

4. Context for the Project

4.1 Planning Context

A preliminary review of the statutory position / permissibility of the project under applicable environmental planning instruments has been undertaken. The results of this review are summarised below.

4.1.1 Environmental Planning and Assessment Act 1979

All development in NSW is assessed in accordance with the provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and Environmental Planning and Assessment Regulation 2000 (the Regulation).

Changes to the EP&A Act

The NSW Parliament passed the *Environmental Planning and Assessment Amendment (Infrastructure and Other Planning Reform) Act 2005 No 43* on 16 June 2005. This amendment came into force on 1 August 2005.

The amendment introduces a new Part 3A to the EP&A Act to cover the assessment of major infrastructure development. This type of development was previously assessed under Part 4 and / or Part 5 of the EP&A Act.

Application of Part 3A of the EP&A Act to the Oxley Highway to Kempsey Project

By an order gazetted on 29 July 2005, the Minister for Planning declared that Part 3A applies to all projects for which the proponent is also the determining authority and which otherwise would have required an environmental impact statement to be obtained under Part 5.

Within the meaning of Part 5 of the EP&A Act, the RTA is both the proponent and the determining authority for the Oxley Highway to Kempsey project. The RTA has decided that it will be seeking assessment of the Oxley Highway to Kempsey project under Part 3A.

Under Part 3A the scope of environmental assessment (EA) would be determined by the Director-General of Planning, who issues EA requirements after consultation with the relevant public authorities and local councils. The RTA will be seeking a Part 3A Application for project approval in the near future.

4.1.2 Local Government Authorities

The study area is located within the Port Macquarie – Hastings Local Government Area (LGA) and the Kempsey LGA.

Two local environmental plans (LEPs) apply to the study area – *Hastings Local Environmental Plan 2001* (Hastings LEP) and the *Kempsey Local Environmental Plan 1987* (Kempsey LEP) and are shown on Figure 4.1. The LEP zones occurring in the study area and the applicable consent authority are summarised in Table 4.1.

Table 4.1 LEPs Applicable to the Study Area

LEP	Consent Authority	Zones
<i>Hastings Local Environmental Plan 2001</i>	Port Macquarie – Hastings Council	1 (a1) Rural 1 (a3) Rural Agricultural Protection 1 (f) State Forests 2 (v) Village 5 (a) Special Uses Community Purposes - Classified Road 6 (a) Open Space 7 (a) Environmental Protection - Wetlands 8 (a) National Parks and Nature Reserves
<i>Kempsey Local Environmental Plan 1987</i>	Kempsey Shire Council	1 (a1) (Rural 1 “A1” Zone) 1 (f) (Rural (Forests) “F” Zone) 1 (g) (Rural (Small Agricultural Enterprises) “G” Zone) 2 (v) (Village or Township Zone)

Roads are permitted with consent under both LEPs in all applicable zones, with the exception of the 8(a) Zone under the Hastings LEP where they are prohibited.

4.1.3 State Environment Planning Policies

A number of state environmental planning policies (SEPP) are potentially applicable to the project however, the following are directly relevant to the statutory position of the project.

State Environmental Planning Policy No. 4 – Development Without Consent and Miscellaneous Exempt and Complying Development (SEPP 4)

SEPP 4 (clause 11C) permits development for the purposes of a “classified road” (as defined under the *Roads Act 1993*) to be assessed in accordance with Part 5 of the EP&A Act (i.e. without the need for development consent) where it would have otherwise required development consent.

SEPP 4 (clause 11C) does not apply:

- ▶ Where the development is prohibited under an environmental planning instrument (local environmental plan, regional environmental plan or SEPP);
- ▶ Where the development has prescribed impacts on a SEPP 14 wetland (refer below); and
- ▶ Development comprising “*the alteration of or addition to, or the extension or demolition of, a building or work*” in the following case (subclause 2(6)):

“(a) described in an environmental planning instrument as a heritage item, an item of the environmental heritage or a potential historical archaeological site”.

The Preliminary Non-Indigenous Heritage Assessment (South East Archaeology, 2005) and Preliminary Indigenous Heritage Assessment (South East Archaeology, 2005) undertaken for the project have identified a number of listed heritage items within the study area. Subject to concept design the project may include some of the prescribed impacts (SEPP 4 subclause 2(6)(a)).

