1 Introduction

1.1 OVERVIEW

The Northern Territory (NT) Department of Planning and Infrastructure (DPI) proposes to upgrade sections of the Victoria Highway (the Highway) between Katherine, in the Northern Territory, and the Northern Territory–Western Australia border.

The proposal involves the construction of new bridges and minor realignments of the Highway at the Victoria River, Joe Creek, Lost Creek and Sandy Creek bridge sites, raising two sections of the Highway, and construction of two passing lanes. Access and use of borrow materials and strengthening and widening parts of the Highway are an integral part of the proposed works.

The Victoria Highway terminates at Kununurra in Western Australia. The project area is in the vicinity of the Victoria River, Northern Territory, between Chainages (Ch) 185 km to 220 km as measured from Katherine. The nearest population centres to the project area are small. They are the Victoria River Inn, located just west of the Highway bridge over the Victoria River, and Coolibah and Fitzroy stations about 12 km west of the Victoria River Bridge.

Katherine is 194 km east of the Victoria River Highway Bridge and Timber Creek is 82 km west of the Victoria River Highway Bridge.

The Victoria Highway, of which 469 km is located in the Northern Territory, forms part of the Australian Land Transport Network and is a component of the declared Darwin to Perth Corridor. The Victoria River Highway Bridge was opened in 1970 and completion of sealing of the Highway to the Western Australia border was completed in 1974.

The standard of the road was originally 434 km of single-lane sealed road (3.7 m wide), 35 km of narrow two-lane sealed road (6.2 m wide), with 28 low-level, single-lane bridges, and three two-lane bridges at the Victoria River, Lost Creek and Escarpment Creek on the Victoria River flood plain.

Options for upgrading the corridor were assessed in a series of studies including:

- Victoria Highway Strategy for Upgrading (Department of Transport and Works [DTW] 1985)
- Beef Road to National Highway (DTW 1988)
- Victoria Highway Development Strategy (DTW 1989)
- The Victoria Highway—From Single Lane to Safety National Highway Program (DTW 1990).

These reports assessed the potential economic options for upgrading the Highway, including a review of options for protecting the Highway from flooding. The outcome of these studies was a Commonwealth-funded programme for widening the Victoria Highway to a two-lane sealed road, which was completed in 1997. Under that programme all single-lane sections of the Highway and narrow bridges were widened to two lanes, with bridges upgraded to provide a flood protection standard of 1 in 20 years and an Annual Average Time of Closure (AATOC) of less than 12 hours.

This programme did not address the section of the Highway on the Victoria River flood plain since the Victoria River and Lost Creek bridges and their approach roads were already two lanes. Consequently, these bridges and areas of the Highway remained below the flood protection standard of the rest of the corridor.

This current project aims at completing the flood immunity (protection) improvements on the Victoria Highway corridor to provide a consistent road standard along the corridor.

A detailed hydrology study of the region (Kellogg Brown & Root Pty Ltd (KBR) 2004) assessed options for upgrading this section of the Highway, including the flooding impacts of the major tributaries of the Victoria River on Highway access. It included engineering and economic factors and whole-of-route flood immunity issues.

The Road Network Division of DPI is the proponent for this proposal and the Construction Division prepared the PER (Section 1.2).

On behalf of DPI, the Construction Division also compiled and submitted a Notice of Intent (NOI) for the project in July 2005 (DPI 2005). A Referral under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was compiled and submitted to the Commonwealth Department of the Environment and Heritage (DEH) in August 2005 (DPI 2005a).

Following discussions between the Northern Territory Minister for Natural Resources, Environment and Heritage and the DEH, the proposal was deemed a Controlled Action under the EPBC Act. Therefore, the Action warranted additional assessment, public review and consultation.

The NT Minister and the DEH agreed that the appropriate level of assessment was a Public Environmental Report (PER). Assessment of the PER will be undertaken in accordance with the requirements of the bilateral agreement between the Commonwealth and NT governments.

Draft Guidelines for the Preparation of a Public Environmental Report were developed by the Northern Territory Environment Protection Agency (EPA) which is part of the Department of Natural Resources, Environment and the Arts (NRETA). The Guidelines were advertised and made available for review by the general public and NT Government agencies. The Guidelines were then modified to take account of resultant submissions.

