EW – Earthworks

Background

Earthworks and **land disturbance** may be required for **subdivision** or other **activities**. The undertaking of these **activities** in areas with **natural hazards**, active geological and geomorphological processes, watercourses, or where future urban growth will be directed may have adverse **effects** on the **environment**.

Resource Management Issues

EW-I1 *The potential **effects** of **earthworks** and vegetation removal on the stability of the **land**.*

Earthworks and **land disturbances** have the potential to cause or aggravate **land** instability. This may result in subsidence, erosion or slippage if undertaken in areas which have topographical constraints, are subject to active geological processes or have a geological or subsoil structure that is susceptible to **land** displacement. Because subdivision can create expectations that land can be used more intensively, any subsequent development may increase exposure to risk from natural hazards.

Land instability can be a significant hazard. Depending on the location and type of **earthworks**, and the intended or potential use of the **site**, **earthworks** will need to be undertaken subject to standards to avoid a potential hazard to the community, **buildings** or the **environment**.

Due to the City's geological and topographical characteristics, there are large areas of steep slopes vulnerable to erosion and slope instability. Removal of vegetation from these areas increases risks of erosion and there is the possibility of downstream hazards as a result of sedimentation of streams increasing the flood risk.

EW-I2 *That **earthworks** and vegetation removal do not adversely affect significant natural landforms, areas of significant indigenous natural vegetation or significant habitats of indigenous fauna or areas of landscape and/or visual value as identified within the Southern Hills Overlay Area.*

Land disturbance in sensitive locations can seriously damage or denigrate the visual amenity of the **environment**. In the case of Upper Hutt, the eastern, southern and western hills are an important component of the landscape and visual appeal of the City. The scarring of **land**, whether urban or rural, detracts from the visual quality of the City.

Land disturbance in sensitive locations can also seriously damage or destroy the ecological values of the **environment**.

EW-I3 *The potential of **earthworks** to alter the natural flow of surface **water** and to adversely affect the visual amenity of the City.*

Land disturbance can create visual **effects** beyond the area of development that may be visible for a long period of time. This affects the amenity of an area, neighbouring **properties** or the wider valley floor where **earthworks** are undertaken on hillsides or other visually prominent areas such as ridgelines.

Earthworks may alter the natural flow of surface **water** and hence can cause **effects** on lower lying **land**. This issue becomes particularly significant for the City as more development occurs along the surrounding hillsides.

EW-I4 ***Earthworks*** *within identified* ***Flood Hazard Extents*** *can increase the flood hazard risk.*

Earthworks can adversely affect the function of the floodplain and therefore increase the flood risk to people and property.

Earthworks can obstruct or divert flood and surface **water** flow paths as well as increase erosion risk. Sediment loss from areas of work can affect the stream channel and have an impact on the function of the stream during times of flood.

Objectives

EW-O1 *The promotion of development that is appropriate to the natural characteristics, landforms, and visual amenity of the City, significant areas of* ***indigenous vegetation*** *and habitats of indigenous fauna, is consistent with the sustainable use of* ***land****, and has regard for walking, cycling and public transport.*

Earthworks and **land disturbance** can create hazards such as **land** slippage, subsidence and falling debris. It is in the interest of the community that the adverse **effects** of **earthworks** are avoided, remedied or mitigated.

Earthworks undertaken in order to promote the development of **land** may affect the visual amenity of the City and hence the visual amenity enjoyed by surrounding residents and the wider community. It is essential that the adverse visual **effects** resulting from **earthworks** are avoided, remedied or mitigated.

Earthworks which alter the natural flow of surface **water** also generate adverse **effects** which need to be avoided, remedied or mitigated. Particularly, **earthworks** should be constructed in such a way to not concentrate **stormwater** generated from the development onto adjoining **properties**.

EW-O2 *To control* ***earthworks*** *within identified* ***Flood Hazard Extents*** *and* ***Erosion Hazard Areas*** *to ensure that the function of the floodplain is not reduced and unacceptable flood risk to people and property is avoided or mitigated.*

Earthworks can result in unacceptable risk for future development or obstruct or divert flood flow paths. Where **earthworks** are proposed within the **Flood Hazard Extent** or **Erosion Hazard Area**, the **natural hazard** constraints should be considered and areas subject to high hazards are avoided or **earthworks** managed to protect the integrity of the high hazard area.

