

# Building Act - Protection Work Notice

## Submission Checklist

If your Building Surveyor has determined the Department of Transport and Planning (the Head, Transport for Victoria) is an adjoining owner on the Determination that Protection Work is Required (Form 6), you must provide the following information:

- Determination that Protection Work is Required (Form 6)
- Protection Work Notice (Form 7)
- Allotment plan in accordance with r25(1)(d) of the *Building Regulations 2018*
- Contract of insurance in accordance with s93 of the *Building Act 1993*. You may arrange the amount of insurance without our involvement; however, we reserve the right to require an increase of the amount if the amount arranged by you is considered unsatisfactory.
- Dilapidation survey in accordance with s94 of the *Building Act 1993*. The dilapidation survey report must cover all road assets (pavement, kerb, footpath, signs, trees, signal and light poles, etc) within the zone of influence of dewatering and excavation or above the temporary ground anchors, whichever is greater. The dilapidation survey report must include all of the following:
  - a) a plan showing all road assets
  - b) labelled overview photos taken at maximum 20 m intervals
  - c) labelled photos of all existing defectsOR
  - d) continuous video footage at maximum 10 m wide passes
  - e) a plan of the path followed during video footage collection.

You may prepare the dilapidation survey report without our involvement; however, we reserve the right to undertake a joint dilapidation survey if the dilapidation survey report provided for review is considered unsatisfactory
- Plans, drawings and specifications in accordance with s92 of the *Building Act 1993* that detail how protection work will protect the adjoining road reserve as described below (further guidance provided below).

a completed copy of this checklist indicating all the below have been addressed or providing statements of clarification where not relevant.

The below sections provide the typical details required for each type of protection work (retention, demolition, gantries, hording, cranes), most sites will include more than one type of protection works.

### RETAINING WALLS AND EXCAVATION RETENTION SYSTEMS:

If any items are not applicable, a brief justification must be provided for our assessment. Situations where items may not be applicable include low retaining walls adjacent to grassed road reserves, retention systems set back from the road reserve, etc.

#### 1. Geotechnical investigation information:

- a) the results of a geotechnical site investigation and laboratory testing undertaken in accordance with AS 1289, AS 1726 and AS 4133
- b) the geotechnical model used for design of protection work prepared in accordance with AS 1726
- c) where the materials encountered by the geotechnical site investigation include distinctly weathered or better sedimentary rock, the bedding dip and dip direction and joint sets must be identified and included in the geotechnical model
- d) an explanation of the source of the design value for each material parameter adopted for the geotechnical model e.g. laboratory testing results, published information (including reference)
- e) an explanation of the source of the design groundwater level/s adopted for the geotechnical model.
- f) the loads and load combinations adopted for design of protection work prepared in accordance with AS 1141
- g) an explanation of the determination of the design structural strength of protection work prepared in accordance with the relevant Australian Standards

To reduce the costs associated with the Departments assessment of an application we encourage inclusion of

- h) an explanation of the determination of the design geotechnical strength of protection work prepared in accordance with AS 4678

## 2. Design reports & calculations

- a) the geotechnical design parameters adopted based on the information from geotechnical report and justified by the designer
- b) the supporting design of the retention piles/retention system and loads
- c) the supporting design of the temporary ground anchors and loads
- d) include the design calculations/software outputs
- e) estimated settlement/retaining wall deflection. I.e. explanation of the expected horizontal and vertical displacement at the ground surface within the zone of influence of excavation or above the temporary ground anchors. Note that the Departments deflections limits for adjacent walls are specified in Bridge Technical Note 023, as published on our website.
- f) If required design and recommendations for dewatering including the target reduced level, the dewatering methodology, extent of drawdown – zone of influence, the expected volume of discharge, modelled settlement resulting from dewatering and the expected recharge duration after cessation of dewatering. A specialised consultant may be required to provide this information.