State Environmental Planning Policy No. 14 – Coastal Wetlands (SEPP 14)

There are two SEPP 14 wetlands within the study area, these being located on Dalhunny Island within the Wilson River, and on the northern bank of the Wilson River adjacent to Dalhunny Island.

Subclause 7(1) specifies that any activities involving land clearing, levee construction and drainage and filling of land mapped as being a SEPP 14 wetland is subject to assessment under Part 4 of the EP&A Act. This requires development consent from council and the concurrence of the Director-General of Planning. Council must also forward a copy of the development application to the Director-General of the Department of Environment and Conservation (National Parks and Wildlife Service).

Subject to concept design the project may include some of the prescribed impacts on SEPP 14 wetlands.

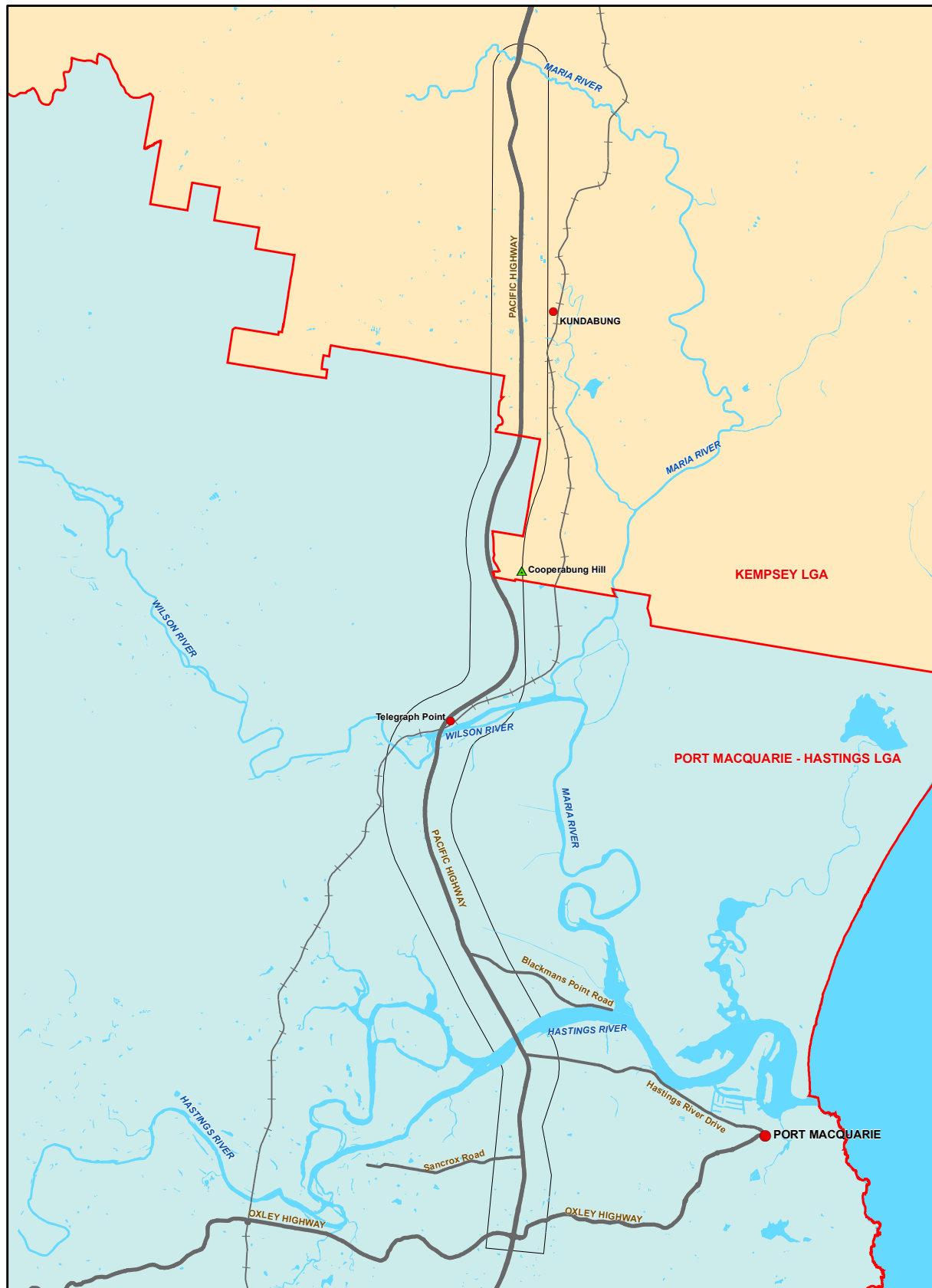
4.1.4 Summary of Statutory Position

The project is permissible with consent in all zones in the study area, with the exception of Zone 8(a) of the Hastings LEP, and pursuant to SEPP 4 the project is deemed to be eligible for assessment under Part 5 of the EP&A Act.

The study area includes listed heritage items and coastal wetlands (SEPP 14). If the project impacts on any of these in the prescribed manner, then development consent under Part 4 of the EP&A Act may be required.

The potential prohibition in Zone 8(a) of the Hastings LEP and the potential implications of SEPP 14 would need to be considered further in the context of recent amendments to the EP&A Act.

The RTA will be seeking assessment of the project under Part 3A of the EP&A Act from the Department of Planning.



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<p>SCALE 1:175,000</p> <p>Map Projection: Universal Transverse Mercator Horizontal Datum: Geodetic Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56</p>	<p>GRID</p>	<p>Legend</p> <table border="0"> <tr> <td> Local Govt Area</td> <td> City</td> <td> Main Rd</td> <td> Port Macquarie - Hastings LEP</td> </tr> <tr> <td> Study Area</td> <td> Hill/Mountain</td> <td> Highway</td> <td> Kempsey LEP</td> </tr> <tr> <td> River/Creek</td> <td> Locality</td> <td></td> <td></td> </tr> </table>	Local Govt Area	City	Main Rd	Port Macquarie - Hastings LEP	Study Area	Hill/Mountain	Highway	Kempsey LEP	River/Creek	Locality		