Policies

EW-P1 *To ensure that **earthworks** are designed and engineered in a manner compatible with natural landforms, significant areas of **indigenous vegetation** and habitats of indigenous fauna, the amenity of an area, and the mitigation of **natural hazards.***

Earthworks can leave unnatural forms or unsightly scars which in some cases can permanently detract from the amenities of an area. They can also alter **stormwater** and floodwater flows, cause potential for subsidence or erosion, or significantly affect the ecology of the area. For these reasons, **Council** considers that controls on such **activities** are necessary.

Earthworks are also essential for building development, which in some cases can have no more than minor environmental effects. Plan provisions have been designed to accommodate earthworks for building development whilst ensuring that adverse effects that may result from such earthworks on the amenity of an area are avoided, remedied or mitigated.

EW-P2 *To avoid, remedy or mitigate the contamination, degradation and erosion of soil from **earthworks** or vegetation removal through advocating responsible **land** use practices.*

It is important that **activities** on **land** are managed and monitored in such a way as to prevent the depletion of resources. This is particularly important in areas that are susceptible to this for a combination of reasons, including:

(1) Erosion prone areas, due to geological and topographical conditions.
(2) Climatic conditions, such as frequency and level of rainfall.
(3) Vegetative conditions, such as an absence of vegetative cover.
(4) Proximity of property or features that could be damaged by landslip, erosion or other events.
(5) Proximity of streams that could be affected by sediment from runoff.

Although the Regional Council has primary responsibility in these areas, the City Council needs to address the potential **effects** of **land** use on the quality and life-supporting capacity of the City's **land** resources, and to employ such methods as are appropriate for encouraging good **land** use practice to complement the responsibilities of the Regional Council. The **Council** will also seek to be involved with the Regional Council on such matters.

EW-P3 *Limit **earthworks** in the high hazard areas within identified **Flood Hazard Extents** and **Erosion Hazard Areas** to avoid an increase in risk from flood hazards to people and property.*

Earthworks in high hazard areas are generally inappropriate and can result in the diversion of flood **waters**, blocking of **water** flow, or reduce bank stability, which can increase the risk to surrounding **properties**. To maintain the function of the floodplain it is important that the passage of flood **waters** is not impeded or blocked.

EW-P4 *To manage **earthworks** in the low hazard areas within identified **Flood Hazard Extents** and **Erosion Hazard Areas** to reduce the flood risk to people and property.*

Earthworks in lower hazard areas may be acceptable as there is less risk of the **earthworks** blocking **water** flow or diverting flood flows. Furthermore, **earthworks** are likely to be required to ensure that future **building** platforms (and in the case of the Mangaroa **Flood Hazard Extent**, the access routes) are above the 1 in 100-year flood level. Managing **earthworks** in these lower hazard areas will support the necessary mitigation and reduce the flood hazard threat to people and property, within the identified **Flood Hazard Extents**.

EW-P5 *Require **earthworks** within identified **Flood Hazard Extents** and **Erosion Hazard Area** to be designed to minimise erosion and loss of sediment from the area of work to streams and **rivers**.*

Earthworks in the **Flood Hazard Extent** and **Erosion Hazard Area** need to be undertaken in a manner to ensure that sediment runoff is minimalised. Sediment runoff has the potential to reduce the capacity of the **river** channel and exacerbate the flood risk. Furthermore, while not within the scope of the plan change, it is recognised that there are amenity, ecological and **water** quality benefits that are derived from controlling sediment runoff from **earthworks**.

EW-P6 *Enable **earthworks** within identified **Flood Hazard Extents** and **Erosion Hazard Areas** that are directly associated with specific and planned **flood mitigation works** or floodplain management that are designed to reduce the flood risk to people and property or maintain the function of the floodplain.*

Earthworks that are undertaken for the express purpose of reducing the flood risk through mitigation works have wider community benefits and therefore it is appropriate that these are supported and encouraged through the policy framework. These works are often undertaken by Greater Wellington Regional Council (or an associated approved contractor) and will be identified in approved floodplain management plans (if one exists).

