

## Low risk sites

Low risk sites are defined as sites with a disturbance area below <2,500m<sup>2</sup> and do not have any of the risk factors described in Table 1.

The 'standard conditions of approval for low risk sites' should be applied to these sites.

## Standard conditions of approval for low risk sites

The following conditions must be applied to low risk sites.

1. An erosion and sediment control plan must be prepared and kept on site at all times and provide to Council upon request.
2. Minimise onsite erosion and the release of sediment or sediment-laden stormwater from the site at all times by implementing industry best practice for erosion and sediment control (ESC), as per the International Erosion Control Association (IECA) *Best Practice Erosion and Sediment Control (IECA BPESC)* (latest version), and the Water by Design *ESC for House Sites* factsheets (<https://waterbydesign.com.au/esc-house>), including but not limited to:
  - a) Drainage control measures must be implemented and maintained to minimise water flow across areas of exposed earth.
  - b) Erosion and sediment control measures must be implemented and maintained to prevent soil loss from earth disturbance areas and prevent deposition beyond earth disturbance areas.
  - c) No release of contaminants to land beyond onsite area of earth disturbance, unless all reasonable and practicable measures have been implemented, as per the best practice guidelines.

This condition applies from the time land disturbance first occurs until all exposed soil areas are permanently stabilised against erosion, for all works associated with this development permit.

## Medium to high risk sites

Medium and high risk sites are defined as sites with disturbance areas above >2,500m<sup>2</sup>, and/or have any of the risk factors listed in Table 1.

The 'standard conditions of approval for medium to high risk sites' should be applied to these sites.

**Table 1.** Environmental risk factors.

Environmental risk factors	Applies Y/N	Additional actions to address risk (In addition to complying with medium to high risk conditions)
Disturbance within a waterway, waterway corridor, riparian zone, and/or within a waterways and wetlands overlay.		<p>Ensure relevant aspects of the waterways and wetlands code are considered and addressed in the ESC plan.</p> <p>Ensure the ESC plan considers and addresses risks to waterways and wetlands.</p>
Disturbance within the steep and unstable lands overlay, or if there is any slope in the area of land disturbance before, during or after construction that is steeper than 15%.		<p>Ensure relevant aspects of the steep and unstable lands code are considered and addressed in the ESC plan.</p> <p>Ensure the ESC plan considers and addresses the risks posed by steep and unstable lands.</p>
Disturbance below 5 m AHD, disturbance of potential acid sulphate soils, and/or within the potential acid sulphate soils overlay.		<p>Ensure relevant aspects of the acid sulphate soils code are considered and addressed in the ESC plan.</p> <p>Provide an acid sulphate soil management plan and ensure risks from acid sulphate soils are considered and addressed in the ESC plan.</p>
Disturbance of dispersive soils.		<p>Ensure relevant aspects of the dispersive soils code are considered and addressed in the ESC plan.</p> <p>Provide a dispersive soils management plan and ensure risks from dispersive soils are considered and addressed in the ESC plan.</p>
Disturbance of groundwater.		<p>Provide a groundwater and/or dewatering management plan and ensure impacts to groundwater and dewatering of groundwater are considered and addressed in the ESC plan.</p>
Other risks as deemed by Council.		<p>Address risks as identified by Council.</p>

## Standard conditions of approval for medium to high risk sites

### 1 General

- 1.1 The following conditions apply to medium to high risks sites, that are under an Operational Works (OPW) application or Material Change for Use (MCU) or Reconfiguration (REC) approvals where there is no subsequent OPW but land disturbance will result.
- 1.2 Unless stated otherwise, the following ESC conditions apply on commencement of any earth-disturbing activities and until all exposed soil areas are permanently stabilised against erosion.