The EPA developed the final Guidelines for the PER in November 2005, in accordance with Clause 8 of the Environmental Assessment Administrative Procedures of the NT *Environmental Assessment Act 1982* (NT). These Guidelines form Appendix A of the PER.

The Administrative Procedures of the Environmental Assessment Act require that the Minister specifies the following matters in the Guidelines:

- matters relating to the environment that the Proponent shall address
- the timeframe for submitting the report
- the number of copies of the report to be provided to the Minister and other agencies, and newspapers in which, and occasions when, the proponent will publish a notice.

The PER is required to contain sufficient information to enable understanding and assessment of the scope and environmental implications of the proposal. The PER must clearly identify the main environmental impacts associated with the development and should contain management strategies that demonstrate how these impacts will be avoided or minimised.

The document has been prepared in accordance with the Environmental Assessment Act, the guidelines within *A guide to the Environmental Impact Assessment Process in the Northern Territory 1996*, and the PER Guidelines provided to DPI by the NT Minister for Natural Resources, Environment and Heritage and the NT EPA.

1.2 THE PROPONENT, THE DEPARTMENT OF PLANNING AND INFRASTRUCTURE, ROAD NETWORK DIVISION

DPI, formerly the Department of Infrastructure, Planning and Environment (DIPE), is the key NT Government agency responsible for the coordination of planning and development of the Territory's economic infrastructure, with regard to the need to protect and conserve the natural environment and heritage values. The Transport Group in DPI comprises eight Divisions, namely:

- Transport Safety
- Road Network
- Road Transport
- Economics and Policy
- Public Transport
- National Reform
- Aviation and Transport Security
- Darwin Bus Service.

Through the Road Network Division, DPI is the notional owner of the Northern Territory's roads, with responsibility for strategic asset management of the Northern Territory road network, policy establishment, road network planning, and developing forward works strategies, programmes and projects. The Division is also responsible for the provision of safe, accessible transport infrastructure for Territorians and visitors to the Territory. This includes research, analysis, planning, economic evaluation and policy development services (DPI 2005).

The Construction Division (a Government Business Division) is responsible for procurement for and supervision of project development, project design, construction and maintenance services on behalf of the Transport Group, as well as for other Government Departments.

Within the Construction Division, the Major Projects cell is responsible for this PER. The Project Officer established as the point of contact for the PER is:

Mr G. Cook
Manager Major Projects
PO Box 61
Palmerston NT 0831.

1.3 DESCRIPTION OF THE PROPOSED WORKS

The location of the project area and the proposed construction and worksites within the project area are illustrated in Figure 1.1.

The proposed works will be undertaken between Ch 185 km to 220 km along the Victoria Highway, as measured from Katherine, in the vicinity of the Victoria River. The proposed construction sites are located at:

- Ch 186.2 km to 189.2 km—construction of a 2 km single passing lane (i.e. in one direction only)
- Ch 192.8 km to 195.2 km—realignment of the Highway and construction of a new bridge at the Victoria River
- Ch 195.5 km to 196.5 km—Highway to be raised
- Ch 202.3 km to 202.9 km—Highway to be raised
- Ch 203.5 km to 205.4 km—realignment of the Highway and construction of a new bridge at Joe Creek
- Ch 206.7 km to 209.7 km—realignment of the Highway and construction of a new bridge at Lost Creek (one construction site over two channels of the watercourse)
- Ch 210.5 km to 213.5 km— construction of a 2 km single passing lane (i.e. in one direction only)
- Ch 216.6 km to 218.3 km—realignment of the Highway and construction of a new bridge at Sandy Creek
- various locations between Ch 185 km to 220 km in which approximately 15.5 km of road strengthening and widening will be undertaken.

Locations of proposed construction sites are detailed in Table 1.1.