Rules

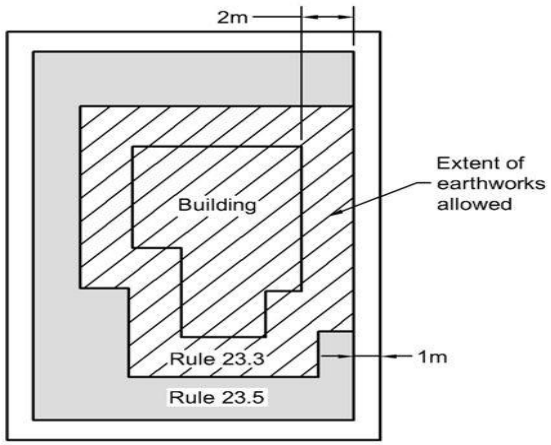
Activities Tables

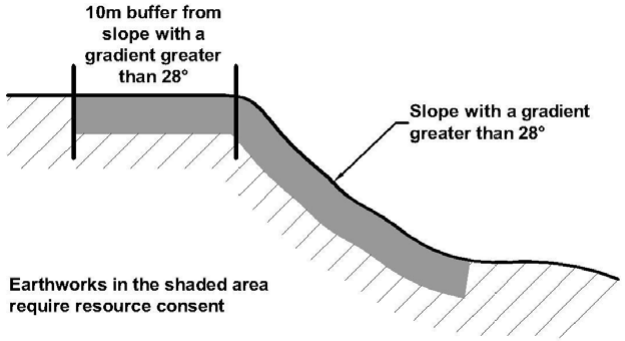
Policies EW-P1, EW-P2, EW-P3, EW-P4, EW-P5, EW-P6, NFL-P3, ECO-P6, NU-P4

Permitted Activities			**Zones**
EW-R1	**Earthworks** which meet the standards under EW-S1 to EW-S16 and are not an identified Restricted Discretionary, Discretionary or Non-Complying Activity.	**PER**	*All*
EW-R2	**Earthworks** within an area identified as Southern Hills Overlay Area which meet the standards under EW-S1 to EW-S12.	**PER**	*All*
Earthworks within the Pinehaven **Flood Hazard Extent**			

EW-R3	**Earthworks** within the **Ponding Area** of the Pinehaven **Flood Hazard Extent** which are directly required for the **building** platform associated with the **alteration and addition** to existing **buildings**, including new **accessory buildings**, and are less than 20m^2 in area, and meet the standards under EW-S14.	**PER**	*All*	
EW-R4	**Earthworks** associated with the **flood mitigation works** within the Pinehaven **Flood Hazard Extent,** which meet the standards under EW-S13.	**PER**	*All*	
EW-R5	**Earthworks** associated with the **maintenance**, upgrade or installation of **network utilities** within the **Ponding Area, Overflow Path** or **Stream Corridor** of the Pinehaven **Flood Hazard Extent** where **earthworks** are located within the legal **road** reserve and complies with standards under EW-S16.	**PER**	*All*	
Earthworks **within the Mangaroa** Flood Hazard Extent				
EW-R6	**Earthworks** within the **Ponding Area** of the Mangaroa **Flood Hazard Extent**, except in the General Residential Zone, are a Permitted Activity where the proposal complies with the relevant zone standards for Permitted Activities and meet the standards under EW-S15.	**PER**	*All*	
EW-R7	**Earthworks** associated with **flood mitigation works** within the Mangaroa **Flood Hazard Extent** which meet the standards under EW-S13.	**PER**	*All*	
EW-R8	**Earthworks** associated with the **maintenance**, upgrade or installation of **network utilities** within the **Overflow Path** or **River Corridor** of the Mangaroa **Flood Hazard Extent** where **earthworks** are located within the legal **road** reserve, and complies with the standards under EW-S16.	**PER**	*All*	

Standards for Permitted Activities		**Zones**
EW-S1 *Policies EW-P1, EW-P2*	(1) Existing **ground level** shall not be altered by cutting by a vertical **height** of more than 1.5m, or filling by a vertical **height** of more than 0.5m. **Exemption** (2) The above shall not apply where the area of **earthworks** for a specific **building** extends no more than 2 metres beyond the exterior foundations of the proposed **building** but no closer than 1 metre to a **boundary** and complies with an **earthworks** plane (as defined in Section 3.1) measured from a **height** of 1.5 metres at the **ground level boundary** and an angle of 45˚ into the **site**.	*General Resider* *Commercial* *City Centre* *General Industr* *Special Activity* *Development A*