### 2 Erosion and sediment control plan

- 2.1 A detailed 'for construction' Erosion and Sediment Control (ESC) plan and accompanying documentation (including the ESC plan checklist and design certificate), must be provided to Council's Delegate at least ten (10) business days prior to the onsite pre-start meeting or prior to any works associated with this development permit commencing if no pre-start meeting is required.
- 2.2 For medium to high risk sites, a detailed ESC plan must be prepared by a suitably qualified person in ESC, such as a Certified Professional in ESC (CPESC), or a similar qualification, for example someone who has undertaken an advanced course in ESC and has a minimum three (3) years' experience in the planning of ESC which can be verified by an independent third party. (Refer to Advice note 1).
- 2.3 Where engineering structures, either temporary or permanent, such as basins, inlets, outlets and spillways, form part of an ESC plan, the design and inspection of such structures must be undertaken and certified by a Registered Professional Engineer of Queensland (RPEQ).
- 2.4 A separate ESC plan is required for each phase of the development including site clearing, bulk earthworks, civil construction, installation of services and final stabilisation.
- 2.5 The ESC plan must have all the relevant elements contained within the ESC plan checklist. The checklist must be completed and accompany the ESC plan when submitted to Council. A design certificate must be completed and signed by the ESC plan developer in the approved form and accompany the ESC plan when submitted to Council.

### 3 Erosion and sediment controls

#### 3.1 General

- 3.1.1 Prescribed water contaminants (as defined in the *Environmental Protection Act 1994* (Qld)) must not be released from the site or to waters within the site, or be likely to be released should rainfall occur, unless all reasonable and practicable measures are taken to prevent or minimise the release and concentration of contamination. This condition applies from the time that land is first disturbed for any works associated with this development permit, until all exposed soil areas are permanently stabilised against erosion. These measures must be designed, implemented and maintained in accordance with IECA *BPESC* (latest version), to the extent that such measures and practices are also consistent with the following conditions.

#### 3.2 Minimise erosion

- 3.2.1 Initial erosion and sediment controls must be implemented prior to commencement of land clearing and land disturbance activities. Until initial controls are in place, land disturbance activities may only occur to the extent necessary to install those controls.
- 3.2.2 Restrict the extent of clearing and soil disturbance to that necessary for safe access and construction of approved works. Any areas not actively worked must be left undisturbed and/or immediately stabilised.

- 3.2.3 The duration of soil exposure is to be minimised by:
- a) Only clearing vegetation to an extent where earthworks will commence in that part of the land within 4 weeks of the clearing taking place. Vegetation must be protected in all unworked areas of the site.
  - b) Stage the works to minimise the area of soil exposed at any one time. Soil disturbances must be staged into manageable sized areas of no greater than ten (10) hectares to ensure adequate ESC management and progressive stabilisation of disturbed surfaces.
  - c) Effectively stabilise cleared areas if works are suspended for a period exceeding 10 days.
  - d) Effectively stabilise steep areas, such as slopes, stockpiles, embankments, batters and bunds which are not being actively worked for a period exceeding 10 days.
  - e) Effectively stabilise all permanent and temporary open drains immediately upon construction, including the base and the full width and length of the drainage channel.
  - f) Effectively stabilise all areas at finished level within 10 days of completion and prior to rainfall.

For the purpose of this condition, an effectively stabilised surface is defined as one that, as a result of rainfall and stormwater runoff, does not erode, does not cause sedimentation and does not cause water contamination.

For the purpose of this condition, "prior to rainfall" is where the Bureau of Meteorology 5-day forecast indicates a 50% or greater chance of rainfall occurring with a predicted total of 20mm or more over the 5-day period.

- 3.2.4 Prior to plan sealing of the survey plan for the development, all site surfaces are to be effectively stabilised using methods that will continue to achieve effective stabilisation in the medium to long term. For the purpose of this condition, an effectively stabilised surface is defined as one that, as a result of rainfall and stormwater runoff, does not erode, does not cause sedimentation and does not cause water contamination.
- 3.2.5 Where hydromulch or polymers are used as a method of temporary stabilisation, grasses must be well established at the time of plan sealing. Hydromulch, polymers, mulch and any other erosion control measures are not to be conveyed to waterways.

