Queensland

Environment and Resource Management Legislation Amendment Regulation (No. 1) 2010

Subordinate Legislation 2010 No. 140

made under the

Survey and Mapping Infrastructure Act 2003
Water Act 2000

Contents

Contents

Part 1 Preliminary

1 Short title

This regulation may be cited as the *Environment and Resource Management Legislation Amendment Regulation (No. 1) 2010*.

Part 2 Amendment of Survey and Mapping Infrastructure Regulation 2004

2 Regulation amended

This part amends the *Survey and Mapping Infrastructure Regulation 2004*.

3 Amendment of s 3 (Definitions)

Section 3, 'the schedule'—

omit, insert—

'schedule 2'.

4 Amendment of s 7 (Intended purpose of survey)

Section 7(2)—

insert—

'(d) identifying, describing and depicting, as appropriate, natural features that are tidal boundaries or non-tidal boundaries of land.'.

5 Amendment of s 8 (Integrating survey and mapping information)

Section 8(2)(c), after 'land'—

insert—

', including if appropriate the former location of a natural feature if the former location still forms a boundary of land'.

6 Amendment of s 18 (Reinstating existing boundaries)

Section 18(2)(e)—

insert—

'*Example—*

A cadastral surveyor may be required to decide whether or not the location at law of a tidal or non-tidal boundary, as provided for in part 7 of the Act, is consistent with the boundary's position as marked on the registered plan for the land.'.

7 Amendment of s 20 (Requirements for cadastral plans)

Section 20(1)(c), after 'person'—

insert—

', including any document supplied for demonstrating consistency with the public interest under part 7 of the Act'.

8 Insertion of new pt 5 and sch 1

After section 22—

insert—

‘Part 5 Watercourse identification and non-tidal boundary (watercourse) location

‘Division 1 Preliminary

‘23 Purpose of pt 5

‘The purpose of this part is to support the application of the provisions of part 7, division 4 of the Act relating to the identification of watercourses and establishing the location at law of non-tidal boundaries (watercourse).

‘24 Meaning of terms used in pt 5

‘If a term used in this part is defined for part 7 of the Act, the term has the same meaning in this part and in schedule 1.

‘Division 2 Supporting provisions

‘25 Diagram depicting different valley reaches

‘Diagram A in schedule 1, part 1 depicts in overview the upper, middle and lower valley reaches of a valley drained by a typical watercourse.

‘26 Explanations and accompanying cross-section diagrams for typical upper valley reach

‘Schedule 1, part 2—

(a) gives an explanation of the characteristics of a typical upper valley reach and associated watercourse; and

(b) includes a diagram (Diagram B) in cross-section form that depicts the natural features that are likely to be found in a typical upper valley reach; and

(c) includes a diagram (Diagram C) that depicts the natural features that are likely to be found in a typical watercourse in an upper valley reach and that can help in locating non-tidal boundaries (watercourse).

‘27 Explanations and accompanying cross-section diagrams for typical middle valley reach

‘Schedule 1, part 3—

(a) gives an explanation of the characteristics of a typical middle valley reach and associated watercourse; and

(b) includes a diagram (Diagram D) in cross-section form that depicts the natural features that are likely to be found in a typical middle valley reach; and

(c) includes a diagram (Diagram E) that depicts the natural features that are likely to be found in a typical watercourse in a middle valley reach and that can help in locating non-tidal boundaries (watercourse).

‘28 Explanations and accompanying cross-section diagrams for typical lower valley reach

‘(1) Schedule 1, part 4—

(a) gives an explanation of the characteristics of a typical lower valley reach and associated watercourse; and

(b) includes a diagram (Diagram F) in cross-section form that depicts the natural features that are likely to be found in a typical lower valley reach; and

(c) includes a diagram (Diagram G) that depicts the natural features that are likely to be found in a typical watercourse in a lower valley reach and that can help in locating non-tidal boundaries (watercourse).

‘(2) Schedule 1, part 4 also includes—

(a) a diagram (Diagram H) in cross-section form that depicts the natural features that are likely to be found in a typical lower valley reach where 2 or more

watercourses in the form of anabranches are contained within the valley; and

(b) a diagram (Diagram I) in cross-section form that depicts the natural features that are likely to be found in typical watercourses in a lower valley reach where the valley contains 2 or more watercourses in the form of anabranches, and that can help in locating non-tidal boundaries (watercourse) in a multiple watercourse environment.

‘29 Additional information about applicability of cross-section diagrams

‘(1) For any valley, a particular valley reach could contain a section of valley reach, or a section of watercourse within a section of valley reach, that is not typical, having regard to the valley reach and watercourse cross-sections depicted in schedule 1, parts 2, 3 and 4.

Example—

The cross-section of part of a middle valley reach of a particular watercourse might more closely resemble what is typical for an upper valley reach cross-section, and the cross-section of part of a lower valley reach of a particular watercourse might more closely resemble what is typical for a middle valley reach cross-section.

‘(2) Accordingly, a cross-section diagram could be used to help in the location of a non-tidal boundary (watercourse), regardless of the valley reach in which the section of watercourse under consideration is located.

‘30 Explanation about valley margins

‘(1) Schedule 1 includes a number of references to valley margins.

‘(2) A reference to a valley margin, in relation to a valley drained by a watercourse, is intended as a reference to the bedrock feature that forms a lateral extent of the valley floor.

‘(3) A valley margin could consist of a hill, cliff, ridge or mountain, but this will generally vary according to where the valley margin is situated in the valley.