Table 1.1 Proposed construction sites and their locations along the Victoria Highway

Site	Name	Chainage (km)	Latitude (S)	Longitude (E)
Site 1	Passing lane	Ch 186.2–189.2 km	15° 36' 04'	131° 10' 50'
Site 2	Victoria River	Ch 192.8–195.2 km	15o 36' 53'	131o 07' 49'
Site 3	Highway to be raised	Ch 195.5–196.5 km	15o 36' 19'	131o 06' 53'
Site 4	Highway to be raised	Ch 202.3–202.9 km	15o 35' 18'	131o 04' 59'
Site 5	Joe Creek	Ch 203.5–205.4 km	15o 35' 39'	131o 04' 05'
Site 6	Lost Creek	Ch 206.7–209.7 km	15o 35' 15'	131o 01' 58'
Site 7	Passing lane	Ch 210.5–213.5 km	15o 35' 15'	131o 00' 18'
Site 8	Sandy Creek	Ch 216.6–218.3 km	15o 35' 48'	130o 57' 29'

Other specific sites impacted by the proposal include the areas proposed as sources of gravel and fill (borrow areas), water, and associated construction sites and depot(s). In addition, the PER assesses the impacts on all environmental matters potentially affected by the proposal.

Owing to the limitation of funding and other strategic priorities, it is possible that work on all these construction sites may not be undertaken concurrently. The most likely scenario is that, firstly, the bridges over the Victoria River and Joe, Lost and Sandy creeks will be replaced by new, higher bridges. This component of the works would include realignment of the Highway at each of the immediate approaches for each of these sites and raising the height of the two sections of the Highway.

The remaining works (passing lanes and strengthening and rehabilitation works) would be reprogrammed for a future stage. Additional funds from AusLink would be required to undertake these other works.

1.4 OBJECTIVES OF THE PROPOSED WORKS

The objectives of the proposed works are to:

- provide improved flood protection (flooding immunity) for a road that is part of the national Darwin to Perth road transport corridor and which is closed for parts of most wet seasons
- provide a road of a standard consistent with the balance of the Victoria Highway and, in particular, upgrade it to enable it to remain open following a 1 in 20 year storm event
- improve road users' safety when using the section of the Highway affected by this proposal.

The project is compliant with the requirements of the National Highway Strategy 'The Next 20 Years' (DTW 1999), which identified the need for replacement of the Victoria and Lost bridges within the timeframe of the Strategy. It is also compliant with the National Highway Rehabilitation and Widening Strategy to achieve acceptable, consistent road standards on all National Highways.

1.5 OBJECTIVES OF THE PER

The objectives of the PER are to:

- provide all stakeholders with information about the proposed design, construction, operation and management of the proposed works
- provide all stakeholders with information that will enable an understanding and assessment of the environmental implications of the proposal
- assess the existing environment and identify the actual and potential environmental impacts of the proposal
- establish environmental management planning and commitments to avoid or minimise adverse impacts and to plan for establishing beneficial environmental impacts
- consult with stakeholders and allow for incorporation of their suggestions into the proposal
- comply with the requirements of the Environmental Assessment Act and the EPBC Act.

1.6 STRUCTURE OF THE PER

The PER comprises two volumes. Prior to the introductory chapter in Volume 1 is an Executive Summary for the proposal. Following this introductory chapter (Chapter 1), Chapter 2 describes the proposal, including a summary of the existing conditions in the project area and the primary and ancillary processes and activities associated with the construction works.

Chapter 3 considers the alternatives available for the proposal, including the consequences of the 'do nothing' option.

Chapter 4 outlines the existing environment in which the proposal would be undertaken. It assesses the likely and potential impacts and the risks and mitigation measures (safeguards) to apply.

Chapter 5 comprises the environmental management requirements for the proposal, including an outline of the Environmental Management Plan for construction.

Chapter 6 describes the health and safety requirements for the proposal, especially the roadworks, traffic management and tasks associated with these works.

Chapter 7 is a risk assessment for the proposal.

Chapter 8 lists the groups, authorities and individuals consulted during preparation of the environmental impact assessments, including this PER, for the proposal.

Chapter 9 contains the references applicable to the PER.

