

LANDSCAPING Access for Maintenance Activities

Issue

Increasing traffic capacity by adding running lanes without acquiring additional land frequently restricts the space available for drainage earthworks, verge infrastructure etc. This can be exacerbated by dense landscape planting with no surrounding spaces. Typically, design solutions include steepening of earthworks slopes and/or a reduction in verge or berm widths which may compromise safety for maintenance operatives, and the safety of road users standing away from the verge after an incident whilst awaiting emergency services.

Mitigation

Design

The preferred solution would be to obtain additional land by agreement, avoiding the need for statutory orders that can significantly delay scheme implementation. Frequently this will not be feasible because of the adjacent land use and occupation. Alternatively, a detailed assessment of the spatial requirements for operations and maintenance access to assets in the affected area should be carried out and an outline boundary established to limit any proposed landscaping, allowing for growth.

Construction

Once construction is underway the options can become greatly reduced. However, opportunities should be taken to liaise with the contractor on potential improvements that can delver value for money when weighed against varying the works.

Maintenance / Operations

The most practical solution would be to reduce the landscape planting areas to provide more access space for routine and emergency maintenance operations. Even then, It may still be challenging to provide access from the carriageway if there are substantial differences in level. In some cases, it might be considered sufficiently hazardous, e.g. in order to deal with chemical spillages into highways drainage, to warrant investigating alternative permanent access via an adjacent side road, or from a landowner's track through a formal agreement.

LINK

HEi Alert 136 – Tree clearance incident

Alternative

Materials

Reduced

Plant

Alternative

Plant

Material

Reduction



LEAN

Please submit examples of similar issues or best practice to the Whole Life Design Group at andrew.finch@jacobs.com for consideration for incorporating and dissemination to designers

Reduced

Land

Reduced

Labour

Reduced

Transport

ation



Case Study

The examples in these two photographs show how, despite the embankments having been steepened, there has been negligible residual width provided for landscaping. Whilst a design solution may appear to be acceptable when first planted, as shown in the photo below, within a few years the situation can be very different when planting matures, as above.



Significant Risks

Activity / Incident	Risk	Persons Affected	Likelihood / Severity
Emergency breakdowns	No available off- road space for personal refuge	Road users	L: Medium S: High
Access for inspection and maintenance	Trapped or isolated in confined areas	O&M personnel	L: Low S: Medium
Access for inspection and maintenance	Struck by plant in restricted work area	O&M personnel	L: Medium S: High

Improved

end user

benefits

Reduced

Activity

Duration

Reduced

Defects

Reduced

Reportable

v.2