

22. CULTURAL AND HERITAGE

22.1 Introduction

This section presents the findings of an assessment of potential impacts to cultural and heritage resources arising from the construction and operation of the Eastern Access Road.

22.2 Potential Sources of Impact

Both temporary and permanent landtake may result in damage to, or loss of, archaeological remains and deposits. Additionally, historic buildings may be displaced or standing archaeological monuments and the physical coherence of historic landscapes irreversibly compromised.

Severance and “islanding” may also result from permanent landtake required for the EAR and the West Rail alignment and from associated permanent or temporary features or landtake required during the construction phase to accommodate construction activities. Areas of historic and cultural interest may be severed, thereby altering or destroying their integrity.

Ground compaction due to construction activities or the weight of permanent embankments may cause damage or distortion to buried archaeological remains, especially in soft alluvial deposits.

Visual and noise intrusion on the setting and amenity of historic and cultural resources may occur where the route passes close to historic buildings, gravesites, archaeological sites and monuments and culturally or historically significant landscape features.

22.3 Cultural & Heritage Resources

The location of potential sites of cultural and heritage significance in the Kam Tin Valley has been evaluated in the West Rail Final Assessment Report. In addition, the alignment of the Eastern Access Road was surveyed by a specialist heritage team and no buildings or structures of historical or cultural importance have been identified within 300 metres of the EAR alignment.

Desk-top literature review has indicated that no known archaeological sites will be directly affected by the EAR or indeed the West Rail Phase I alignment. However, as part of the West Rail EIA Study, a series of maps of archaeological potential were prepared which assigned a low to medium potential to the Kam Tin River floodplain. The West Rail predictive model of archaeological potential has subsequently been tested through field evaluations which included the excavation of a series of evaluation trenches on the valleyfloor during May - June 1999 (ERM, in preparation).

Although radiocarbon determination are yet to be reported, the field evaluations revealed pottery covering periods from the late Bronze Age/early Iron Age (c. 1,000 - 220 BC) to the Qing dynasty (c. 1644-1911). In the historic period, the quantities of Southern Song (c. 1127-1279AD)

pottery and roof tiles suggested that some settlement was taking place in the Kam Tin valley during that period.

In addition to the historic material recovered during the field evaluations, several large fragments of 'net impressed' pottery, identified as dating from the South Coastal China late Bronze Age (c. 1,500 - 221BC) indicating utilisation of the area (though not necessarily permanent settlement) by prehistoric communities.

The desk-top research and field evaluations undertaken by the Study Team in the Kam Tin Valley have confirmed the archaeological potential of the EAR alignment. Ideally, this assessment would be tested by field evaluation to confirm the presence of similar stratigraphic features as has been observed in field evaluations in Kam Tin that have produced archaeological deposits. However, attempts to gain access to land in the Kam Tin valley for the purposes of archaeological evaluation have proved problematic. Repeated approaches to individual tenant farmers, landowners and village representatives failed to allow archaeologists to access the nearby West Rail alignment until resumption of land, and the resolution of all associated compensatory disputes, had been completed. This practical limitation has informed the Study Team's recommendation that field evaluation be undertaken following the resumption of land.

22.4 Prediction and Evaluation of Impacts

No buildings or structures of known historical or cultural interest or archaeological resources are to be directly impacted by the construction and operation of the EAR.

The results of the West Rail Archaeological Field Evaluations indicate that the EAR alignment is likely to disturb historic, and possibly, prehistoric archaeological deposits. It is recommended, therefore, that data gathered as part of subsequent engineering/geotechnical investigations be examined in order to determine the geological deposition of alluvium deposits and, thereby, determine areas of particular potential for revealing archaeological deposits. If such engineering/geotechnical investigations are not required during the detailed design phase then it is recommended that a series of trial pits and/or auger investigations are undertaken, following gazettal of the land, to identify areas of archaeological potential for further field evaluation.

The trial pit excavations outlined above will form a basis for determining the need for further field evaluation in advance of the construction works. If field evaluation works are required, these will be advanced through the development (in consultation with the AMO) of a specification and programme for field evaluation, in the form of a Field Evaluation Project Design.

The Field Evaluation Project Design will identify the areas to be investigated and will produce field evaluation protocols determining the sampling technique (for example, test pit or trench), the sample rationale to be applied (numbers of required evaluation trenches; dimensions of trenches, sampling grid, etc.) and the site record forms to be used during the field evaluations. The evaluation protocols would be produced with reference to those established in Hong Kong and would be compatible with the best field practice and data capture requirements of the AMO.

The results of the Field Evaluations would form the basis for the development of an archaeological action plan detailing the measures (if any) to be adopted to provide appropriate mitigation of the impacts to buried archaeology. Although there are no standard criteria against which to assess the severity of impacts to cultural heritage, the appropriate actions will be defined and recommended based upon the following factors:

- The proportion of the feature affected and whether its key characteristics would be affected by the EAR works;
- A consideration of the type, survival or condition, fragility or vulnerability, potential and amenity value of the feature affected, and
- Guidelines or criteria on noise, visual intrusion, etc. either in general or site specific terms, provided by other West Rail specialist teams.

The adopted of mitigation measures might include the minimisation of ground disturbance in archaeologically sensitive areas, excavation in advance of construction and the provision of a watching brief during construction.

22.5 Recommended Mitigation

Due to access difficulty, following the gazettal of the alignment of the EAR, and in advance of the construction works, it is recommended that archaeological field evaluation is undertaken to determine the presence and preservation of buried archaeological deposits. The field evaluation will be undertaken to a Field Evaluation Project Design to be submitted to the Antiquities & Monuments Office for approval. The findings of the field evaluation will determine the need for further mitigation of impacts to archaeological resources.

In addition, general good site practice will be established and maintained during the construction phase, and site staff should be formally informed of the legal requirement governing any finds of potential archaeological significance uncovered during construction works. The field evaluation will comprise the excavation of trenches along the alignment such that a minimum of 5% of undisturbed impacted land is sampled. Areas disturbed through the construction of modern developments are unlikely to allow for the survival of archaeological deposits.

If during the field evaluation significant archaeological remains (as determined through consultations with the AMO) are revealed appropriate measures will be adopted. Such measures may range from the full excavation of identified features to the redesign or realignment of the EAR.

22.6 Conclusions

No known archaeological, heritage or cultural resources are present in the EAR study area; however, field evaluation of the EAR alignment is required to determine the presence and state of preservation of buried archaeological deposits. The findings of the field evaluation will determine the need for further mitigation of impacts to archaeological resources.

Table 22.5a Summary of Recommended Mitigation Measures During Construction and Operation of the Project

Phase	Recommended Mitigation Measures
Construction Phase	Review of data gathered as part of subsequent engineering/geotechnical investigations in order to confirm the archaeological potential of the area or undertake trial pits to gather appropriate depositional information. Subsequently, undertake field evaluation of the road alignment to determine the presence and preservation of buried archaeological deposits and to determine the need for further mitigation measures.
Operational Phase	None required.