		
EW-S2 *Policies EW-P1, EW-P2*	(1) Existing ground level shall not be altered by cutting or filling by a vertical height of more than 1.5m. **Exemption** (2) The above shall not apply where the area of earthworks for a specific **building** extends no more than 2 metres beyond the exterior foundations of the proposed **building** but no closer than 1 metre to a **boundary** and complies with an earthworks plane (as defined in Section 3.1) measured from a height of 1.5 metres at the ground level boundary and an angle of 45˚ into the **site.**	*General Rural* *Rural Production* *Rural Lifestyle* *Open Space* *Development Area 2*
EW-S3 *Policies EW-P1, EW-P2*	(1) The physical extent of **earthworks** shall not exceed 150m^2 in surface area on any one **site** within any continuous 12 month period. **Exemption** (2) In the General Residential, Commercial, City Centre, General Industrial, Special Activity, General Rural, Rural Production and Rural Lifestyle Zones, **earthworks** exceeding the foundations of a specific **building** by more than 2 metres are exempt from the 150m^2 surface area limit provided that the **earthworks** beyond the 2 metre foundation line of a **building**: (a) do not exceed a vertical cut height of 1.5m or a vertical fill height of 0.5m; and (b) do not go closer than 1 metre to any **boundary**; and (c) comply with an **earthworks** plane (as defined in Section 3.1) measured from a height of 1.5 metres at the ground level **boundary** and an angle of 45˚ into the **site.**	*All*

EW-S4 *Policies* *EW-P1,* *EW-P2*	(1)	**Earthworks** shall not be undertaken on erosion prone land, identified as land with a gradient steeper than 28 degrees, or within 10m of a downhill slope with a gradient steeper than 28 degrees (see diagram below).  	*All*
EW-S5 *Policies* *EW-P1* *EW-P2*	(1)	Earthworks shall not be undertaken within 10m of any water body (measured from the bank of the water body), or within the 1 in 100 year flood extent of the Hutt River (as defined on the Planning Maps).	*All*
EW-S6 *Policies* *EW-P1,* *EW-P2*	(1)	Sediment retention and run-off controls shall be implemented to ensure there is no contamination of natural water by sediment.	*All*
EW-S7 *Policies* *EW-P1,* *EW-P2*	(1)	**Earthworks** which are not being worked for three months or more, shall be hydroseeded or sown in order to achieve ground cover.	*All*
EW-S8 *Policies* *EW-P1* *EW-P2*	(1) **Exemption** (2)	**Earthworks** shall be undertaken in accordance with the relevant provisions of the **Code of Practice for Civil Engineering Works** The above standards shall not apply to **earthworks** for flood mitigation purposes undertaken or approved by a local authority.	*All*

EW-S9 *Policies* *EW-P1* *EW-P2*	(1) Stormwater resulting from **earthworks** development is to be controlled and managed so as to avoid, remedy or mitigate adverse **effects** on other land.	*All*	
EW-S10 *Policies* *NU-P4*	(1) Within 12m of high voltage (110kV or greater) electricity **transmission lines, earthworks** shall not be undertaken that: (a) Are at a depth greater than 300mm within 6m of the outer visible edge of a tower support structure; or (b) Are at a depth greater than 3m between 6m and 12m of the outer visible edge of a tower support structure; or (c) Create an unstable batter; or (d) Result in a reduction of the existing conductor clearance distances. **Exemptions** (2) The above standard shall not apply to **earthworks** undertaken by utility operators. (3) The above standard shall not apply to normal agricultural or domestic cultivation or repair, sealing, resealing of an existing **road**, footpath or driveway. **Restriction on notification** Subject to sections 95A(2)(b), 95A(2)(c), 94A(4) and 95C of the Act, a resource consent application required due to non-compliance with this standard will be precluded from public notification under section 95A, and limited notification will be served on Transpower New Zealand Limited as the only affected party under section 95B.	*All*	
EW-S11 *Policies* *EW-P1* *EW-P2* *NFL-P3,* *ECO-P6*	**Earthworks** within an area identified as Southern Hills Overlay Area (1) Within an area identified as Southern Hills Overlay Area, existing **ground level** shall not be altered by cutting or filling by a vertical **height** of more than 2.5m.	*All*	
EW-S12 *Policies* *EW-P1* *EW-P2* *NFL-P3,* *ECO-P6*	(1) Within an area identified as Southern Hills Overlay Area, the physical extent of **earthworks** shall not exceed 300m^2 in surface area on any one **site** within any continuous 12 month period.	*All*	
EW-S13 *Policies*	**Earthworks** associated with flood mitigation works within the Pinehaven or Mangaroa **Flood Hazard Extents**	*All*	