Local Govt Area	City	Main Rd	Port Macquarie - Hastings LEP											
Study Area	Hill/Mountain	Highway	Kempsey LEP											
River/Creek	Locality													

LGA/LEP Boundaries

Spatial layers courtesy of Port Macquarie - Hastings Shire Council, Kempsey Shire Council, NSW Department of Lands, Geoscience Australia.

Figure 4.1

4.1.5 Property Acquisition and Revocation

The project would involve acquisition of property that is privately and / or government owned. Any potential acquisition would be subject to appropriate compensation in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* and the *RTA Land Acquisitions Policy 1999*, which includes provision for ‘*hardship acquisition*’ at the preferred route stage. This report contains discussion of the potential impacts of the project on properties and businesses and is based on cadastral information available to the project team, the accuracy of which has not yet been verified by any property survey work. Verification would be undertaken as part of the concept design at which time the property acquisition requirements will be confirmed.

Prior to any acquisition of land dedicated under the *National Parks and Wildlife Act 1974* (e.g. national park or nature reserve) revocation of the land in accordance with the Act must first be effected by an Act of Parliament.

Prior to any acquisition of land dedicated under the *Forestry Act 1916* (e.g. state forest) revocation of the land in accordance with the Act must first be effected by one, or a combination of the following means:

- ▶ Act of Parliament – where the land affected (irrespective of the area) is zoned by Forests NSW for conservation purposes;
- ▶ Resolution of both Houses of Parliament – where the land affected is not zoned for conservation purposes and exceeds 20 hectares; or
- ▶ Notice in the Gazette – where the land affected is not zoned for conservation purposes and is less than 20 hectares.

4.1.6 Strategic Planning

Strategic planning reports and studies relevant to the study area were reviewed, and the potential implications for the project identified. Table 4.2 summarises the results of this review.

