



### 3. The Upgrade Corridor



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### 3.1 Design Objectives

The decision to protect a high quality railway corridor that allows for up to four rail tracks and associated infrastructure and earthworks has been made for this study. A similar standard has been established for the adjoining Caboolture to Landsborough rail upgrade. This is to allow for future flexibility for additional tracks to be developed within the corridor, mitigating the need to acquire additional land in the future. This is a long term planning decision, to allow for a greater level of certainty in the longer term development of land use surrounding the corridor. It should also provide landowners affected by the corridor greater certainty about the future land requirements for the corridor.

Although the upgrade corridor will accommodate up to four rail tracks and associated infrastructure and earthworks, the Landsborough to Nambour Rail Project encompasses the construction of two (2) tracks and associated infrastructure. A similar standard has been established for the adjoining Caboolture to Landsborough rail upgrade.

Design standards relevant to the development of route options include the Queensland Rail *Civil Engineering Track Standards – Module 8 for New Construction*.

The following design standards have been established for the upgrade:

- A high speed alignment (i.e. 160 km/hr desirable, 80 km/hr absolute minimum in constrained areas)
- Design for two tracks, allow corridor for four tracks plus access roads for maintenance and emergency services at formation level
- Maximum grade 1 in 100 in both directions
- Grade separated road crossings
- Stations on straights
- Minimise property impacts
- Minimise environmental and social impacts
- Identify staging opportunities
- Identify potential sites for stabling and freight refuge/s
- Flood immunity for new railway construction suitable for a 100 year Average Recurrence Interval (ARI)
- Queensland Rail *Standard Track Formation Corridor Widths* (sheet 5 of 6, drawing no. 2571)
- Queensland Rail *Standard Clearances for Proposed Structures* (drawing no. 2461).

Generally a 60 m wide corridor will accommodate these requirements. However, in some places due to terrain or other infrastructure issues, a wider corridor may be needed, particularly where steeper cuttings or embankments, road overpasses, landscaping, or noise protection treatments are required.

The following elements are assumed for provision at stations:

- Extend station platforms to 150 m, with provision for further extension in the future if required
- Upgrade pedestrian and disabled access to comply with current standards and the *Disability Discrimination Act 1992* (including lifts and pedestrian overbridges)
- New station building
- Car park and access upgrades
- Station and car park lighting
- CCTV for station and car parks
- Emergency phone and communications
- Provision for interchange connectivity with other public transport modes.

### 3.2 Operational Considerations

Operational analysis was undertaken for a conceptual upgraded corridor, consideration both the duplicated track and eventual four track scenario. Key issues recommended for further review during the preliminary design include:

- Consider requirements for an additional turnout at Landsborough
- Consider provision of freight refuge for services travelling north of Nambour
- Understanding of the close linkages between stabling provisions, platform requirements, and optimised scheduling during peak services times for the lead up to and beyond 2026 for Nambour
- Consider provision of bidirectional signalling and crossovers to enhance operational flexibility
- Identify station and corridor layouts that can be easily upgraded in the future to accommodate the four track scenario
- Consider not only the infrastructure provision but also the supporting services, facilities and access necessary to be co-located with stabling facilities.

This work will be further considered during the preliminary design phase.