EW-P6	(1) Must be undertaken by Greater Wellington Regional Council, Upper Hutt City Council or their nominated contractor and be for the express purpose of mitigating the identified flood hazard and, where applicable, achieving the design and objectives of the relevant floodplain mitigation plan.		
EW-S14 *Policies* *EW-P4* *EW-P5*	Within the Ponding Area of the Pinehaven **Flood Hazard Extent**, **earthworks** directly required for the **building** platform associated with the **alteration and addition** to existing **buildings,** including new **accessory buildings**, provided they are 20m^2 or less in area, must comply with the following standards: (1) **Earthworks** must be directly associated with the **building** platform of the proposed extension or alteration or new **accessory building** provided for as a permitted activity under NH-R2; and (2) The **earthworks** cannot exceed 20m^2 in area; and (3) The **earthworks** must not be within the **Stream Corridor** or an **Overflow Path**.	*All*	
EW-S15 *Policies* *EW-P3* *EW-P4* *EW-P5*	**Earthworks** within the Ponding Area of the Mangaroa **Flood Hazard Extent**, except in the General Residential Zone, where the proposal complies with the relevant zone standards for Permitted Activities The **earthworks** are required to comply with the following standards: (1) Must not be within the **Erosion Hazard Area**, **River Corridor** or **Overflow Path**; and (2) Must not be located in a General Residential Zone; and (3) Complies with the relevant **earthworks** zone standards for Permitted Activities.	*All*	
EW-S16 *Policies* *EW-P3* *EW-P4* *EW-P5* *NU-P15*	**Earthworks** associated with the maintenance, upgrade or installation of **network utilities** within the identified Pinehaven and Mangaroa **Flood Hazard Extents** where **earthworks** are located within the legal **road** reserve (1) **Ground levels** are reinstated to those existing prior to the works; or (2) **Earthworks** are associated with the installation of underground utilities using directional drilling or thrusting techniques.	*All*	

Restricted Discretionary Activities			**Zones**
EW-R9	**Earthworks for a building platform in the High Slope Hazard Overlay** Where: (3) The earthworks are for a suitable building platform for a Potentially Hazard Sensitive Activity or Hazard Sensitive Activity in the High Slope Hazard Overlay.	**RDIS**	*All*

	Council will restrict its discretion to, and may impose conditions on: **(a)** The matters in NH-P6			
EW-~~R9~~10 *Policies* *EW-P1* *EW-P2* *NU-P4*	**Earthworks** which do not meet the standards under EW-S1 to EW-S16 unless specifically identified as a Discretionary or Non-Complying Activity Council will restrict its discretion to, and may impose conditions on: (1) Avoiding, remedying or mitigating **effects** related to the standard in question. (2) Financial contributions. (3) In addition to the above, within the Mount Marua Structure Plan Development Area, consistency with the Mont Marua Structure Plan.	**RDIS**	*All*	
EW-R~~10~~11 *Policies* *EW-P1* *EW-P2* *NFL-P3,* *ECO-P6*	**Earthworks** within an area identified as Southern Hills Overlay Area which do not meet any one or more of the standards under EW-S1 to EW-S10, but meet the standards under EW-S11 and EW-S12 Council will restrict its discretion to, and may impose conditions on: (1) Avoiding, remedying or mitigating effects relating to the standard in question. (2) **Effects** on visual values. (3) **Effects** on landscape values. (4) **Effects** on ecological values. (5) Measures to avoid, remedy or mitigate potential adverse **effects**. (6) In addition to the above, within the Mount Marua Structure Plan Development Area, consistency with the Mont Marua Structure Plan.	**RDIS**	*All*	
Earthworks within the Pinehaven Flood Hazard Extent				
EW-R~~11~~12 *Policies* *EW-P2* *EW-P3* *EW-P4* *EW-P5*	All **earthworks** not associated with permitted **building** extensions (up to 20m^2) or **flood mitigation works** within the **Ponding Area** of the Pinehaven **Flood Hazard Extent,** which meet the standards under EW-S17 Council will restrict its discretion to, and may impose conditions on: (1) Height of cut or fill and area of earthworks above ground level. (2) **Earthworks** stability. (3) Erosion and sediment control. (4) **Effect** on the flooding risk to people and property. (5) Permanent surface treatment of **earthwork** area. (6) Avoiding, remedying or mitigating **effects** related to the standard in question.	**RDIS**	*All*	

