**EDD / DE Report**

Project / Road name & no.

Location

SUBHEADING IF REQUIRED

Consultant / Designer (Logo if required)

Contact Details

TRIM No. (if applicable)

Month Year

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Document Control

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| **Owner** |  |
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Amendments

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# Introduction

This report applies to < State the Project Name and Road Name & no > and summarises the rationale behind the intention to deviate from standard design practice in the application of Normal Design Domain (NDD) design values and to use design values considered to fall within the Extended Design Domain (EDD) or Design Exception (DE) range. The report explains the reason for the proposed departure, the justification for the departure, the expected impacts and mitigation measures to address the impacts. A risk assessment is documented to show residual risk. Where the design values are considered DEs, the monitoring requirements are documented.

## Project Purpose

* Outline the project purpose and objectives. If this is a road safety project give a description of the issue(s) that the project aims to address.

# Basic Information

[The format of this report in sections 2 to 7 is based on the assumption that only one design element is being considered in the report. On larger projects where there may be any number of locations or design elements where EDD or DE design values are proposed to be used, the Designer may choose to repeat Sections 2 to 7 for each location or design element. Common information such as RAV Route designation, locality map, traffic volumes or traffic composition could be included up front.]

* State the location where Extended Design Domain (EDD) or Design Exception (DE) design values are to be used (SLK xxx to SLK xxx for existing roads) (Cha xxx to Cha xxx for new roads).
* Provide the RAV Route designation.
* Provide a location diagram or map (Appendix A).

## Traffic

### Speed

* State the posted speed limit.
* For existing roads, state the 85th percentile speed limit and provide supporting evidence in the Appendices (MetroCount data, or similar).
* For new roads state the expected operating speed and provide supporting data from similar roads.
* State the Design Speed that would be used under Normal Design Domain (NDD). If this is also the proposed Design Speed, state this. (Note, if the proposed Design Speed is less than the NDD Design Speed, this will be covered in Section 3.).

### Traffic Volumes

* State the existing traffic volumes (AADT or Peak Hour volumes).
* State the future AADT (10 year horizon) and the basis on which this was estimated.

### Composition of Traffic

* Sate the percentage heavy vehicles and give a breakdown of the vehicle classes (if available).
* Are drivers likely to be familiar with this road? State whether the road is part of a tourist route or whether a significant number of “Grey Nomads” or “vehicles towing caravans, trailers or boats” are expected on the route.

## Crash History

* For existing roads provide the most recent 5-year crash history at the relevant location. Provide details of:
* Crash type
* Location
* Time
* Severity
* Number
* For intersections provide a crash diagram.
* Provide insights into any trends or patterns.

# Design Element & design parameters

* State the design element(s) to which the EDD or DE design values apply.
* State the value(s) or range which would normally be applied to the design parameter(s) (NDD values) and the source. (eg. Guide to Road Design Part 3: Geometric Design, Austroads, 2016)
* State the minimum (or maximum, as applicable) value or range of the EDD / DE parameter(s) being considered and the source.
* State the value of the EDD / DE parameter being proposed.

[In the case of the application of EDD for Stopping Sight Distances (Section A,3 in Guide to Road Design Part 3: Geometric Design, Austroads, 2016) the Designer shall develop and justify the base case prior to applying the checking cases. The base case should be signed off by MRTE before applying the process to the check cases.]

[In the case of Design Speed, for EDD purposes, the adopted value should not be less than the Operating Speed, which is taken to be the 85th percentile speed of cars at a time when traffic volumes are low and drivers are free to choose the speed at which they travel. The adopted Design Speed shall be justified based on recorded speed data or speed profiles.]