### 3.3 Manage concentrated stormwater flows

- 3.3.1 Implement drainage and erosion control measures (including contingency measures) that prevent or minimise rill erosion and gully erosion prior to rainfall.
- 3.3.2 Ensure clean stormwater is diverted/managed around or through the site without increasing the concentration of total suspended solids (TSS) or other contaminants in the flow and without causing erosion (onsite or offsite). If it is not feasible to divert all areas discharging clean stormwater around or through the site, the clean stormwater runoff is managed in the same manner as contaminated stormwater runoff, ensuring that sediment basins are sized to accommodate the additional volume of runoff.
- 3.3.3 Prior to each rainfall event ensure concentrated stormwater flow paths are provided with capacity in accordance with IECA *BPESC* (latest version) Table 4.3.1 and do not cause water contamination, rill or gully erosion, sedimentation or damage to structures or property.

### 3.4 Manage groundwater

- 3.4.1 If the works involve the disturbance and/or dewatering of groundwater, a groundwater management plan must be provided to Council that addresses risks to the groundwater table, and the testing and treatment (if necessary) of groundwater discharged.
- 3.4.2 Discharged groundwater must meet the following water quality standards, in addition to any other requirements and conditions placed on the groundwater management plan:
- a) 50 mg/L Total Suspended Solids (TSS) or less, and

b) pH in the range (6.5 – 8.5).

### 3.5 Minimise sediment released from the site

- 3.5.1 All exposed areas greater than 2,500 m<sup>2</sup> must be provided with sediment controls which are designed, implemented and maintained to a standard which will achieve at least 80% of the average annual runoff volume of the contributing catchment treated (i.e. 80% hydrological effectiveness) to 50 mg/L Total Suspended Solids (TSS) (or 60 NTU) or less, and pH in the range 6.5 – 8.5. High efficiency sediment basins are the most effective way to achieve this (refer *Advice note 2*), and the following conditions are to be applied to their design:
- a) Each basin is sized and operated in accordance with either a Type A or Type B high efficiency sediment basin as documented in IECA *BPESC* (latest version) Appendix B (June 2018 or later amendments), based on the contributing catchment area including undisturbed catchments which cannot be diverted.
  - b) Each basin is to be provided with an automated system of coagulant/flocculant dosing and a suitable supply of flocculant/coagulant, with the type of flocculant/coagulant determined based on jar testing and reference to the Chemical Coagulants and Flocculants Fact Sheet (IECA 2018 or later amendments). The proposed coagulant/flocculant must have regard to the downstream receiving environment and water quality (refer *Advice note 3*).
  - c) Each basin must have suitable access for maintenance including for sediment removal, dewatering and water treatment.
  - d) Markers are provided within each basin indicating the maximum sediment storage level and any additional water storage capacity for water reuse.
  - e) During discharge from the primary outlet system, the concentration of TSS discharged does not exceed 50 mg/L (or 60 NTU – refer *Advice note 4*), and the pH is within the range of 6.5 – 8.5. These discharge standards apply equally to any intentional release of any water captured or stored within the site.
  - f) The hydraulic structures such as inlets, outlets, and spillways must be structurally sound for the design events as specified in IECA *BPESC* (latest version).
  - g) The sediment basin is to be constructed and operational before any disturbance occurs in the catchment upslope of the basin. Accumulated sediment from the operation and maintenance of basins and other controls is to be removed and disposed of appropriately without causing water contamination.
- 3.5.2 If a disturbed area is <2,500 m<sup>2</sup> and it is not feasible to divert runoff from the area to a sediment basin, compensatory ESC measures must be implemented and maintained to ensure that erosion of those of areas is minimised, and Type 2 or Type 3 sediment controls are provided in accordance with IECA *BPESC* (latest version).
- 3.5.3 Controls are to be installed and maintained to minimise the tracking of dirt from the site onto roadways. Any dirt on roadways caused by vehicles leaving the site is to be removed without causing water contamination, prior to rainfall and at least at the end of each workday.
- 3.5.4 Decommissioning of sediment and drainage controls must only occur once a minimum of 70% ground cover across the disturbed catchment has been achieved.