	(7) Financial contributions.			
Earthworks within the Mangaroa Flood Hazard Area				
EW-R~~12~~13 *Policies* *EW-P3* *EW-P4* *EW-P5*	**Earthworks** within the **Ponding Area** (excluding the **Erosion Hazard Area**) of the Mangaroa **Flood Hazard Extent** which meet the standards under EW-S18 and where one of the following applies: (1) the proposal does not meet the Permitted Activity **earthworks** standards for the relevant zone, or (2) the proposal is within the General Residential Zone. Council will restrict its discretion to, and may impose conditions on: (3) **Height** of cut or fill and area of **earthworks** above **ground level**. (4) **Earthworks** stability. (5) Erosion and sediment control. (6) **Effect** on the flood risk to people and property. (7) Permanent surface treatment of **earthwork** area. (8) Avoiding, remedying or mitigating **effects** related to the standard in question. (9) Financial contributions.	**RDIS**	*All*	
EW-R~~13~~14 *Policies* *EW-P3* *EW-P4* *EW-P5*	**Earthworks** within the **Erosion Hazard Area** of the Mangaroa **Flood Hazard Extent** which meet the standards under EW-S19. **Council** will restrict its discretion to, and may impose conditions on: (1) **Effect** on slope stability and appropriateness of the works based on the provided report required by Section 2.4.10 of Part 1 of this Plan. (2) Height of cut or fill and area of **earthwork**s above **ground level.** (3) Erosion and sediment control. (4) **Effect** on the flood risk to people and property. (5) Permanent surface treatment of **earthwork** area.	**RDIS**	*All*	

Standards for Restricted Discretionary Activities		**Zones**
EW-S17 *Policies* *EW-P2* *EW-P3* *EW-P4* *EW-P5*	**Earthworks** not associated with permitted **building** extensions or **flood mitigation works** within the **Ponding Area** of the Pinehaven **Flood Hazard Extent** (1) Earthworks must not be located within the **Stream Corridor** or an **Overflow Path**.	*All*

EW-S18 *Policies* *EW-P3* *EW-P4* *EW-P5*	**Earthworks** within the **Ponding Area** (excluding the **Erosion Hazard Area**) of the Mangaroa **Flood Hazard Extent** (1) Earthworks must not be located within the Erosion Hazard Area, an Overflow Path or the River Corridor.	*All*
EW-S19 *Policies* *EW-P3* *EW-P4* *EW-P5*	**Earthworks** within the **Erosion Hazard Area** of the Mangaroa **Flood Hazard Extent** (1) Where the proposal is located within the **Erosion Hazard Area**, provision of a report by a suitability qualified and experienced person to determine the erosion risk is required in accordance with the requirements of Section 2.4.10 of Part 1 of this Plan. (2) Earthworks must not be located within the **River Corridor** or an **Overflow Path** (but includes **ponding areas** within the **Erosion Hazard Area**).	*All*

Discretionary Activities			**Zones**
EW-R~~14~~15	**Earthworks** on a **site** identified in Schedule HH-SCHED1 or affecting a tree identified in TREE-SCHED1 or UTG-SCHED1. For the purposes of this rule, the following exclusion applies: **Earthworks** undertaken by a **network utility operator** affecting a tree identified in UTG-SCHED1 when undertaken in compliance with the rules of the Urban Tree Groups (UTG) Chapter.	**DIS**	*All*
EW-R~~15~~16	**Earthworks** within an area identified as Southern Hills Overlay Area which do not meet any one or more of the standards under EW-S11 and EW-S12.	**DIS**	*All*
Earthworks **within the Mangaroa** Flood Hazard Area			
EW-R~~16~~17	**Earthworks** within an **Overflow Path** of the Mangaroa **Flood Hazard Extent** (excluding those associated with **network utilities** that are otherwise provided for as a Permitted Activity).	**DIS**	*All*