Example—

A valley margin in an upper valley reach could be a mountain, but in a lower valley reach, a valley margin is likely to be no higher than a ridge.

‘31 Explanation about terraces

‘(1) Schedule 1 includes a number of references to terraces.

‘(2) A reference to a terrace, in relation to a valley drained by a watercourse, is intended as a reference to an abandoned floodplain that is situated above an active floodplain associated with the watercourse.

‘(3) A terrace is formed when floodplains are abandoned during down cutting into the valley floor by base level change in the form of tectonic activity, by shifts in sediment load or by changes in the flow regime of the watercourse.

‘Schedule 1 Valley reaches

sections 25 to 28

Part 1 Overview of valley reaches

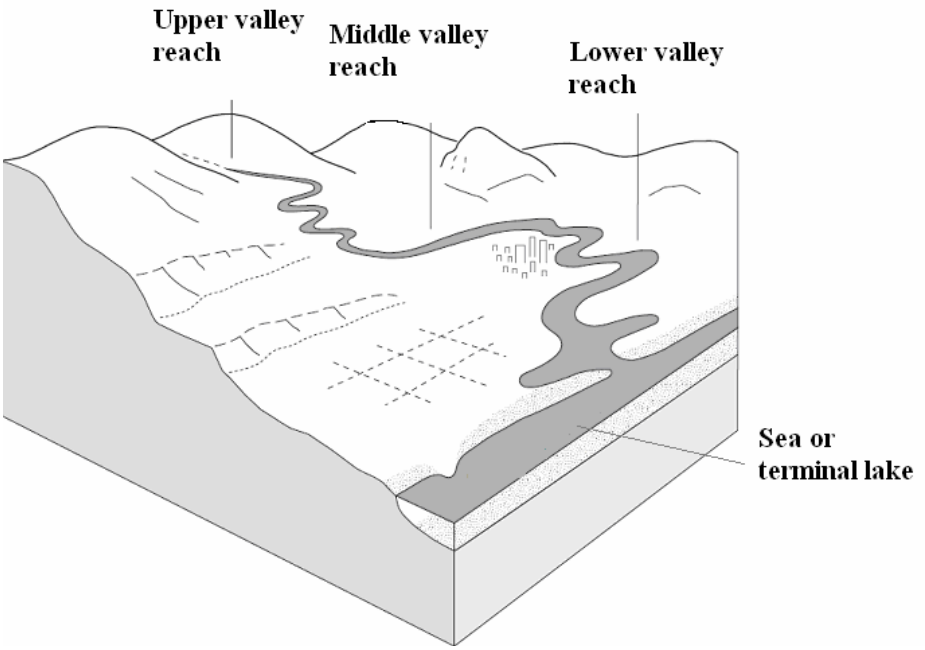

Diagram A—Overview of valley reaches

Part 2 Upper valley reach

Explanation of upper valley reach and associated watercourse

The upper valley reach of a valley drained by a watercourse is typically located in the most elevated parts of the watercourse catchment, often near the catchment's watershed. The valley floor is typically quite narrow, characterised by gorges and in some places is only as wide as the watercourse itself. The valley floor is typically quite steep, characterised by waterfalls and cascades. The general direction and location of the reach is dictated by the valley margins which appear as significant geomorphic features.

The watercourse is typically narrow and deep with a V-shaped profile carved into the bedrock. The location of the watercourse within the narrow valley floor is generally dictated by the valley margins. The flow in the watercourse has high velocity and high energy, resulting in high erosive power. High flow events are confined within the watercourse by the adjoining valley margins. Past flow levels are often evidenced by scour marks on the valley margin or the deposition of lighter material, for example sands and twigs, carried by the flow. The bed and banks of the watercourse typically consist of bedrock and very coarse material, including boulders, cobbles and gravel. The movement and deposition of material happens primarily in periods of high flow. Flow tends to respond directly to rainfall events and during dry periods there is little or no base flow. Vegetation within or along the watercourse is often sparse or immature due to the regular scouring caused by high flow energy or by the absence of deep soil profiles.

Where the watercourse is wider, it could have a narrow bench adjacent to one bank or the other. These benches are typically made of finer materials, commonly cobbles and gravel. These benches tend to be short in length and disconnected, and alternate from one side of the watercourse to the other as the flow rebounds from one valley margin to the other. These benches are regularly reshaped by flow events.