Table 4.2 Strategic Planning

Document	Overview	Implications for the Project
<i>North Coast Urban Planning Strategy, 1995</i>	Provides a vision for the future of the North Coast Region, identifying areas with the potential for future growth.	The strategy does not identify any land within the study area for future development.
<i>Hastings Urban Growth Strategy 2001</i>	Provides a framework for planning over the next 15 years and identifies urban investigation areas to accommodate increase in population. One of the urban investigation areas (Area 13) is located in the southeastern end of the study area near the intersection with the Oxley Highway.	The development of Area 13 may involve extensive urban development adjacent to the existing highway. The potential implications of development of this area need to be considered in the planning of the project.
<i>Hastings Industrial Landuse Strategy</i>	The strategy was prepared to forecast demand and make	The strategy identified that Area 13 would require provision of industrial lands to service

Document	Overview	Implications for the Project
<i>Discussion Paper 1995</i>	recommendations for the future supply of industrial land in the Port Macquarie – Hastings LGA.	this development.
<i>Hastings Industrial Landuse Strategy 1998 Review</i>	The purpose of this review was to review the 1995 Discussion Paper data and note any changes in circumstances.	No new areas were identified within the study area for industrial development.
<i>Hastings Rural Residential Strategy 2004</i>	This strategy identified existing supply and demand for rural residential land and identifies areas for further investigation.	Within the study area the strategy identifies land in the vicinity of Telegraph Point and Bushlands Drive / Le Clos Farms as potential rural residential land, and further land between the Oxley Highway and Sancrox Road as an investigation area.
<i>Kempsey Industrial Land Review 2004</i>	The strategy was prepared to forecast demand and make recommendations for the future supply of industrial land in the Kempsey LGA.	No land within the study area has been identified for industrial development.

4.1.7 Government Transport Initiatives

Strategic transport planning documents relevant to the project were reviewed, and the potential implications for the project identified. Table 4.3 summarises the results of this review.

Table 4.3 Transport Planning

Document	Overview	Implications for the Project
<i>AusLink: Building Our National Transport Future, 2004</i>	The Federal Government's formal policy statement on land transport. Provides a long-term plan for funding of transport infrastructure. Under AusLink, the National Highway System and Roads of National Importance will be replaced with a broader and more strategic network of transport corridors. This new AusLink National Network will form the basis of the Federal Government's investment in land transport.	Federal Government funding for Pacific Highway projects is provided under this program.
<i>Pacific Highway Upgrading Program, RTA, 1996.</i>	The \$2.2 billion, 10 year upgrading program aims to achieve significant improvements to road conditions, safety and travel times.	The planning of the Oxley Highway to Kempsey upgrade is one of the projects being funded under the Pacific Highway Upgrade Program.
<i>Pacific Highway Managing The Impact of Delay, Discussion Paper, RTA, 1999.</i>	The paper emphasises the need to coordinate construction activities where delays are likely to occur.	The refined design for the preferred route will take the recommendations of this paper into account.
<i>North Coast Motorway, Memorandum of Understanding between the Government of Australia and the Government of the State of NSW, December 2005.</i>	An understanding between the Government of Australia and the Government of the State of NSW for the development of a high standard North Coast Motorway between the F3 at Beresfield and the Queensland Border.	The Federal and State Governments are investigating ways to accelerate the upgrade program, through the construction of the North Coast Motorway as a toll road. The Oxley Highway to Kempsey Project may be considered part of a possible future toll road.

4.2 Transport Context

4.2.1 Predicted Traffic Volumes and Level of Service

A summary of the predicted traffic volumes at the time of opening and 20 years after opening is provided in Table 4.4. The level of service (LoS) projections are based on the assumption that no upgrading has occurred (the “do nothing” scenario).

Table 4.4 Predicted Traffic and Level of Service Summary 2016 and 2036

Location	At Projected Opening (2016)			At 20 Year Horizon (2036)		
	AADT ⁽¹⁾	LoS ⁽²⁾	v/c ⁽³⁾	AADT ⁽¹⁾	LoS ⁽²⁾	v/c ⁽³⁾
Sancrox Road	11,931	D	0.57	17,507	E	0.84
Hastings River Drive	16,249	E	0.77	23,842	F	1.13
Telegraph Point	15,329	E	0.73	22,492	E	0.73
Kundabung	14,825	D	0.71	21,752	E	0.71
Maria River	14,320	D	0.69	21,011	E	0.68

Notes: (1) Annual Average Daily Traffic (AADT) – The number of vehicles crossing at a specific site per year and dividing this number by the number of days in the year (366 days in 2004);
 (2) LoS determined from Highways Capacity Manual (2000); and
 (3) v/c is volume / capacity ratio.