Non-complying Activities	**Zones**
Earthworks within the Pinehaven **Flood Hazard Extent**	

EW-R~~17~~18	**Earthworks** within the Pinehaven **Flood Hazard Extent** (excluding those associated with flood protection works and **network utilities** that area otherwise provided for as permitted activities), which are within the **Overflow Path** or **Stream Corridor**.	**NC**	*All*	
Earthworks within the Mangaroa **Flood Hazard Area**				
EW-R~~18~~19	**Earthworks** within the **River Corridor** of the Mangaroa **Flood Hazard Extent** (excluding those associated with **network utilities** that are otherwise provided for as a Permitted Activity).	**NC**	*All*	

Matters for Consideration

Matters that may be relevant in the consideration of any resource consent may include the following:

EW-MC1	**Earthworks** (1) The extent to which any cut or fill will remove existing vegetation, alter existing landforms, affect water quality, cause or contribute to land instability, soil erosion or affect existing natural features, such as **water bodies**. (2) The **effect** of any cut or fill on any stands of important indigenous vegetation, or sites, **buildings** or places of scientific, cultural or heritage value. (3) The extent to which any cut or fill can be restored or treated to resemble natural landforms. (4) The extent to which the proposed **earthworks** will impact on prominent or visually sensitive features, such as ridgelines, escarpments, **water bodies**, or high visual and/or landscape value areas identified within the Southern Hills Overlay Area. (5) The proposed methods and timing to avoid, remedy or mitigate potential adverse **effects** including rehabilitation, re-contouring and re-vegetation or retention of existing vegetation. (6) The necessity for carrying out the work, and extent to which the **earthworks** are required. (7) Whether the **earthworks** proposed increase or decrease flood hazards. (8) The time period when the soil will be exposed. (9) Traffic movements. (10) Noise. (11) Dust. (12) The findings of any assessment prepared by a suitably qualified expert ecologist or landscape planner, either commissioned by Council or accompanying a resource consent application. (13) The Southern Hills Environmental Management Study prepared for Upper Hutt City Council by Boffa Miskell Ltd July 2008 (14) Effect on the diversion or obstruction of flood waters in the **Overflow Path** and **Stream/River corridors** and proposed measures to mitigate the **effect** on the function of the floodplain. (15) **Effect** of the flood risk to people and property. (16) In addition to the above, within the Mount Marua Structure Plan Development Area, consistency with the Mount Marua Structure Plan.

Advice Note

For any **activity** within the Stream/**River Corridor**, **Overflow Path**, **Ponding Area** or **Erosion Hazard Area**, applicants are advised to consult the Wellington Regional Coun determine if regional consent is also required.

Methods

EW-M1 District Plan provisions consisting of:

(1) Rules to control the location of **building** platforms, **earthworks** and accessways in the identified **Flood Hazard Extents** and **Erosion Hazard Area.**

(2) Performance standards and consent conditions to minimise the adverse **effects** of **earthworks**. These relate to:

(a) Provision of utilities, supply of **water** and disposal of effluent.

(b) Landscape values, native vegetation, heritage and cultural sites.

(c) Managing dust, **waterbody** siltation, soil erosion, **effects** on ground stability and other **natural hazards**.

(3) Management of the **effects** of **earthworks** and clearing of native vegetation by using:

(a) Zone performance standards to establish thresholds for resource consents.

(b) Management plans and monitoring of ongoing operations.

(4) The ability to impose conditions on resource consents to avoid, remedy or mitigate any adverse **effects**.

EW-M2 Liaison with service providers and **network utility operators**.

EW-M3 The **Code of Practice for Civil Engineering Works**.

EW-M4 To record known sites of potential instability on a hazard register and to supply this information, in response to requests for project information memoranda and land information memoranda and for processing resource consents.

Anticipated Environmental Results

The following results are expected to be achieved by the objective, policies, methods and rules in this chapter. The means of monitoring whether this Plan achieves the anticipated environmental results are also set out below.

Anticipated environmental results		**Monitoring indicators**	**Data source**
EW-AER1	Minimal adverse **effects** on the environment from **subdivision** and **earthworks**	Effectiveness of conditions of consent and methods used in managing adverse **effects**	**Council** complaints register

		Complaints received about adverse **effects**	**Council** resource consent records and monitoring compliance