**Table 8.1:** ESC report content checklist – submission requirement during detailed design

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| --- | --- | --- | --- | --- |
| **Section** | **Content description** | **Reference** | **Section included?** | **If no, provide reason** |
| **Contact information / definition of roles** | 1. Identify, and define roles of, key personnel including but not limited to:
* Site owner, project manager / design engineer, ESC inspector, 24 hour emergency contact
1. Outline chain of communication
 | Chp. 5.0, Table 5.1 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Site location** | Location, key map and site area (ha) \*\*provide in report or reference plan with this information |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Existing site conditions** | Detail existing site conditions, including:1. land cover and use
2. vegetation
3. general topography
4. existing flow patterns and external drainage
5. adjacent properties and their land uses, including identification of any protected natural heritage features1
6. soil characteristics.
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Receiving water system** | Provide the following information about water system(s) that will receive runoff / discharge from the site:1. Identification / names of features/systems that will be receiving site flows, whether natural (e.g. streams) or other (e.g. sewer system).
2. Classification of natural receiving water body (coldwater, warmwater, species at risk habitat)
3. Summary of current aquatic habitat conditions
4. Identification of confined or unconfined valleys
5. Physical description of receiver (e.g. critical erosion areas, channel dimensions, slope, etc.)
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Proposed Site Alteration** | Provide a brief discussion of the proposed activities, including:1. description and location of permanent and temporary SWM measures
2. plans for using permanent SWM facilities for sediment control during construction
3. LID details if applicable, including types, locations, and any controls / methods applied to prevent sedimentation
 | LID protection measures (s. 7.6) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Construction phasing** | 1. Provide a brief discussion on proposed construction phasing to minimize unnecessary stripping of the site and efforts to re-stabilize inactive areas where possible.
2. Describe boundary of work zone(s), work proposed during each stage, and approximate time to complete each stage.
3. Identify any applicable ecological timing windows that affect schedule.
 | Minimized or phased land clearing guidance (App. B, p. B1-2) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Erosion Risk Assessment** | For applicable sites, provide documentation and results of Erosion Risk Assessment (ERA) which are detailed in Chapter 6.0. | ERA (Chp. 6.0) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Design details and calculations for ESC measures** | Provide details on how ESCs will be implemented for each construction stage, including supporting calculations and design details.* For sediment ponds, include detailed calculations related to permanent pool and active storage volumes, pond outlet and emergency spillway
* Where applicable, consider ERA outcomes when selecting and placing BMPs.
* Describe plans for site restoration / permanent stabilization, including proposed seed mix with species and percentage composition.
 | ESC BMP design (App B)Sediment pond design (p. B2-32)Seeding & restoration (App. G)ERA outcomes for ESC planning (s. 6.2.5) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Inspection, monitoring and maintenance** | Describe the ESC inspection and monitoring program by detailing:1. inspection frequency
2. documentation and reporting protocol
3. chain of communication
4. anticipated repair / maintenance timelines and
5. monitoring protocols
 | Inspection and monitoring guidance (Chp 10)Recommended protocols for continuous turbidity monitoring (s.10.2) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Emergency Contacts** | Provide list of emergency contacts (e.g. site supervisor, regulatory agency enforcement officer) and define the triggers (e.g. chemical spill, elevated stream turbidity levels) that constitute an emergency. | Turbidity targets (s. 10.2.2)Spills response (s. 7.7) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Sealing** | Report should be sealed, signed, and dated by a Professional Engineer. | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Supporting documents** | If applicable, include: (i) soils report, (ii) sample ESC inspection form, (iii) monitoring protocol | [ ]  Yes[ ]  No | Click or tap here to enter text. |

1 – Protected natural heritage features include: watercourses, wetlands, woodlands, valleylands, Areas of Natural and Scientific Interest (ANSI), Environmentally Significant Areas (ESA), habitat of endangered and threatened species, fish habitat, seeps and springs, and significant wildlife habitat.

**Table 8.2:** ESC drawings checklist – submission requirement during detailed design. \*Note: not all projects require all drawings detailed here\*

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| --- | --- | --- | --- | --- |
| **Item** | **Description** | **Reference** | **Item complete?** | **If no, provide reason** |
|  |
| **General items** |
| **Drawing formatting** | * Site address and application number
* Key plan including site limits
* Drawing scale
* North arrow
* Legend which includes identification of standard drawing elements and ESC measures
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Emergency contacts** | In the event of an emergency, the following contacts need to be provided in the ESC notes on all drawings:* The engineer responsible for the ESC drawings
* Site supervisor
* Pertinent agency enforcement officer
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Standard notes** | Examples include:* The ESC strategies outlined on the plans are not static and may need to be upgraded/amended as site conditions change to prevent sediment releases to the natural environment. Any changes from the approved ESC plans will be documented and reported to the Enforcement Office.
* Inspection of the proposed erosion and sediment control measures will occur at the frequency defined in section 10.1.2.
* All damaged ESC measures will be repaired and/or replaced within 48 hours or sooner if environmental receptors are at imminent and foreseeable risk of adverse impact.
* Disturbed areas left for 30 days or longer must be stabilized.
* Temporary sediment conveyance systems and sediment pond to be immediately stabilized (include stabilization method if possible, and notes on seasonally appropriate stabilization practices)