## 3. Construction drawings:

- a) the pile type/s, loads, materials and their properties, numbers, locations and lengths above and below the excavation.
- b) if the piles are not contiguous, the type/s, materials and their properties and locations of all infills e.g. shotcrete, and any walers
- c) the temporary ground anchor type/s, loads, materials and their properties, numbers, locations, lengths (free and bonded) and orientations
- d) the temporary ground anchor testing types, methods, frequencies and test loads
- e) the details of connections between piles, temporary ground anchors and any walers
- f) staging of pile construction, excavation and temporary ground anchor installation

- g) the method of dewatering e.g. dewatering wells, temporary or permanent, sumps etc. and any dewatering infrastructure to be installed inside the road reserve and demonstrate no adverse impacts due to associated settlements.
- h) if a drained basement design with continuous groundwater collection and extraction has been adopted as a permanent solution, a copy of all the necessary approvals must be submitted

## 4. Certificate of compliance:

- a) a *Building Regulations 2018* r126 certificate of compliance for protection work signed by an independent engineer who **DID NOT** prepare the design and who is a Registered Building Practitioner in the category of engineer, class of engineer (civil).
- b) all documents referenced in certificate of compliance must be supplied and should be marked issued for construction.
- c) The revisions, issue date and other details of the documents referenced on the certificate of compliance must match those of the supplied documents.

## 5. Utility information:

- a) a plan showing all utilities located within the zone of influence of dewatering and excavation or above or below any temporary ground anchors, whichever is greater, including owner, type, size and materials used for construction
- b) for utilities identified as sensitive receptors, evidence that the utility owners have been contacted and asked to nominate a maximum permissible ground deflection and maximum permissible ground vibration within the vicinity of their assets. Sensitive receptors include, but are not limited to:
  - utilities which carry gas or fluid that are  $\geq 300$  mm diameter
  - utilities constructed from cast iron, wrought iron, vitrified clay or masonry
  - registered pipelines as defined by the *Pipelines Act 2005*.
  - Tram lines.

A copy of an email to the utility owner is sufficient evidence or a permit, and it is noted that a response from utility owners may not be forthcoming.

## 6. Instrumentation and monitoring plan:

- a) what: e.g. survey monitoring, inclinometers, piezometers
- b) where: e.g. survey points on capping beam at 5 m intervals
- c) when: baseline and subsequent monitoring will be undertaken e.g. baseline undertaken before any excavation commences, subsequent monitoring undertaken twice weekly until temporary ground anchors are destressed.
- d) thresholds: e.g. maximum horizontal displacement of 20 mm measured from survey monitoring
- e) alarm procedure: e.g. green alarm = monitoring results are within 80% of threshold, continue construction with increased monitoring frequency; amber alarm = monitoring results are within 95% of threshold, notify VicRoads, VicRoads may impose conditions on further construction; red alarm = monitoring results have exceeded threshold, cease construction and notify VicRoads, construction not to recommence without VicRoads' approval.
- f) who: the person responsible for setting thresholds, monitoring instrumentation, determining if a threshold has been reached and enacting the alarm procedure
- g) delay: the expected delay between a threshold being reached and the alarm procedure being enacted.

## HOARDINGS, SCREENS AND OTHER PERIMETER PROTECTIONS OUTSIDE THE ROAD RESERVE:

- Supply drawings showing arrangement, indicating location and type.
- Supporting design.

## CRANES THAT SWING OVER THE ROAD RESERVE:

- Supply Construction drawing indicating location, type, swing range and foundation including required founding material and method of verification.
- Details of the crane loadings applied to the foundation for the proposed crane type.

- Supply supporting design for foundations including the geotechnical profile and design parameters adopted.
- Worksafe – notice of plant design registration or interstate equivalent.

## GANTRIES AND SCAFFOLDS IN THE ROAD

**RESERVE:** All of the following items.

### 1. Structural information:

- a) the loads and load combinations adopted for design of protection work prepared in accordance with AS 1141
- b) an explanation of the determination of the design structural strength of protection work prepared in accordance with the relevant Australian Standards.