# Explanation

## Why are EDD / DE values being proposed?

* Describe the reasons for the proposed use of EDD or DE design values.
* Describe the site constraints.
* Describe and, if possible, quantify the costs and impacts involved **with fully meeting NDD criteria**. Some costs, such as construction and right-of-way costs, are relatively easy to quantify. Social costs, such as impacts to communities or the natural environment, are more difficult to quantify but are still very important. Use tables, charts, and drawings as appropriate to illustrate and clarify the impacts. (e.g. for an isolated crest vertical curve on an existing road, it may be too costly to excavate through 10m of rock to achieve an acceptable K value. This could be illustrated using a profile drawing.)

## Alternative solutions

* Describe (any) other alternatives that were considered. If any of these alternatives are based on NDD values quantify the costs and impacts involved with fully meeting NDD criteria.

## Potential Impacts

* Discuss the potential impacts (of the proposed design) on any of the following aspects, as applicable:
* Health & Safety
* Transport Services, e.g. operational efficiency
* Financial (construction, additional land)
* Reputation & Trust (Political, Stakeholders and Community)
* Business or Project Operations
* Environmental
* Legal & Compliance

# mitigation

## Mitigation measures considered

* Describe the mitigation measures that were considered.

## Mitigation measures to be implemented

* Describe the mitigation measures that will be implemented. Include drawings if appropriate.

# Risk Assessment

* Document the risk assessment process, reiterating the EDD/DE parameters and the values used. **The focus of the initial assessment is on the use of EDD / DE design values before applying mitigation measures**. Comment on thevalue of the Risk Rating.
* Document the final step of the risk assessment process with the mitigation measures proposed to be implemented in place (residual risk). Comment on the value of the residual risk rating.
* Provide a copy of the Risk Assessment matrix in Appendix B. [A copy of the spreadsheet may be found in TRIM (D18#363243)].

# Supporting information

* For locations where an existing feature that does not meet criteria is being maintained and current crash data are available, quantify the substantive safety of the location and how it compares to similar facilities.
* If any research or other technical resources were consulted as part of the evaluation process, identify them.

# Monitoring and evaluation (de ONLY)

* For locations where a Design Exception is being proposed (including “trials” or “pilot projects”, the Designer should liaise with the Road Safety Branch (and Strategy Branch if Innovation & Research funding is being used) to develop a suitable monitoring program.
* Document the recommended monitoring that is to be used to determine whether any original problems have been dealt with in an “on-going’ manner.
* Document what issues should be reviewed immediately after completion of the site works (eg. vehicle speeds) and after 5 years in service (eg. crash data). Consider whether monitoring over a longer time frame (eg. 15 years) is also necessary.

# conclusion and recommendations

* This section should summarise what geometric elements have been reviewed, what standards are proposed and the mitigation measures to be applied.

# review and approval

This EDD / DE Report has been recommended, reviewed and approved in terms of Main Roads’ Delegation of Authority Manual.

## To be completed by RM, DMO, DSWO,BM or PD

The use of EDD / DE (delete not applicable) design values are recommended to be used on this project:

………………………….. ……………………….. ……………………… ……….

Name Signature Position Date

Comments:

## To be completed by MRTE, SES or MME

The use of EDD / DE (delete not applicable) design values have been reviewed by me and are recommended / not recommend (delete not applicable) for approval to be used on this project:

………………………….. ……………………….. ……………………… ……….

Name Signature Position Date

Comments:

## To be completed by EDPTS

The use of EDD / DE (delete not applicable) design values are approved / not approved (delete not applicable) be used on this project:

………………………….. ……………………….. ……………………… ……….

Name Signature Position Date

Comments:

# References and related Documents

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# Appendices

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| **Appendix A** | Locality Map |
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Appendix A: Locality Map

Appendix B: Risk Assessment Spreadsheet

[Risk Assessment Process for EDD & DE Design Values – Excel Spreadsheet](https://www.mainroads.wa.gov.au/Documents/Risk%20Assessment%20Process%20for%20EDD%20%5E26amp%5E3B%20DE%20Design%20Values%20-%20Excel%20Spreadsheet.RCN-D18%5E23363243.XLSX)