The data in Table 4.4 indicates that the operation of the highway at 2016 would start to experience or would already exhibit, unstable flow conditions. Level of service F at 2036 at Hastings River means that the highway would experience serious queuing and delays as it will be operating over capacity. The remaining areas of the highway within the study area would also be operating at over capacity and experiencing delay with a LoS E. These dates have been adopted for planning purposes only.

4.2.2 Intersections

The predicted operation of the at-grade intersections at the design horizon (2036) if no upgrading has occurred (the “do nothing” scenario) is:

- ▶ Rollands Plains Road / Pacific Highway – would not operate satisfactorily;
- ▶ Telegraph Point South2 / Pacific Highway – would not operate satisfactorily;
- ▶ Blackmans Point Road / Pacific Highway – would operate satisfactorily as seagull intersection;
- ▶ Glen Ewan Road / Hastings River Drive / Pacific Highway – would not operate satisfactorily; and
- ▶ Sancrox Road / Pacific Highway – would not operate satisfactorily.

As a result, intersection / interchange treatments may need to be considered as part of the project.

The location of a proposed grade separated interchanges and service roads will be determined as part of the detailed investigations to be undertaken for the preferred route and during the concept design phase.

² Joins highway with Mooney Street near Telegraph Point Public School.

The location of the existing interchange with the Oxley Highway to the south, the proposed grade separated interchange south of Kempsey (part of the Kempsey to Eungai Pacific Highway Upgrade project) connection to local road network and connectivity issues will all be considered in finalising the proposed grade separated interchange locations.

New service roads would be required in a Class M scenario to provide access to proposed grade separated interchanges or to provide a continuous alternate route. In a Class A scenario new service roads maybe provided to assist with the rationalisation of at grade intersections and private accesses.

The service road strategy would aim to improve safety by separating through and local traffic. This may involve use of existing local roads, sections of old highway or the existing highway. Where possible, the new service roads would be located within or immediately adjacent to the upgraded highway, but may also be located outside the preferred route corridor.

4.2.3 Key Aspects of Preliminary Traffic Investigations

The results of the preliminary traffic investigations indicate that:

- ▶ The Hastings River Drive to Telegraph Point section will require upgrading prior to 2016;
- ▶ Traffic growth will be defined by the underlying growth in heavy vehicles along the corridor. The growth in heavy vehicles will account for up to four times the growth of other vehicles; and
- ▶ Grade separation or alternative access (local access road etc) provisions will be required at the following locations in 2016:
 - Hastings River Drive / Pacific Highway;
 - Telegraph Point south / Pacific Highway; and
 - Telegraph Point north / Pacific Highway.

4.2.4 Crash Reduction

A primary objective of upgrading the Pacific Highway is to improve road user safety. Construction of dual carriageway to current Pacific Highway Upgrade design guidelines will potentially decrease the total number of crashes per 100 MVK if a Class A upgrade or Class M upgrade is undertaken over the entire highway. Based on the potential reduction in accident rates only and the resultant costs, the repayment period would be in the range of 23 – 37 years, dependant on the form of the upgrade (Class A or M). For the purposes of assessing crash reduction it has been assumed that the Class A scenario includes the conversion of all at-grade intersections to either a “seagull” arrangement or left in / left out only.

Data indicates that there is a high incidence of fatigue related crashes. These types of crashes may be reduced by the use of barriers and provision of runoff areas, clear zones, etc. However, this section of the highway is approximately four to five hours north of Sydney. As a result, it is within the fatigue zone for long distance travel. During the refined design stage, consideration needs to be given to incorporating rest areas. For this project, there is a requirement to retain or replace existing rest areas within the study area which are currently located adjacent to the southbound carriageway north of Kundabung and adjacent northbound carriageway south of Maria River.

4.2.5 Road User Delay

Road user delays on the highway are due to either construction or operation. Delays are quantified by assigning a cost to the road user.