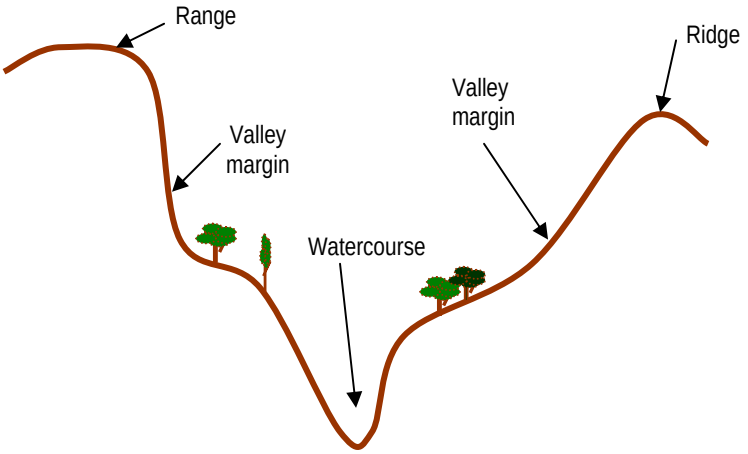

Diagram B—Cross sectional view of an upper valley reach

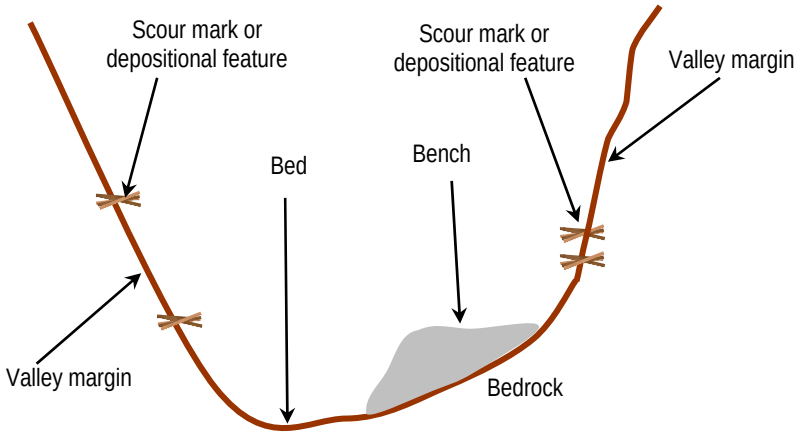

Diagram C—Cross sectional view of a watercourse in an upper valley reach

Part 3 Middle valley reach

Explanation of middle valley reach and associated watercourse

The middle valley reach of a valley drained by a watercourse is typically located in the watercourse catchment's pediment or foot hills. The middle valley reach is at a higher elevation than the lower valley reach but is not as high as the upper valley reach. The valley floor is typically of moderate width, and is characterised by narrow floodplains between valley margins of fringing hills, terraces and low ridges. The valley floor has a moderate grade, characterised by a meandering watercourse and occasional cascades. The valley floor is typically comprised of ancient sediments deposited by the watercourse in earlier geological periods, and can be interrupted by occasional bedrock ridges or bars that are exposed in the watercourse.

The watercourse carries flow from several tributaries and so is typically deeper and wider than in the upper valley reach. The location of the watercourse within the valley floor is generally dictated by its meander pattern and is occasionally bounded by the

valley margin. The flow in the watercourse has less energy and is not as fast as in the upper valley reach. However, it has enough energy to transport sediment eroded in the upper valley reach down to the lower valley reach. Much of the sediment being transported is temporarily stored in the watercourse (typically as in-stream benches and islands) or on adjacent floodplains before being further eroded and transported downstream in subsequent high flow events.

A number of benches are typical in the watercourse, created by the mixture of flow size and frequency. The lower, narrower channel of the watercourse is shaped by the more frequent, smaller flows and the wider, deeper channel of the watercourse is shaped by less frequent large flows. High flow events commonly erupt from the watercourse onto the adjacent floodplain. The bed and banks of the watercourse typically consist of medium sized material, such as cobbles, gravel and sand. Subject always to long-term weather cycles, almost perennial base flows occur because of the slow drainage of upper sections of the middle valley reach and groundwater inflows from alluvial floodplain aquifers along the watercourse. Vegetation within or along the watercourse is well established because of the reliable base flows and stable channel profile.

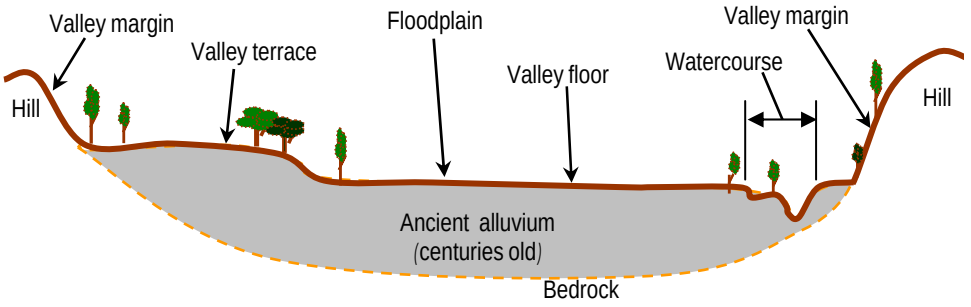

Diagram D - Cross sectional view of a middle valley reach

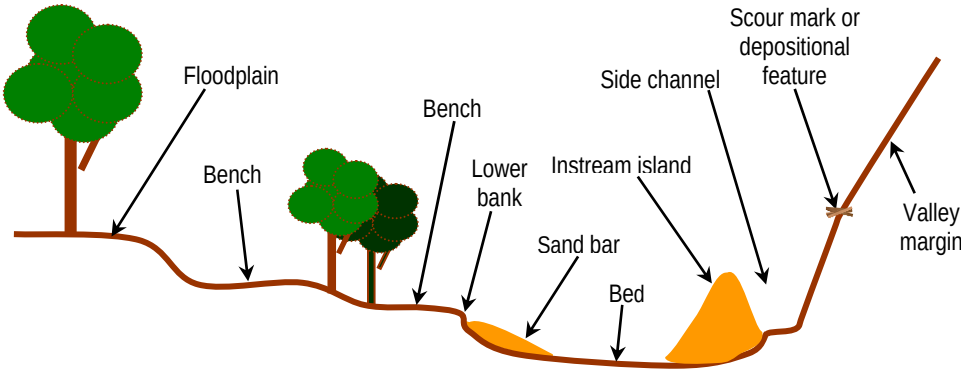

Diagram E - Cross sectional view of a watercourse in a middle valley reach

Part 4 Lower valley reach

Explanation of lower valley reach and associated watercourse

The lower valley reach of a valley drained by a watercourse is typically located in the watercourse catchment's lowest elevations, generally immediately upstream of where the watercourse becomes tidal or where it flows into a natural terminal lake. The valley floor is quite broad, characterised by extensive floodplains between distant valley margins of fringing hills and low ridges. The valley floor has a low gradient, characterised by a strongly meandering watercourse with ox-bows and occasional anabranches. The valley floor is typically comprised of ancient sediments deposited by the watercourse in earlier geological periods.

