



Transport  
for NSW

Revitalising Newcastle

# Wickham Transport Interchange

Review of Environmental Factors - Summary

July 2014





# OVERVIEW

Transport for NSW has completed a Review of Environmental Factors (REF) to consider the potential benefits and impacts of the construction and operation of the Wickham Transport Interchange (the proposal). The REF has been prepared in accordance with the provisions of Part 5 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act) and will be used to assist Transport for NSW to determine whether to proceed with the implementation of the proposal. Feedback from the community and other key stakeholders received during the public exhibition of the REF will also be important to consider when making this determination.

This REF Summary provides an overview of the proposal and should be read in conjunction with the Wickham Transport Interchange REF.



## The need for change

Newcastle is the second biggest city in NSW and, by 2036, its city centre is expected to accommodate an additional 10,000 jobs and 6,000 homes.

In 2012, the NSW Government announced the *Newcastle Urban Renewal Strategy*, a 25 year plan to revitalise Newcastle, reinforce its role as a 21st century regional centre and provide a framework to create the jobs and homes needed by 2036.

The key issues and requirements for undertaking urban renewal in the Newcastle city centre have also been considered in the City of Newcastle Council's *Newcastle City Centre Plan* and the *Hunter Regional Transport Plan* prepared by Transport for NSW.

The *Newcastle Urban Renewal Strategy* identifies transport, access and connectivity as a guiding principle for the urban renewal of Newcastle.

One of the major renewal initiatives currently underway is Newcastle Light Rail which includes the delivery of a new transport interchange at Wickham. Together, these initiatives are set to revitalise Newcastle and are part of the *Newcastle Urban Renewal Transport Program*.

In summary, the program would:

- provide a new transport interchange at Wickham, which is a key area for renewal and future urban growth and development under the renewal strategies

- provide the opportunity to reconnect the city centre to the waterfront and make it easier to move around the city centre
- allow for the removal of the heavy rail line between Wickham and Newcastle stations, which would provide the foundation for introducing light rail to Newcastle.

## Vision

**“Newcastle will continue to grow and evolve to strengthen its position as the Hunter region’s capital. The city centre’s location and setting between the river and ocean make Newcastle a compact, people-friendly city with unique attributes.**

**Newcastle city centre will be a vibrant regional hub and attractive destination for businesses, residents and visitors, providing accessible and suitable employment opportunities, a choice of retail and other services, and local, national and international investment opportunities.”**

***Newcastle Urban Renewal Strategy, 2012***







Artist's impression of new transport interchange at Wickham (indicative only)

## The proposal

The proposal involves:

- constructing and operating a new station at Wickham, and a transport interchange for heavy rail, local buses, taxis and private vehicles (short term parking for passenger pick up and drop off) to the west of Stewart Avenue
- ceasing train services between Wickham and Newcastle stations
- providing for the introduction of light rail.

To continue operating the rail network to the west of Stewart Avenue, a number of modifications to existing rail infrastructure and services would also be required, including:

- terminating services on the Newcastle Branch Line at Hamilton Station for about two years during construction of the new transport interchange at Wickham
- constructing and operating a new train stabling yard to the north of Hamilton Station
- constructing and operating a new head shunt (third) rail track, about 700 metres long, between the Maitland Road overbridge and the new station at Wickham

- installing new rail crossovers and turnouts to facilitate the movement of trains between the three rail tracks
- making changes to roads in the vicinity of the new station and transport interchange at Wickham, ancillary infrastructure, including power supply, signalling and overhead wiring.

The boom gates and manually-controlled train signals at the level crossing on Stewart Avenue would be removed. Also, Railway Street would be closed and the level crossing would be removed.

The design of the transport interchange allows for the future provision of light rail. The Newcastle Light Rail project will be subject to a separate environmental impact assessment process and there will be further community consultation at this time. The key features of the proposal are shown in the map on page 6 overleaf.

## Construction timeframe

Construction of the proposal is forecast to start in late 2014. The proposal would take about 24 months to complete, and would be complete in late 2016.

## Replacement bus services

From 26 December 2014, all trains will terminate at Broadmeadow Station so that work can be done at Hamilton Station. During this time, shuttle buses will operate between Newcastle, Civic, Wickham, Hamilton and Broadmeadow stations.