Construction

In accordance with RTA design standards, alternate routes for use during construction would need to be designed for an 80 km/h design speed with 3.5 metre wide lanes and one metre shoulders. It has also been assumed that the existing highway operates at 100 km/h when the highway deviates from the existing highway. Construction immediately adjacent to the existing highway would require the existing highway to operate at 80 km/h during the construction phase.

Operation

Operational delays are associated with the length of the new highway and the type of upgrade (refer to Section 4.6 for a description of upgrading scenarios). Operational delays could be attributed to the time required to access a U-Turn facility when an at-grade intersection prohibits a right turn or time required to access a grade separated interchange via a local access road.

4.3 Adjoining Projects

Median separated dual carriageways adjoin the project at either end. To the south, the highway includes the Oxley Highway grade separated interchange, which was constructed prior to the Pacific Highway Upgrade Program.

The closest proposed Pacific Highway upgrading project is the Kempsey to Eungai project immediately to the north. This project is currently developing the concept design, and is preparing the Part 3A application to the Department of Planning under the EP&A Act.

4.4 Need for the Project

4.4.1 The “Do Nothing” Option

Consideration was given to the “Do-Nothing” option. The Do-Nothing option should be interpreted as retaining the Highway as the existing two-lane pavement and only undertaking maintenance works such as pavement patching and re-sheeting works and linemarking when required.

4.4.2 The Implications of Doing Nothing

The Pacific Highway will continue to play an important role as a major local, intra and inter-regional road transport link and a main link between Sydney and Brisbane.

One of the objectives of the Pacific Highway Upgrade Program is to reduce crashes to 15 crashes per 100 million vehicle kilometres. If the upgrading of the Oxley Highway to Kempsey section of the highway did not occur, it is projected that:

- ▶ By 2016, there would be 29.35 crashes per 100 million vehicle kilometres (MVK) within the study area. This equates to an average of 0.9 fatal and 10.8 serious injury crashes per year; and
- ▶ By 2036, there would be 29.45 crashes per 100 MVK within the study area. This equates to an average of approximately 1.6 fatal and 17.8 serious injury crashes per year.

It is estimated that reducing the number of crashes would save the community in the order of \$4.2 million per annum by 2036, as well as reducing the personal effects of road crash trauma.

A reduction in travel times and freight transport costs would also benefit the economy and encourage regional economic development.

4.4.3 Highway Upgrade Timing

Based on traffic demands, the proposed lane configurations for the 2036 horizon are listed in Table 4.5.

Table 4.5 Upgrade Timing

Section	Upgrade Timing ⁽¹⁾	2036 Configuration
Oxley Highway to Hastings River Drive	2010-2020 ⁽²⁾	Four lanes
Hastings River Drive to Moorside Drive	2007-2016	Four lanes
Moorside Drive to Cooperabung Road	2009-2016	Four lanes
Cooperabung Road to Mingaletta Road	2011-2016	Four lanes
Mingaletta Road to Maria River	2012-2016	Four lanes

Notes: (1) Timeframe within which initial upgrade may be required; and

(2) The section between Hastings River Drive and Sancrox Road may require an upgrade by 2010 and the section between Oxley Highway and Sancrox Road by 2020.

Based on a sustained growth of 3%, the results of the preliminary traffic investigations indicate that the Hastings River Drive to Telegraph Point section would require upgrading to Class M standard prior to 2036 with an upgrade to six lanes by 2041. The options include the Hastings River and Wilson River bridges to be constructed at project opening with sufficient width for three lanes in each direction. These bridges would be linemarked at project opening for two lanes and then new linemarking provided when three lanes are required.

4.4.4 Base Case Scenario

The base case scenario is considered for the purposes of economic analysis and comparison. It is assumed that the base case or “do nothing” scenario would be limited to minor upgrades of the existing highway on its current alignment.

The base case assessment has considered the following minimum upgrade works by 2036:

- ▶ Sections of highway that will require minor upgrade and / or reconstruction;
- ▶ Sections of highway that will require additional overtaking lanes or climbing lanes;
- ▶ Provision of additional local access roads;
- ▶ Intersection modifications or upgrades; and
- ▶ Assessment of bridge structures.