The watercourse gradient is quite low, resulting in slow moving flow. However, the watercourse is now carrying water from all upstream reaches and so dissipates this kinetic energy by meandering across the valley floor, eroding and depositing sediment along the way. This results in a comparatively wide, shallow channel, often with large sediment accumulations such as in-stream benches and islands. Sediment that makes up the channel

of the watercourse and adjoining floodplains tends to be fine, commonly gravel, sand and silt, with low resistance to erosion. Large flows result in floods that spread across the floodplains, depositing fine sediment. Perennial base flows occur because of the slow drainage of upper sections of the lower valley reach and groundwater inflows from alluvial floodplain aquifers along the watercourse. Vegetation within or along the watercourse is well established due to the reliable base flows and stable channel profile.

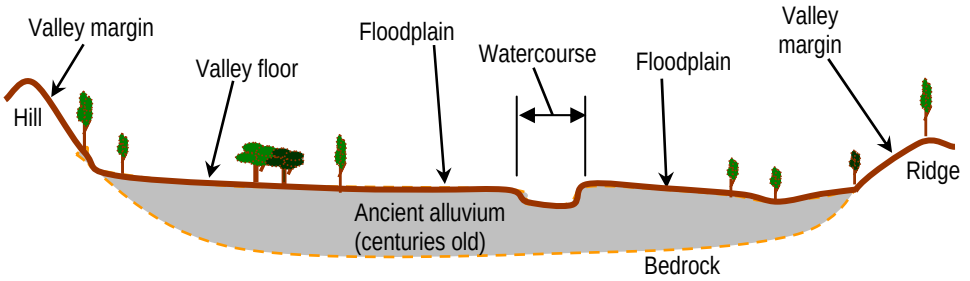

Diagram F - Cross sectional view of a lower valley reach

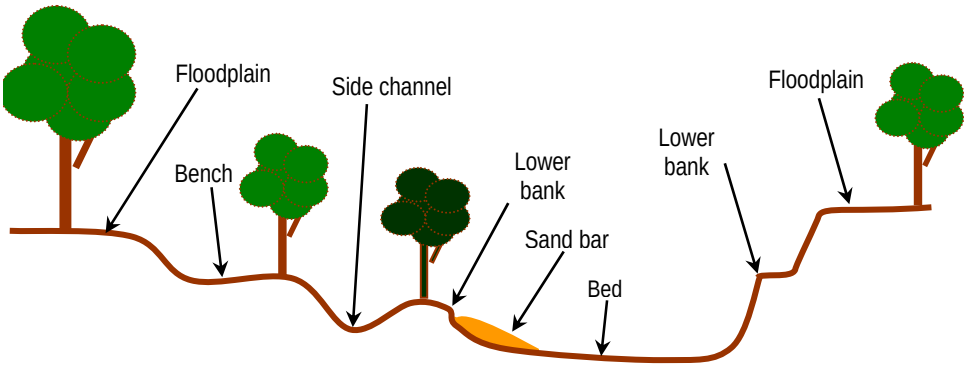

Diagram G - Cross sectional view of a watercourse in a lower valley reach

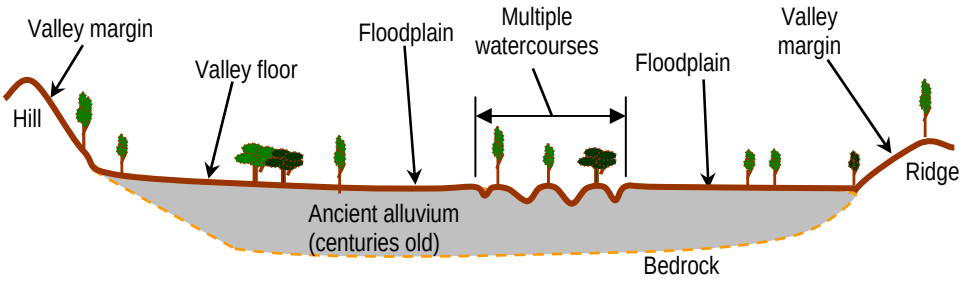

Diagram H—Cross-sectional view of a lower valley reach with multiple watercourses

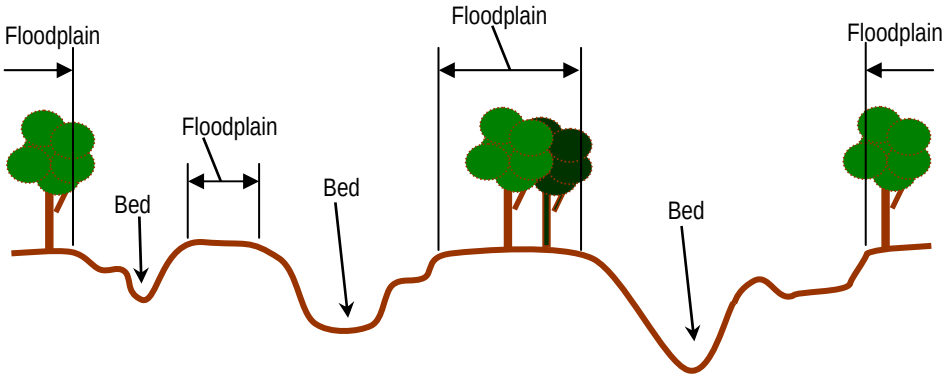

Diagram I—Cross-sectional view of multiple watercourses in a lower valley reach'.