### 3.6 Manage works within waterways

- 3.6.1 Waterways, including perennial and permanent waterways, are not to be altered, nor riparian vegetation disturbed without prior written approval of the relevant administering authority.
- 3.6.2 Work within waterways is to be:
- a) Only undertaken during the lower rainfall months between June-October.

- b) Rescheduled if the Bureau of Meteorology the 5-day forecast by indicates a 50% or greater chance of rainfall occurring with a predicted total of 20mm or more over the 5-day period.
  - c) Promptly rehabilitated to the natural channel form, substrates and riparian vegetation as far as possible. Rehabilitation timeframes must not exceed those specified in the IECA *BPESC (latest version), Appendix I – Instream works*.
  - d) Undertaken in accordance with IECA *BPESC (latest version), Appendix I – Instream works*.
- 3.6.3 Temporary vehicular crossings of waterways are to be designed and constructed to convey flows for the 63% AEP and remain stable for all rainfall events up to the 10% AEP event of critical duration.
- 3.6.4 Unless works are being undertaken in the riparian buffer zone under a development approval, erosion and sediment controls are not to be constructed within the riparian buffer zone.

## 4 Litter and other contaminants

- 4.1 Collect and remove gross pollutants, litter and contaminants to authorized waste facilities.
- 4.2 Prevent the release of oil or visible sheen to released waters.
- 4.3 Prevent the release of mulch and other contaminants to waterways.

## 5 Implementation and maintenance

- 5.1 Implement the certified ESC plan and maintain all ESC measures in accordance with industry best practice as per IECA *BPESC (latest version)* and, to the extent of any inconsistency, the relevant approval conditions.
- 5.2 For all sites, contactors responsible for the implementation and maintenance of ESC measures must inspect the ESC measures regularly, including before, during, and after rainfall events, to ensure that the ESC measures are implemented as per the ESC plan and conditions of approval, and are maintained in good working order. If any issues are identified, they must be rectified immediately and the advice of a suitably qualified person in ESC be sought if necessary.

## 6 Prestart meeting

- 6.1 Request and attend a pre-start meeting with an ESC Officer from Council (or similar) prior to any works associated with this development permit commencing onsite. Requests are to be made when submitting copies of all required documentation, including design certificates.
- 6.2 The name and contact details of the landowner, superintendent, and principal contractor, for the purposes of compliance with the conditions of this approval, must be provided to Council's Delegate in writing prior to the onsite pre-start meeting and prior to any works associated with this development permit commencing. The details must include the details of the corporation (including ACN) or natural person undertaking each role. Any changes to these parties during construction must be notified to Council in writing within five (5) business days of the change occurring.

## 7 Inspections

- 7.1 For sites with exposed areas equal to or greater than one (1) hectare, the proponent is to engage a suitably qualified and experienced professional, such as a CPESC or a similar qualification, for example someone who has undertaken an advanced course in ESC and has a minimum three (3) years' experience in ESC, to supervise the implementation of ESC



measures on the site and certify that the conditions of this approval, and the requirements of the *State Planning Policy 2017* and *IECA BPESC* (latest version) are achieved. The suitably qualified person must undertake site inspections and complete an inspection certificate using the approved form, at the following intervals:

- a) Inspection of ESC measures prior to commencement of earthworks.
- b) Ten (10) days after commencement of earthworks.
- c) Following completion of bulk earthworks.
- d) Immediately prior to any instream works or disturbance within a waterway and immediately following completion of instream works or disturbance within a waterway.
- e) Immediately prior to and after decommissioning of any sediment basin or transitioning from a sediment basin to a water sensitive urban design (WSUD) bioretention device.
- f) Immediately prior to any request for survey plan sealing.
- g) At intervals not exceeding one (1) month.

7.2 Where engineering structures, either temporary or permanent, such as basins, inlets, outlets and spillways, form part of an ESC plan, the design and inspection of such structures must be undertaken and certified by an RPEQ. These structures must be inspected upon installation at a minimum.