During the construction period from early January 2015, trains would terminate at either Broadmeadow or Hamilton Stations. Rail replacement buses would enable customers to travel easily to Newcastle and other locations. Return bus services would be provided from the city centre stations to Broadmeadow and Hamilton. The interim bus arrangements will be reliable, convenient and quick for transport customers. The bus services would be timetabled to meet trains in both directions wherever possible. More information will be provided later in 2014.

When construction is complete, a shuttle bus route would operate between the new interchange at Wickham and the city centre, until the light rail is built.

There is no current plan to change existing public bus routes during construction.

### Environmental impact assessment

The first stage of the environmental impact assessment process involved preparing a preliminary environmental review report which included contamination, heritage and flora and fauna studies.

The second stage involved preparing the REF. The purpose of the REF is to provide information about the proposal and summarise the results of the environmental impact assessment. The REF has been prepared in close consultation with Transport for NSW, Urban Growth, technical advisors, government agencies and stakeholders. Input to the REF has included:

- specialist technical papers:
  - Technical Paper 1 – Traffic and transport assessment
  - Technical Paper 2 – Non-Aboriginal heritage impact assessment
  - Technical Paper 3 – Noise and vibration assessment
  - Technical Paper 4 – Socio-economic impact assessment
  - Technical Paper 5 – Visual and urban design assessment.
- desktop review of other information.

### Alternatives

A number of alternatives to the proposal were considered in a previous study. The study considered two distinct project elements:

- new station at Wickham and transport interchange
- stabling yard and track infrastructure.

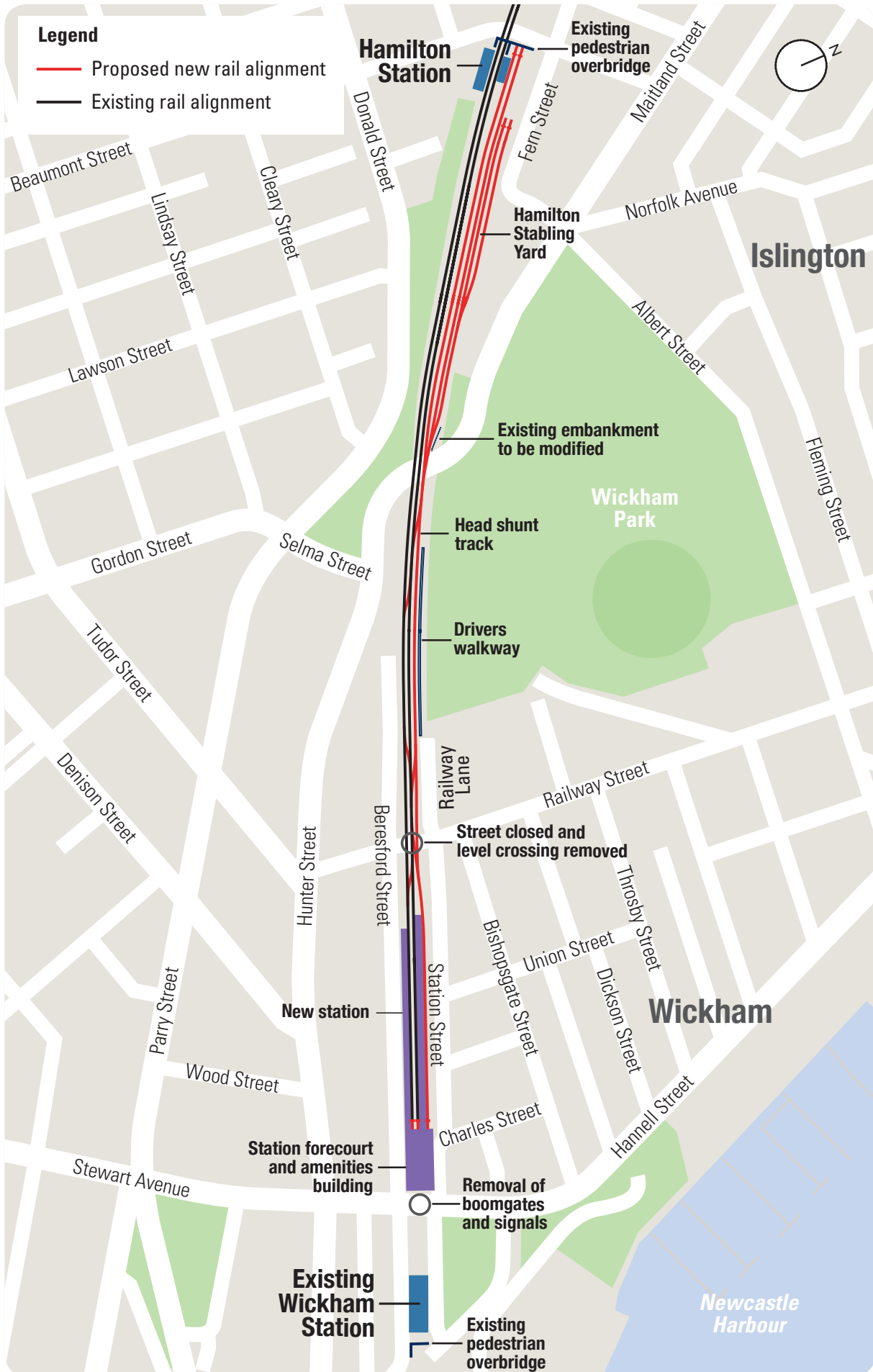
The location and general configuration of the new station at Wickham has been guided by:

- the availability of public land in the vicinity of the proposed rail termination point
- operational rail requirements
- the opportunity to remove the boom gates and signals on Stewart Avenue.

Four options for the station and interchange were developed and workshopped with key stakeholders. The preferred option, which forms the basis for the proposal, was selected as an outcome of these workshops.

A review of potential sites and layout options for the stabling yard was also undertaken. Five options were considered for the location of the facility. The preferred option was considered to perform best in relation to the key assessment criteria of operational flexibility and reliability.

**Key features of the proposal**





# COMMUNITY AND STAKEHOLDER CONSULTATION

Community and stakeholder consultation is being undertaken in two stages: during REF preparation; and in conjunction with the public display of the REF.

Consultation activities to date have included:

- stakeholder identification and analysis
- establish community contact and feedback mechanisms
- key stakeholder workshops
- station precinct and stabling location workshops
- meetings with the City of Newcastle Council.

## Key issues raised

Key issues raised by stakeholders during the preparation of the REF included:

- traffic, parking and access impacts
- ease of connectivity and integration with other transport modes
- noise impacts
- visual amenity impacts and opportunities to enhance the public domain
- impacts to listed heritage items
- potential impacts of the closure of the rail line on passengers, businesses and tourists.

Transport for NSW will continue to work closely with key stakeholders and the community to minimise any impacts.

## Current consultation

Formal consultation with stakeholders and the community is being undertaken in accordance with requirements of the Infrastructure State Environmental Planning Policy (SEPP) during the public display of the REF. Key engagement activities during the REF display period include advertisements, posters, community information sessions, stakeholder briefings, letterbox drops

and information at rail stations. The community and other stakeholders are invited to make written submissions to Transport for NSW on the Wickham Transport Interchange proposal.

Following the REF display, issues raised in the submissions will be summarised in a submissions report. Transport for NSW will consider the issues raised and may make changes to the proposal as a result. A determination will then be made whether to proceed with the proposal.

Transport for NSW will continue to liaise with key stakeholders and the community during detailed design development, construction, and operational phases of the proposal. This ongoing engagement process will play an important role in reducing the potential impacts and enhancing the benefits of the proposal for all stakeholders.



# SUMMARY OF THE KEY FINDINGS OF THE REF

## Traffic and transport

The study area is located within a busy and complex traffic and transport environment, with a large number of roads and a range of other transport facilities and infrastructure, including the railway, train stations, bus stops, pedestrian and cycle facilities.