9 Amendment of schedule (Dictionary)

(1) Schedule, heading, 'Schedule'—

omit, insert—

'**Schedule 2**'.

(2) Schedule 2, as renumbered, definition *survey records*—

insert—

'(e) any document supplied for demonstrating consistency with the public interest under part 7 of the Act.'.

Part 3 Amendment of Water Regulation 2002

10 Regulation amended

This part amends the *Water Regulation 2002*.

11 Insertion of new pt 1, div 1 hdg

Part 1, before section 1—

insert—

‘Division 1 Introduction’.

12 Insertion of new pt 1, div 2

Part 1, after section 3—

insert—

‘Division 2 Watercourse identification and outer bank location

‘Subdivision 1 Preliminary

‘3A Purpose of div 2

‘The purpose of this division is to support the application of the provisions of the Act relating to the identification of watercourses and establishing the location of outer banks of watercourses.

‘3AB Meaning of terms used in div 2

‘(1) If a term used in this division is defined in chapter 1, part 2 of the Act, or in schedule 4 of the Act to the extent it supports the

operation of chapter 1, part 2 of the Act, the term has the same meaning in this division and in schedule 1AA.

'(2) However, a reference to a watercourse is not intended to be limited in the way provided for in section 5(4) of the Act.

'Subdivision 2 Supporting provisions

'3AC Diagram depicting different valley reaches

'Diagram A in schedule 1AA, part 1 depicts in overview the upper, middle and lower valley reaches of a valley drained by a typical watercourse.

'3AD Explanations and accompanying cross-section diagrams for typical upper valley reach

'Schedule 1AA, part 2—

(a) gives an explanation of the characteristics of a typical upper valley reach and associated watercourse; and

(b) includes a diagram (Diagram B) in cross-section form that depicts the natural features that are likely to be found in a typical upper valley reach; and

(c) includes a diagram (Diagram C) that depicts the natural features that are likely to be found in a typical watercourse in an upper valley reach and that can help in locating outer banks.

'3AE Explanations and accompanying cross-section diagrams for typical middle valley reach

'Schedule 1AA, part 3—

(a) gives an explanation of the characteristics of a typical middle valley reach and associated watercourse; and

(b) includes a diagram (Diagram D) in cross-section form that depicts the natural features that are likely to be found in a typical middle valley reach; and

(c) includes a diagram (Diagram E) that depicts the natural features that are likely to be found in a typical watercourse in a middle valley reach and that can help in locating outer banks.

‘3AF Explanations and accompanying cross-section diagrams for typical lower valley reach

‘(1) Schedule 1AA, part 4—

(a) gives an explanation of the characteristics of a typical lower valley reach and associated watercourse; and

(b) includes a diagram (Diagram F) in cross-section form that depicts the natural features that are likely to be found in a typical lower valley reach; and

(c) includes a diagram (Diagram G) that depicts the natural features that are likely to be found in a typical watercourse in a lower valley reach and that can help in locating outer banks.

‘(2) Schedule 1AA, part 4 also includes—

(a) a diagram (Diagram H) in cross-section form that depicts the natural features that are likely to be found in a typical lower valley reach where 2 or more watercourses in the form of anabranches are contained within the valley; and

(b) a diagram (Diagram I) in cross-section form that depicts the natural features that are likely to be found in typical watercourses in a lower valley reach where the valley contains 2 or more watercourses in the form of anabranches, and that can help in locating outer banks in a multiple watercourse environment.

‘3AG Additional information about applicability of cross-section diagrams

‘(1) For any valley, a particular valley reach could contain a section of valley reach, or a section of watercourse within a section of valley reach, that is not typical, having regard to the valley reach and watercourse cross-sections depicted in schedule 1AA, parts 2, 3 and 4.

Example—

The cross-section of part of a middle valley reach of a particular watercourse might more closely resemble what is typical for an upper valley reach cross-section, and the cross-section of part of a lower valley reach of a particular watercourse might more closely resemble what is typical for a middle valley reach cross-section.

‘(2) Accordingly, a cross-section diagram could be used to help in the location of an outer bank, regardless of the valley reach in which the section of watercourse under consideration is located.

‘3AH Explanation about valley margins

‘(1) Schedule 1AA includes a number of references to valley margins.

‘(2) A reference to a valley margin, in relation to a valley drained by a watercourse, is intended as a reference to the bedrock feature that forms a lateral extent of the valley floor.

‘(3) A valley margin could consist of a hill, cliff, ridge or mountain, but this will generally vary according to where the valley margin is situated in the valley as a whole.

Example—

A valley margin in an upper valley reach could be a mountain, but in a lower valley reach, a valley margin is likely to be no higher than a ridge.

‘3AI Explanation about terraces

‘(1) Schedule 1AA includes a number of references to terraces.

‘(2) A reference to a terrace, in relation to a valley drained by a watercourse, is intended as a reference to an abandoned

floodplain that is situated above an active floodplain associated with the watercourse.

‘(3) A terrace is formed when floodplains are abandoned during down cutting into the valley floor by base level change in the form of tectonic activity, by shifts in sediment load or by changes in the flow regime of the watercourse.’.

13 Amendment of s 25 (Section numbers 25–30 not used)

Section 25, ‘footnote’—

omit, insert—

‘editor’s note’.