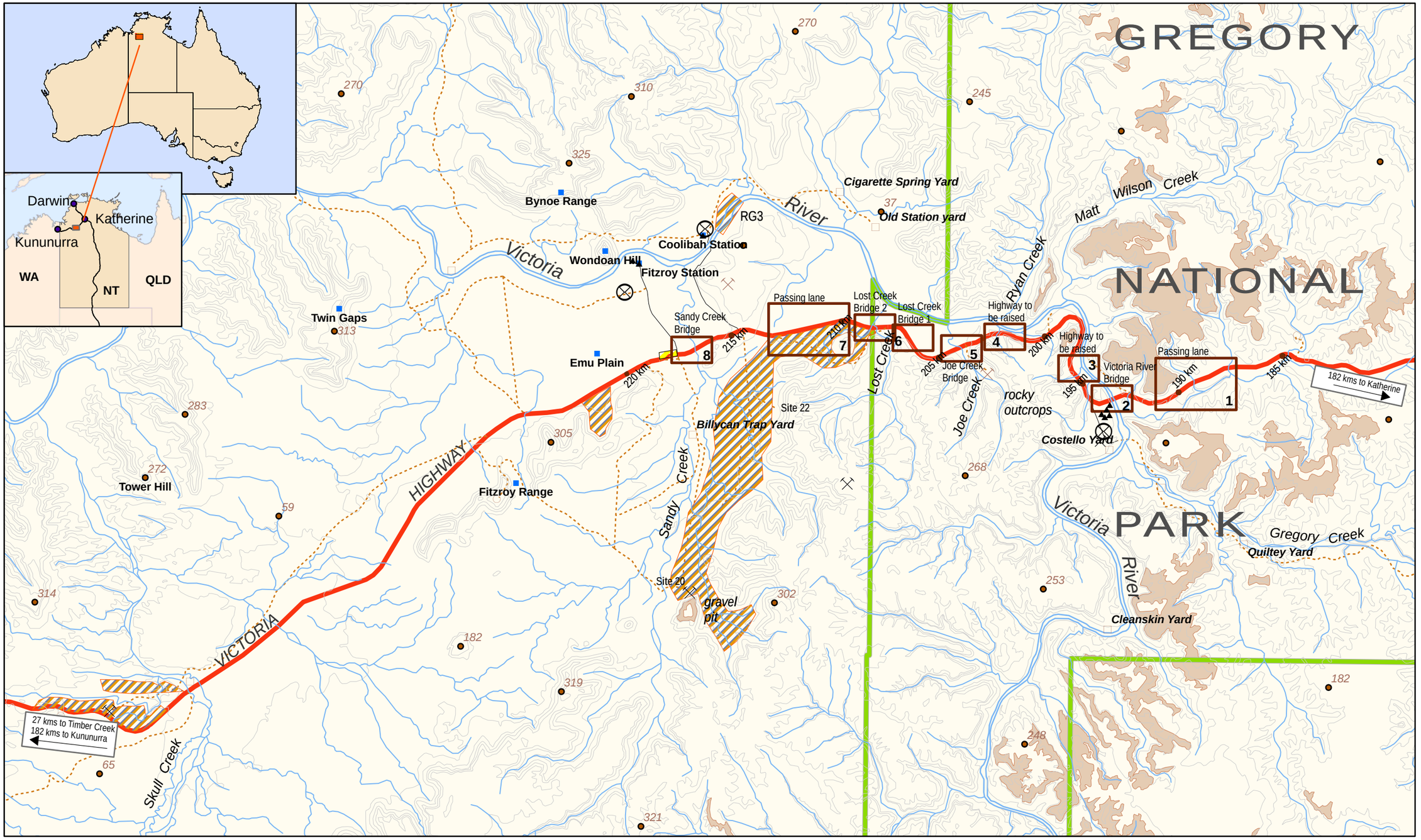
Chapter 10 is the glossary of terms and abbreviations used in the PER.

The appendices to the PER form Volume 2 and provide additional information not included in the body of the PER. The Guidelines for the PER form Appendix A. Appendix B comprises DPI documents, including a sample DPI Contract Specification applicable to a contractor undertaking construction of this project, plus figures of each of the proposed construction sites and the geology of the area.

Appendices C, D and E contain copies of the specialist reports and baseline studies undertaken for the PER, including information on the physical, biological and cultural environments.

Note: Throughout this document:

- 'the project area' is the term used to refer to the area in which all impact sites are located
- the words proposal and project are used interchangeably
- the verb 'will' is used specifically in relation to management actions to establish commitment.



Airstrip
Building
Locality
Spot height (m)
Landmark
Borrow pit
Scrape
Yard
Highway
Sealed road
Track
Watercourse
Contours
Rocky outcrop
Gregory National Park boundary
Proposed Highway impact (construction) area
Potential locations for borrow materials (gravel and fill)
Stockpile area

km 0 1 2 3 4 5
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Figure 1.1

Location of Project Area and Impact Areas

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