7.3 Copies of the inspection certificate and updated ESC plans must be provided within five (5) business days of the inspection taking place to the landowner, superintendent and principal contractor and are to be kept on site at all times and provided to Council upon request.

7.4 Where inspection indicates a non-conformance, a non-conformance report is to be completed and kept on site at all times and provided to Council upon request. The non-conformance report must include:

- a) The chain of responsibility.
- b) Details of the nature and cause of non-conformance.
- c) Details of the required corrective actions.
- d) Details the timeframe for corrective actions to be implemented.

## 8 Monitoring and record keeping

### 8.1 Monitoring

8.1.1 Release limits: Unless all reasonably and practicable measures have been taken as per *IECA BPESC* (latest version), there shall be no release of contaminants to land beyond the onsite area of earth disturbance, other than releases that achieve water pollutant concentration release limits of:

- a) Either 50 mg/L TSS (or 60 NTU – refer *Advice note 4*) or less.
- b) pH between 6.5 – 8.5.

If water is released with pollution concentrations outside of the prescribed range and not in accordance with conditions of this approval, the local regulatory authority must be notified immediately.

8.1.2 The water quality of the discharge flows must be measured at each concentrated discharge point from the site, including but not limited to sediment basin outlets, all pumped or gravity releases of captured water, other applicable sediment control devices and the site water drainage system, and recorded against the release limits at least once on each calendar day until discharge stops.

8.1.3 Undertake soil testing and other environmental testing and monitoring as specified in the ESC plan and other conditions of approval.

8.1.4 Maintain a written record on site for inspection by Council officers of all soil, water and other environmental testing and monitoring required to be undertaken as specified in the conditions of approval.

## 8.2 Record keeping

8.2.1 The following documents must be kept on site at all times and provided to Council upon request:

- a) ESC plan including original and updated versions. All updates must be signed-off by a suitably qualified person.
- b) Design certificate.
- c) Inspection certificates.
- d) All soil, water and other environmental testing and monitoring required to be undertaken as specified in the conditions of approval.

## 9 Advice notes

**Advice note 1:** Council reserves the right to specifically request that the ESC plan be prepared by a qualified CPESC (rather than the broader definition of a 'suitably qualified person') in situations where Council deems this to be necessary and appropriate.

**Advice note 2:** High efficiency sediment (HES) basins are the preferred and most effective option to capture and treat runoff from development sites over 2,500 m<sup>2</sup>. However, alternatives to HES basins that achieve an equivalent outcome may be adopted in circumstances where HES basins are not able to be constructed due to site constraints. These options include total site capture, enlarged Type D basins, erosion control, and other innovative measures. Refer to the *Healthy Land & Water Sediment Management on Construction Sites: Complying with the SPP (July 2017) Technical Note for Local Government Assessment and Compliance Officers*.

If an alternative option is proposed, the ESC plan must specify:

- a) Why the site is not able to accommodate a HES basin.
- b) How the alternative option will be designed and maintained with sufficient storage capacity to capture runoff from the design rainfall event and treat the water to meet the required water quality standards, to the equivalent of or greater than a HES basin.
- c) How water will be treated and tested prior to release to achieve the necessary discharge water quality standards of 50 mg/L TSS or less and a pH of 6.5 – 8.5.

**Advice note 3:** If not applied and managed correctly, coagulants and flocculants can have negative impacts on the environment. Aluminium chlorohydrate (ACH) and chitosan have low ecotoxicity, negligible effect on pH, and low dose rates, so are considered suitable for most applications. For other products refer to: <https://www.austieca.com.au/documents/item/818>.

**Advice note 4:** It is suggested that each site obtain a site-specific relationship between TSS and turbidity (NTU) by undertaking laboratory testing on runoff sampled from the site. Once established, the turbidity NTU value corresponding to 50 mg/L TSS may be used at the site as the release limit. Until such time as this relationship is established, a turbidity limit of 60 NTU shall apply.