14 Insertion of new sch 1AA

Before schedule 1—

insert—

‘Schedule 1AA Valley reaches

sections 3AC to 3AF

Part 1 Overview of valley reaches

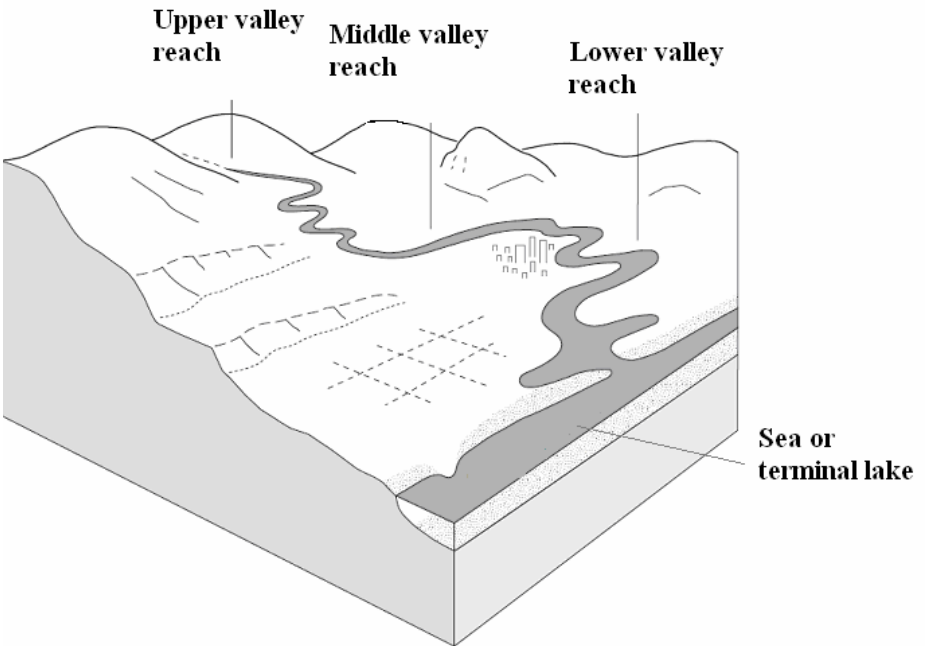

Diagram A—Overview of valley reaches

Part 2 Upper valley reach

Explanation of upper valley reach and associated watercourse

The upper valley reach of a valley drained by a watercourse is typically located in the most elevated parts of the watercourse catchment, often near the catchment's watershed. The valley floor is typically quite narrow, characterised by gorges and in some places is only as wide as the watercourse itself. The valley floor is typically quite steep, characterised by waterfalls and cascades. The general direction and location of the reach is dictated by the valley margins which appear as significant geomorphic features.

The watercourse is typically narrow and deep with a V-shaped profile carved into the bedrock. The location of the watercourse within the narrow valley floor is generally dictated by the valley margins. The flow in the watercourse has high velocity and high energy, resulting in high erosive power. High flow events are confined within the watercourse by the adjoining valley margins. Past flow levels are often evidenced by scour marks on the valley margin or the deposition of lighter material, for example sands and twigs, carried by the flow. The bed and banks of the watercourse typically consist of bedrock and very coarse material, including boulders, cobbles and gravel. The movement and deposition of material happens primarily in periods of high flow. Flow tends to respond directly to rainfall events and during dry periods there is little or no base flow. Vegetation within or along the watercourse is often sparse or immature due to the regular scouring caused by high flow energy or by the absence of deep soil profiles.

Where the watercourse is wider, it could have a narrow bench adjacent to one bank or the other. These benches are typically made of finer materials, commonly cobbles and gravel. These benches tend to be short in length and disconnected, and alternate from one side of the watercourse to the other as the flow rebounds from one valley margin to the other. These benches are regularly reshaped by flow events.