The proposed removal of the boom gates and manually-controlled train signals on Stewart Avenue is expected to improve traffic flows, especially during peak periods. A survey conducted for the REF indicates that the existing boom gate closures result in a substantial interruption to traffic movements along Stewart Avenue. Movements are interrupted for 22 per cent and 19 per cent of the AM and PM peak hours respectively. The removal of the boom gates and train signals at Stewart Avenue would ease congestion created by the boomgate closures.

The proposal would result in a change in public transport conditions for train customers travelling to, from and within the area currently serviced by the Newcastle Branch Line. Heavy rail services would not operate east of Wickham Station, and customers wishing to travel to and from the Newcastle city centre would need to change transport modes to bus (and any future light rail system) at the new station at Wickham.

This would result in travel time increases for some rail customers, depending on their origin destination.

The Railway Street level crossing would need to be removed to construct and operate the proposal. As a result, the road would also be closed on both sides of the existing railway corridor. This would change access arrangements for vehicles, pedestrians and cyclists who currently use this crossing. Removing the level crossing would result in the diversion of traffic to other crossing locations.

However, the preliminary findings of the traffic and transport assessment indicates that the resulting impact on traffic conditions of closing the Railway Street level crossing is likely to be acceptable. This is because the existing volume of traffic using Railway Street is much less than the capacity of the Stewart Avenue crossing, and the proposed removal of the boom gates and signals at Stewart Avenue is expected to improve traffic flow. Detailed modelling of the traffic diverted from Railway Street is currently being undertaken to confirm these preliminary findings. The results of this modelling will be provided in the submissions report.

Construction traffic would be minimal, and would be unlikely to impact on traffic in the study area. Potential construction impacts would be mitigated and managed by implementing the mitigation measures identified in the REF, including a detailed traffic management plan.

Changes to some local roads in Wickham would be required to construct and operate the proposal. Traffic flow along some sections of Charles Street and Station Street would become one-way. The width of Station Street would need to be reduced to accommodate the proposal, which would result in the loss of up to about 75 on-street car parking spaces. However, there is considered to be sufficient parking in surrounding areas to accommodate this loss.

## Heritage

The heritage impact assessment identified that the following listed items, located within or in the immediate vicinity of the proposal site, have the potential to be impacted:

- Hamilton Railway Station Group/Hamilton Station Buildings and Signal Box
- Wickham Railway Station
- Former Newcastle Cooperative Store
- Sydney Junction Hotel
- Residence at 22 Maitland Road, Islington.





The Hamilton Railway Station Group is listed on the State Heritage Register and is located within the proposal site. The only work proposed within the curtilage of this item is minor track realignment. This would not impact any of the items that form part of the heritage listing, or the significance of the item.

The design of the new interchange at Wickham would take into account its location within the Newcastle City Centre Heritage Conservation Area.

Construction may result in vibration impacts to heritage items. Potential impacts would be minimised by adopting the recommended minimum offset distances for specified plant items, monitoring vibration levels at potentially affected structures where necessary, and responding appropriately to the results of monitoring.

Archaeological relics may be uncovered during the works. The potential for impacts on any unidentified relics or items would be minimised by the implementing the measures provided in the REF.

### Noise and vibration

The truncation of the heavy rail line at Wickham would result in a reduction in operational noise at receivers adjacent to the current heavy rail line between Wickham and Newcastle stations, benefitting residents and businesses in this area.

The results of the assessment of operational rail noise indicate that, without mitigation, noise levels from the stabling yard would exceed the operational noise criteria at the nearest residences. A more detailed assessment of noise mitigation strategies would be undertaken during the detailed design phase to ensure that acceptable noise levels would be achieved at the nearest residences.

The public address systems and mechanical plant at the new station at Wickham would be designed to comply with the operational noise criteria at the nearest residences.

Construction activities have the potential to exceed the construction noise criteria at residences closest to the proposal site. The potential significance of these impacts would be managed by implementing the measures provided in Transport for NSW's *Construction Noise Strategy*, where feasible and reasonable. The construction noise impacts would be short-term and temporary, and limited to the duration of the construction period.

The potential impacts of construction vibration were assessed, and offset distances for plant and equipment causing high vibration levels are provided to minimise the potential for significant vibration impacts.