***Notes provided are for general reference only. Additional notes will be required as necessary based on ESC measures and strategy employed.*** | Consult with local CA for notes required | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Sealing** | All drawings must be sealed, signed, and dated by a Professional Engineer. | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Stage 1: Topsoil stripping, grading, and re-stabilization** |
| **Drawing 1: Existing Site Conditions** | * Contour elevations at 0.5-1.0 m intervals;
* Drainage boundaries and directions;
* Vegetation locations
* Highly erodible areas, with a plan provided for any downstream areas where erosion risk is a concern;
* Water body locations;
* Regional storm floodplain and regulation areas.
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **CONDITIONAL REQUIREMENT: Proposed site alterations** | *Include only if the submission does not include other engineering drawings (e.g. SWM plan, or stage 3 or 4 ESC plan) that would show these details.** Show proposed site condition **excluding** ESC measures
* A cut/fill plan showing existing and proposed contours and spot elevations
* Clearing, grading, and site boundary limits
* Proposed SWM measures and their locations, including LID
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Drawing 2: Stage 1 ESC Plan** | * Based on existing conditions drawing
 | Staged ESC planning (s. 7.2)Minimized or phased land clearing (p. B1-2)ESC BMPs guidance (App. B)Dewatering protocols (s. 7.4)Buffers (p. B1-2)Perimeter controls (App. B)Vehicle tracking controls (p. B2-48)Interceptor swales (p. B1-9)Check dams (p. B2-8 to B2-17)Sediment control ponds (p. B2-32)LID protection during construction (s. 7.6) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Construction phasing details, including limits of disturbance, phasing boundaries and construction sequencing details.
 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Drainage areas identification, including delineation of all external and internal drainage boundaries, labels for catchment sizes (ha) and runoff coefficients, and depiction of overland flow routes
 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Location and details for all ESC measures, including dewatering protocols to ensure appropriate treatment of pumped water.
 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Identification of appropriate buffers / setbacks from natural features.
 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Placement of perimeter controls, with appropriate setbacks / buffers applied and consideration of more robust controls upslope of sensitive areas
 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Vehicle access points - locations and ESC measures applied – and identification of internal haul roads.
 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Details on stormwater conveyance measures, including interceptor swale dimensions and design flows, erosion prevention measures, and placement of check dams.
 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Details for temporary sediment control ponds, including:
1. Plan view of pond showing grading requirements
2. Cross-sections of the pond, including length, width, and outlet structure
3. Stage-storage tables showing adequate depth and volume
4. Details of storm inlet, outlet, emergency overflow and any associated drainage facilities
5. Stabilization techniques
6. Plans for decommissioning or conversion to permanent SWM facility.
 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Where applicable, LID locations and any measures applied to mitigate compaction of infiltration LID areas.
 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Stockpiles and/or berm locations, sizes and ESC measures, including stabilization for stockpiles idle for > 30 days.
 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Notes related to ESC requirements.
 | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Stage 2: Site servicing** |
| **Drawing 3: Stage 2 ESC Plan** | * Coordination with Stage 1 and Stage 3 Construction Activities
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Overlay of draft subdivision plan provided on ESC Plan (showing ultimate roadway and lot layout)
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Drawing 3: Stage 2 ESC Plan****(continued)** | * Updated locations and details for all ESC measures, including dewatering protocols to ensure appropriate treatment of pumped water.
 | ESC BMPs guidance (App. B)Dewatering protocols (s. 7.4) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Where applicable, LID locations and any measures applied to protect against sedimentation and compaction of infiltration LID areas.
 | LID protection during construction (s. 7.6) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Updated drainage area details, including delineation of all external and internal drainage boundaries, labels for catchment sizes (ha) and runoff coefficients, and depiction of overland flow routes
* Catchbasin inlet protection types and locations
 | Inlet protection (p. B2-21) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Notes related to ESC requirements.
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Stage 3: Building construction** |
| **Drawing 4: Stage 3 ESC Plan** | * Updated drainage area details, including delineation of all external and internal drainage boundaries, labels for catchment sizes (ha) and runoff coefficients, and depiction of overland flow routes
* Catchbasin inlet protection types and locations (e.g. all rear lot and street catchbasins)
 | Inlet protection (p. B2-21) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Updated locations and details for all ESC measures, including dewatering protocols to ensure appropriate treatment of pumped water.
 | ESC BMPs guidance (App. B)Dewatering protocols (s. 7.4) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Updated details on stormwater conveyance measures, including interceptor swale dimensions and design flows, erosion prevention measures, and placement of check dams.
 | Interceptor swales (p. B1-9)Check dams (p. B2-8 to B2-17) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Plan for dewatering sediment control ponds during construction of permanent stormwater management facilities, including:
1. details on discharge locations;
2. measures for treating sediment laden water; and
3. erosion prevention measures at discharge points.
 | Sediment ponds maintenance (p. B2-32)Dewatering protocols (s. 7.4) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Where applicable, LID locations and updated details on any measures applied to protect against sedimentation and compaction of infiltration LIDs.
 | LID protection during construction (s. 7.6) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Updated stockpiles and/or berm locations, sizes and ESC measures, including stabilization for stockpiles idle for > 30 days.
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Notes related to ESC requirements.
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| **Stage 4: Final stabilization and decommissioning** |
| **Drawing 5: Stage 4 ESC Plan** | * Planting / site restoration plan depicting all permanent stabilization measures and timelines
 | Erosion control BMPs (App. B1)Restoration guidelines (App. G) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Plan for dewatering sediment control ponds during construction of permanent stormwater management facilities, including:
1. details on discharge locations;
2. measures for treating sediment laden water; and

erosion prevention measures at discharge points. | Sediment ponds maintenance (p. B2-32)Dewatering protocols (s. 7.4) | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Removal / decommissioning of ESC measures depicted in drawing and / or drawing notes.
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Where surface infiltration LIDs are planned for the site, provide details on LID planting / stabilization.
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |
| * Notes related to ESC requirements.
 |  | [ ]  Yes[ ]  No | Click or tap here to enter text. |