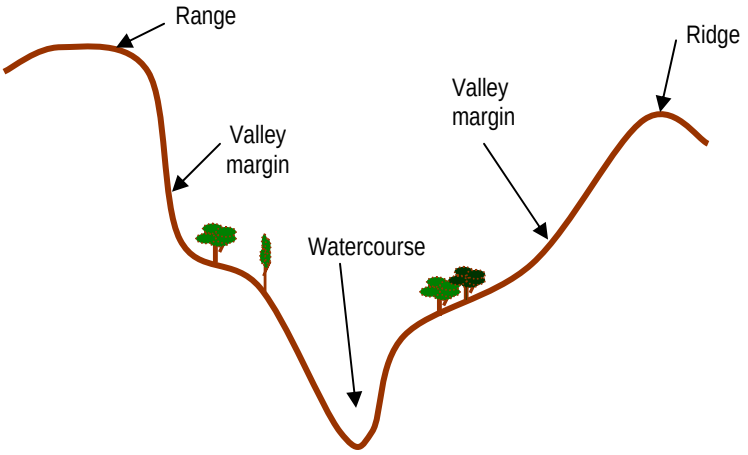

Diagram B—Cross sectional view of an upper valley reach

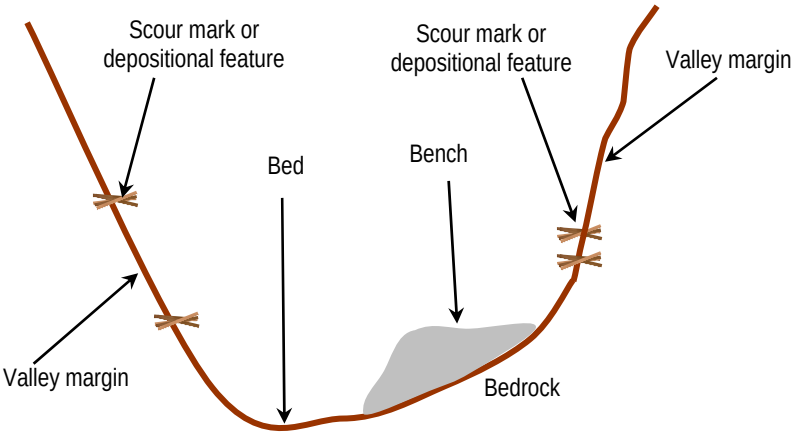

Diagram C—Cross sectional view of a watercourse in an upper valley reach

Part 3 Middle valley reach

Explanation of middle valley reach and associated watercourse

The middle valley reach of a valley drained by a watercourse is typically located in the watercourse catchment's pediment or foot hills. The middle valley reach is at a higher elevation than the lower valley reach but is not as high as the upper valley reach. The valley floor is typically of moderate width, and is characterised by narrow floodplains between valley margins of fringing hills, terraces and low ridges. The valley floor has a moderate grade, characterised by a meandering watercourse and occasional cascades. The valley floor is typically comprised of ancient sediments deposited by the watercourse in earlier geological periods, and can be interrupted by occasional bedrock ridges or bars that are exposed in the watercourse.

The watercourse carries flow from several tributaries and so is typically deeper and wider than in the upper valley reach. The location of the watercourse within the valley floor is generally dictated by its meander pattern and is occasionally bounded by the

valley margin. The flow in the watercourse has less energy and is not as fast as in the upper valley reach. However, it has enough energy to transport sediment eroded in the upper valley reach down to the lower valley reach. Much of the sediment being transported is temporarily stored in the watercourse (typically as in-stream benches and islands) or on adjacent floodplains before being further eroded and transported downstream in subsequent high flow events.

A number of benches are typical in the watercourse, created by the mixture of flow size and frequency. The lower, narrower channel of the watercourse is shaped by the more frequent, smaller flows and the wider, deeper channel of the watercourse is shaped by less frequent large flows. High flow events commonly erupt from the watercourse onto the adjacent floodplain. The bed and banks of the watercourse typically consist of medium sized material, such as cobbles, gravel and sand. Subject always to long-term weather cycles, almost perennial base flows occur because of the slow drainage of upper sections of the middle valley reach and groundwater inflows from alluvial floodplain aquifers along the watercourse. Vegetation within or along the watercourse is well established because of the reliable base flows and stable channel profile.

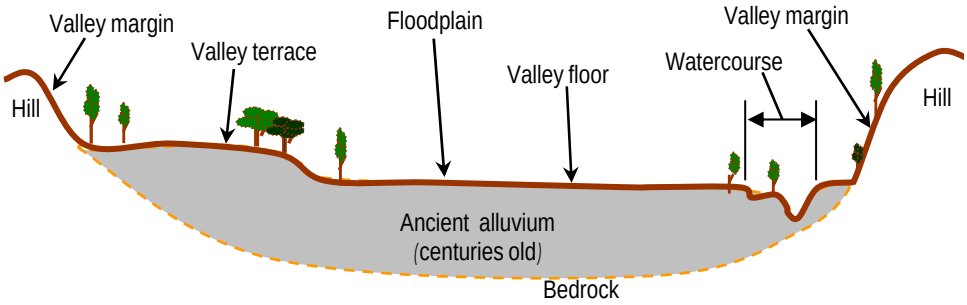

Diagram D - Cross sectional view of a middle valley reach

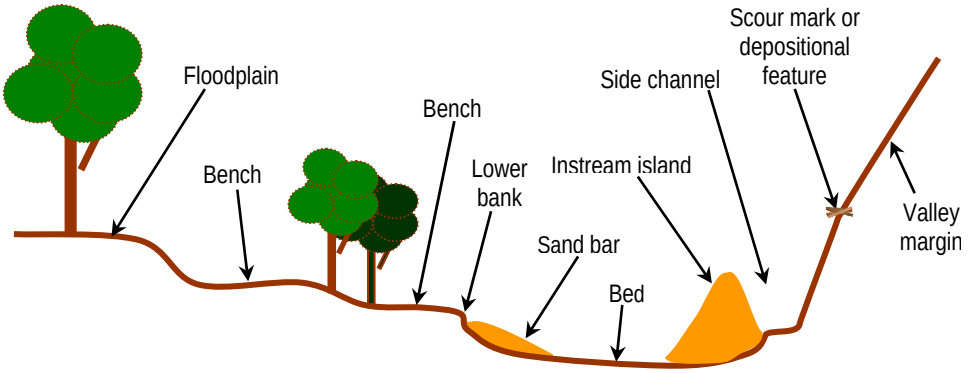

Diagram E - Cross sectional view of a watercourse in a middle valley reach

Part 4 Lower valley reach

Explanation of lower valley reach and associated watercourse

The lower valley reach of a valley drained by a watercourse is typically located in the watercourse catchment's lowest elevations, generally immediately upstream of where the watercourse becomes tidal or where it flows into a natural terminal lake. The valley floor is quite broad, characterised by extensive floodplains between distant valley margins of fringing hills and low ridges. The valley floor has a low gradient, characterised by a strongly meandering watercourse with ox-bows and occasional anabranches. The valley floor is typically comprised of ancient sediments deposited by the watercourse in earlier geological periods.