## Air quality

The proposal would result in diesel trains ceasing to operate between Hamilton and Newcastle stations during construction, and between the new station at Wickham and Newcastle Station during operation. The removal of these emissions would improve air quality in these areas.

The potential for adverse air quality impacts during operation would be associated with the movement and layover of diesel trains at the new station at Wickham and the stabling yard. The proposal is not likely to result in impacts on local air quality for the following reasons:

- there would be no increase in the number of diesel trains compared to the existing situation
- the same types of locomotives would be used
- only electric trains would be stabled overnight at the proposed stabling yard
- the prevailing winds are primarily from the north-west, which would assist in dispersing locomotive emissions away from the nearest sensitive receivers.

The generation of dust during construction would be managed by implementing the air quality management controls specified in the Construction Environmental Management Plan. During construction, the clearance of ground vegetation would be minimised to reduce the potential for airborne dust impacts.

## Socio-economic impacts

The proposal is likely to result in the following socio-economic benefits:

- long term benefits for some businesses in the vicinity of the new station at Wickham, which may experience increases in patronage as a result of people using the new station and interchange
- future growth and investment in the Wickham area generated by the new interchange and station facilities

- revitalisation of the city centre by providing opportunities for better connections to the waterfront and through the city centre
- increase in customers for businesses in the vicinity of the proposal site and at Broadmeadow and Hamilton stations during construction
- employment for up to 150 people in peak periods during construction.

The proposal may result in the following main socio-economic impacts:

- changes to public transport access within the study area during and following construction
- travel time increases for train customers wishing to travel to the Newcastle city centre.

Management measures are provided in the REF to minimise the impacts of the proposal. A number of measures to enhance the customer experience of the proposal are also outlined including working to provide a seamless interchange to customers.

## Urban design and visual amenity

The existing visual environment is characterised by its highly developed urban nature which includes a range of built form, paved areas and transport infrastructure.

The design of the new station and associated facilities provides an opportunity to reinforce and enhance the role of the Wickham area in the city centre urban renewal process. The design would continue to be refined during future design phases. The final design of the station and associated facilities would take into account all relevant considerations, including its future role as a gateway to the Newcastle city centre, heritage, urban design and visual impacts.

The proposal would generate temporary visual impacts during construction. Impacts would be experienced in the vicinity of work sites. Visible elements would include machinery and equipment, waste materials and the structures being constructed.



## Sustainability

A sustainability assessment of the proposal was undertaken in accordance with Transport for NSW's *NSW Sustainable Design Guidelines*. The results of the assessment indicate that a silver rating should be achievable for the proposal, and it may also be possible to achieve a gold rating by incorporating additional discretionary measures subject to further investigation. The sustainability assessment would be updated as the proposal progresses.

A greenhouse gas and carbon footprint assessment would be undertaken during the detailed design stage, in accordance with Transport for NSW's *Greenhouse Gas Inventory Guide for Construction Projects* and the *NSW Sustainable Design Guidelines*. This assessment would evaluate the sources of greenhouse gas emissions during the construction and operation phases.

## Other issues

In addition to the above, a range of other environmental issues were also considered to develop a comprehensive environmental management framework for the proposal. These

issues included water quality and flooding, soils, contamination and hazardous materials, flora and fauna, Aboriginal heritage, cumulative impacts, and infrastructure impacts. These impacts would be managed by the implementation of appropriate environmental management measures included in the Construction Environmental Management Plan for the proposal.



## Next steps

During the public display period, stakeholders and the community are encouraged to make submissions to Transport for NSW in relation to the proposal. Following the display period, Transport for NSW will consider the issues raised in submissions and will respond to community feedback in a submissions report. Transport for NSW will then determine whether to proceed with the proposal. If the proposal proceeds, it would be undertaken in accordance with the mitigation measures proposed in the REF, the submissions report, and any conditions that form part of the determination.

## For more information

Call: **Project Infoline 1800 684 490**

Email: **[projects@transport.nsw.gov.au](mailto:projects@transport.nsw.gov.au)**

Visit: **[www.transport.nsw.gov.au/projects](http://www.transport.nsw.gov.au/projects)**  
**[haveyoursay.nsw.gov.au](http://haveyoursay.nsw.gov.au)**