This base case scenario has been considered to determine the extent of works already required along the highway.

4.5 Upgrading Scenarios

The upgrade considers two scenarios. These are described below.

4.5.1 Class A Upgrade Scenario

The Class A (arterial) upgrade scenario would involve a four-lane, 100 km/h posted speed, limited access condition roadway with at-grade intersections. Grade separated interchanges may be used if traffic at the intersection will exceed the capacity of an at-grade intersection at completion of the highway upgrade or in the first few years of its operation.

It is anticipated that the highway may be upgraded to a Class A standard initially, and upgraded to a Class M (motorway) standard ultimately (up to six lanes). Table 4.5 shows the possible timing for the upgrade.

This scenario presents several challenges with respect to the rationalisation of accesses. Generally, at-grade intersections would be changed, where suitable, to seagull intersections and in some cases limited to left in / left out only with U-Turn facilities “downstream” to reduce conflict.

Private accesses would also be rationalised wherever possible. This would be achieved by the use of local access roads, partly constructed for the ultimate Class M configuration, to consolidate several accesses into one, or the provision of full local access roads where a cost benefit can be realised.

4.5.2 Class M Upgrade Scenario

The Class M (motorway) highway upgrade scenario would involve a four-lane (up to six lanes), 110 km/h posted speed, controlled access condition roadway with grade separated interchange access and local access roads.

Interchange locations would depend on which option is selected and further refinement of the preferred route. Integration with the existing interchange with the Oxley Highway to the south and the Kempsey to Eungai project to the north will be considered during the refinement of the preferred route.

As a result of the constrained condition of the corridor in some parts of the existing alignment, the retrofitting of local access roads to Class M from Class A may be difficult depending on the route option selected for the preferred route.

In order to achieve the 110 km/h design speed where the existing highway is being duplicated, a significant proportion of the existing alignment would require reconstruction.

4.5.3 Property Impact and Access Rationalisation Strategies

As noted above, private accesses will need to be rationalised where possible. Where private accesses are not rationalised onto a local access road in the Class A scenario, they will be altered to left in / left out with U-Turn facilities provided “downstream”.

The Class M scenario presents several challenges with respect to the rationalisation of accesses and the re-arrangement of access conditions. The spacing between grade separated interchanges is important to ensure that residents are not forced into long circuitous routes to gain access to their properties via local access roads.

4.5.4 Interchange / Intersection Location Strategies

The Oxley Highway grade separated interchange is located at the southern end of the study area. This interchange will be considered in the planning for the Oxley Highway to Kempsey project. Grade separated interchanges for a Class A scenario are possible in the vicinity of:

- ▶ South of Hastings River Drive; and
- ▶ Telegraph Point.

These grade separated interchanges are necessary as traffic predictions have shown that a seagull arrangement would operate unsatisfactorily at project opening. Therefore, if the project is initially constructed as a Class A scenario, the required grade separated interchanges would conform to a Class M scenario.

The location of interchanges should take into account the following:

- ▶ Spacing with other grade separated interchanges, particularly adjacent interchanges;
- ▶ The traffic generation catchment and the need to capture sufficient traffic to ensure cost effectiveness;
- ▶ Opportunities to support commercial development; and
- ▶ The potential for visual impact.

The Class A upgrade scenario would require a change of form on many of the side road intersections within the study area. For duplication, right turns from many side roads will not be allowed. Alternative arrangements would be provided, such as downstream U-Turn facilities.

The location of a proposed grade separated interchanges will be determined as part of the detailed investigations to be undertaken for the preferred route and during the concept design phase. The location of the existing interchange with the Oxley Highway to the south, connection to local road network and connectivity issues will all be considered in finalising the proposed grade separated interchange locations.

4.5.5 Pedestrian, Cyclist and Public Transport Provisions

Pedestrian access to the carriageways would not be provided for the Class M scenario. Separate pedestrian facilities would need to be provided where demand exists.

There are many bus stops located along the existing highway which would be rationalised. This may be achieved by providing bus stops on side roads with formalised intersections and U-Turn facilities, or through the provision of new local access roads. Provision for cyclists would be on the outer shoulder of each carriageway. These would need to be coordinated with cycleways proposed by Council.