The watercourse gradient is quite low, resulting in slow moving flow. However, the watercourse is now carrying water from all upstream reaches and so dissipates this kinetic energy by meandering across the valley floor, eroding and depositing sediment along the way. This results in a comparatively wide, shallow channel, often with large sediment accumulations such as in-stream benches and islands. Sediment that makes up the channel

of the watercourse and adjoining floodplains tends to be fine, commonly gravel, sand and silt, with low resistance to erosion. Large flows result in floods that spread across the floodplains, depositing fine sediment. Perennial base flows occur because of the slow drainage of upper sections of the lower valley reach and groundwater inflows from alluvial floodplain aquifers along the watercourse. Vegetation within or along the watercourse is well established due to the reliable base flows and stable channel profile.

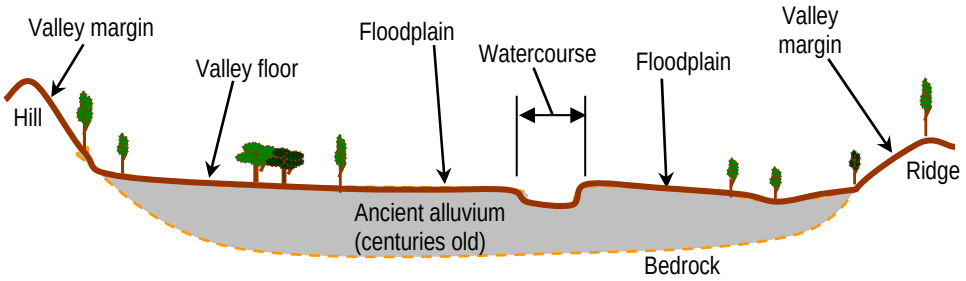

Diagram F - Cross sectional view of a lower valley reach

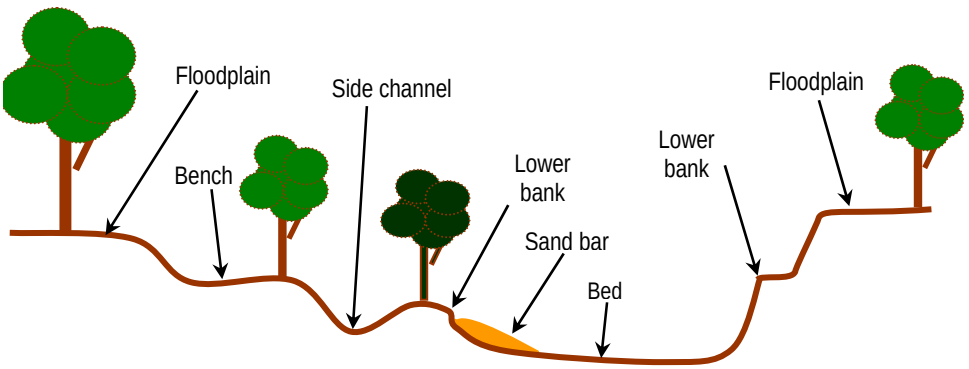

Diagram G - Cross sectional view of a watercourse in a lower valley reach

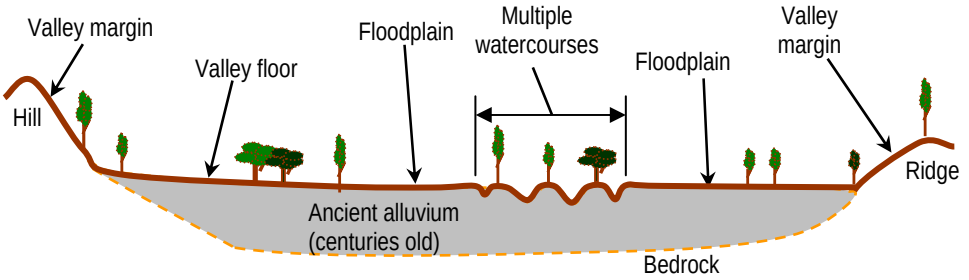

Diagram H—Cross-sectional view of a lower valley reach with multiple watercourses

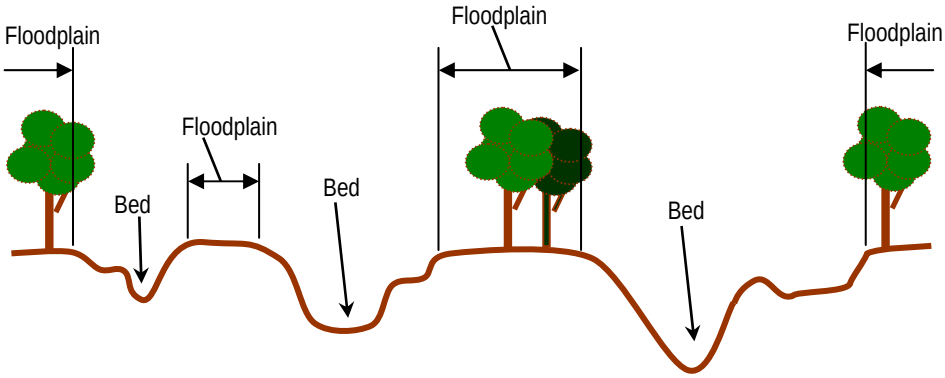

Diagram I—Cross-sectional view of multiple watercourses in a lower valley reach'.

ENDNOTES

1 Made by the Governor in Council on 24 June 2010.

2 Notified in the gazette on 25 June 2010.

3 Laid before the Legislative Assembly on . . .

4 The administering agency is the Department of Environment and Resource Management.