum with some Product Rates
High risk works >\$100k
Generally procured and managed by specialist teams at Regional or State level

Plant Panel Contract

Works Type

Major Capital or Upgrade Works
Can also be used for Maintenance (outside of established Primary Contracted Roads)
No standby or fire response obligations within contract
Contractor manages work sites and risks

Procurement Process

Standard Competitive Procurement Processes
VicRds or DSE Pre Qualification
Mainly Lump Sum with some Product Rates
Up to \$100k

Minor Works Contracts

Works Type

Minor Capital or Upgrade Works
Can also be used for Maintenance (outside of established Primary Contracted Roads)
No standby or fire response obligations within contract
Contractor manages work sites and risks

Procurement Process

Standard Competitive Procurement Processes
VicRds or DSE Pre Qualification
Mainly Lump Sum with some Product Rates
Up to \$100k

Major Works Contracts

Works Type

Minor Capital or Upgrade Works
Can also be used for Maintenance (outside of established Primary Contracted Roads)
No standby or fire response obligations within contract
Contractor manages work sites and risks

Procurement Process

Standard Competitive Procurement Processes
VicRds or DSE Pre Qualification
Mainly Lump Sum with some Product Rates
Up to \$100k

Procurement Process

Competitively won 3-5 Year Maintenance contract
Specific Pre-Qualification requirements
Geographic Based, no overlap (District/sub District scale)
Intensive performance management tied to contractual benefits
May subcontract by agreement

Lump sum component (inspection regime) with works by Product Rates
Road and infrastructure inspections by contractor, maintenance works authorised by DEPI job-by-job
Contractor manages work sites and risks
Annual adjustments to rates
Can subcontract by agreement
Road obligations must be met unless fire directly impacts works

Maintain identified Heavy/Med strategic roads (Contracted Roads)
Planned Burning Prep and Support
Obligated where adjacent to Contracted Roads
Pre-determined prep product rates
Pre-determined burn support rates
Machinery type is defined by DEPI in RFT
Always on 2hr standby, no need for DEPI to initiate, part of Lump sum
15 min standby response times based on threat level, DEPI initiated, standby rate applies
Type 1 risk capable
Local Deployment
Hourly rates part of RFT Assessment
Must respond in own area and adjacent areas, not elsewhere
Contractors in own area retained in preference to other contractors in own area
2nd choice to retain in adjacent areas

Minor Variations outside identified road network (<10%/year by length)
Planned burn prep and support within geographic contract area, but not adjacent to Contracted Roads
All other offers by Minor Works competitive process or through Plant Panel Contract

Minor Capital or Upgrade Works
Can also be used for Maintenance (outside of established Primary Contracted Roads)
No standby or fire response obligations within contract
Contractor manages work sites and risks

Standard Competitive Procurement Processes
VicRds or DSE Pre Qualification
Mainly Lump Sum with some Product Rates
Up to \$100k

Works Type

Emergency Standby
First Attack
Extended Attack

Procurement Process

Competitively won 3-5 Year Maintenance contract
Specific Pre-Qualification requirements
Geographic Based, no overlap (District/sub District scale)
Intensive performance management tied to contractual benefits
May subcontract by agreement

Lump sum component (inspection regime) with works by Product Rates
Road and infrastructure inspections by contractor, maintenance works authorised by DEPI job-by-job
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Minor Variations outside identified road network (<10%/year by length)
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All other offers by Minor Works competitive process or through Plant Panel Contract

Minor Capital or Upgrade Works
Can also be used for Maintenance (outside of established Primary Contracted Roads)
No standby or fire response obligations within contract
Contractor manages work sites and risks

Standard Competitive Procurement Processes
VicRds or DSE Pre Qualification
Mainly Lump Sum with some Product Rates
Up to \$100k

Works Type

Emergency Standby
First Attack
Extended Attack

Procurement Process

Competitively won 3-5 Year Maintenance contract
Specific Pre-Qualification requirements
Geographic Based, no overlap (District/sub District scale)
Intensive performance management tied to contractual benefits
May subcontract by agreement

Lump sum component (inspection regime) with works by Product Rates
Road and infrastructure inspections by contractor, maintenance works authorised by DEPI job-by-job
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Type 1 risk capable
Local Deployment
Hourly rates part of RFT Assessment
Must respond in own area and adjacent areas, not elsewhere
Contractors in own area retained in preference to other contractors in own area
2nd choice to retain in adjacent areas

Minor Variations outside identified road network (<10%/year by length)
Planned burn prep and support within geographic contract area, but not adjacent to Contracted Roads
All other offers by Minor Works competitive process or through Plant Panel Contract

Minor Capital or Upgrade Works
Can also be used for Maintenance (outside of established Primary Contracted Roads)
No standby or fire response obligations within contract
Contractor manages work sites and risks

Standard Competitive Procurement Processes
VicRds or DSE Pre Qualification
Mainly Lump Sum with some Product Rates
Up to \$100k