### 2. Construction drawings:

- a) the location, type and dimensions
- b) the component materials and properties,
- c) the details of connections between components.
- d) Foundation requirements including required founding material and method of verification.

### 3. Certificate of compliance:

- a) a *Building Regulations 2018* r126 certificate of compliance for protection work signed by an independent engineer who **DID NOT** prepare the design and who is a Registered Building Practitioner in the category of engineer, class of engineer (civil).

## DEMOLITION OF EXISTING BASEMENT:

### 1. Geotechnical investigation information:

- a) the results of a geotechnical site investigation and laboratory testing undertaken in accordance with AS 1289, AS 1726 and AS 4133
- b) the geotechnical model used for design of protection work prepared in accordance with AS 1726
- c) where the materials encountered by the geotechnical site investigation include distinctly weathered or better sedimentary rock, the bedding dip and dip direction and joint sets must be identified and included in the geotechnical model
- d) an explanation of the source of the design value for each material parameter adopted for the



geotechnical model e.g. laboratory testing results, published information (including reference)

- e) an explanation of the source of the design groundwater level/s adopted for the geotechnical model.
- f) the loads and load combinations adopted for design of protection work prepared in accordance with AS 1141
- g) an explanation of the determination of the design structural strength of protection work prepared in accordance with the relevant Australian Standards
- h) an explanation of the determination of the design geotechnical strength of protection work prepared in accordance with AS 4678

## 2. Design reports & calculations

- a) the geotechnical design parameters adopted based on the information from geotechnical report and justified by the designer.
- b) the supporting design for the demolition works.
- c) the supporting design for any temporary supports.
- d) include the design calculations/software outputs.
- e) demolition and construction sequence.

## 3. Demolition drawings:

- a) layout of the temporary works to support demolition.
- b) demolition and construction/ remediation sequence/ staging.
- c) the temporary supports including type/s, loads, materials and their properties, numbers, locations. Where anchors are to be used their loading, testing, lengths (free and bonded) and orientations
- d) the details of connections between temporary supports and wall
- f) the method of dewatering if tanked e.g. dewatering wells, temporary or permanent, sumps etc. and any dewatering infrastructure to be installed inside the road reserve and demonstrate no adverse impacts due to associated settlements.

## 4. Certificate of compliance:

- a) a *Building Regulations 2018* r126 certificate of compliance for protection work signed by an independent engineer who **DID NOT** prepare the design and who is a Registered Building Practitioner in the category of engineer, class of engineer (civil).
- b) all documents referenced in certificate of compliance must be supplied and should be marked issued for construction.
- c) The revisions, issue date and other details of the documents referenced on the certificate of compliance must match those of the supplied documents.

## 5. Instrumentation and monitoring plan:

- a) what: e.g. survey monitoring, inclinometers, piezometers
- b) where: e.g. survey points on capping beam at 5 m intervals
- c) when: baseline and subsequent monitoring will be undertaken e.g. baseline undertaken before any excavation commences, subsequent monitoring undertaken twice weekly until temporary ground anchors are destressed.
- d) thresholds: e.g. maximum horizontal displacement of 20 mm measured from survey monitoring
- e) alarm procedure: e.g. green alarm = monitoring results are within 80% of threshold, continue construction with increased monitoring frequency; amber alarm = monitoring results are within 95% of threshold, notify VicRoads, VicRoads may impose conditions on further construction; red alarm = monitoring results have exceeded threshold, cease construction and notify VicRoads, construction not to recommence without VicRoads' approval.
- f) who: the person responsible for setting thresholds, monitoring instrumentation, determining if a threshold has been reached and enacting the alarm procedure
- g) delay: the expected delay between a threshold being reached and the alarm procedure being enacted.

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### Need more information?

Find out more about the government's initiatives at [dtp.vic.gov.au](http://dtp.vic.gov.au)