



A strategic approach to managing urban development to protect local waterways









Individual building sites



BEFORE



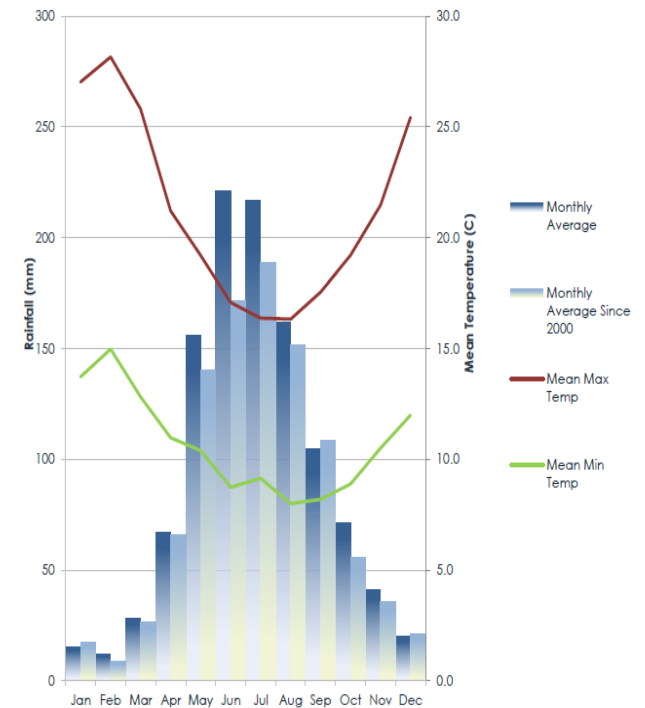
AFTER





Environmental conditions in AMR

- Winter rainfall leading to soil saturation, runoff and erosion and transport of sediments
- High intensity summer rainfall associated with ex-tropical cyclones and thunderstorms – high erosion risk













2011



2018



Stormwater kit for builders information pack

Stabilised Entry and Exit Point



Clean Site
BUILDING A BETTER ENVIRONMENT



Guidelines for Erosion & Sediment Control at Building Sites in the South West of WA



Concrete Works



Clean Site
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Construction 1

1. Strip topsoil, level if space available



Building A Better Environment

Wash Down

Contained Wash Areas



Clean Site
BUILDING A BETTER ENVIRONMENT



What goes down the drains ends up in the sea!

Please Take Care in our Catchment

Building A Better Environment

If you are involved in the building industry, you are required to provide the right circumstances necessary to reduce any environmental impact as a result of the building process.

All building work must be carried out in a way to stop the entry of any pollution into the stormwater system.

The following hints are aimed at the building activities and trades involved on a typical building site.

- Wash-down water is best managed by draining it into a container (eg 200L drum) and allowing the water to stand until the solid particles settle to the bottom. Where possible the water can then be siphoned off and reused and the residue in the bottom can be allowed to dry before being disposed of in a recycling or solid waste bin.
- No wash-down water may be disposed of to the sewerage system.
- As a final option, the wash-down area should drain to a low point or contained area where water is allowed to percolate through geotextile fabric into the soil. The settled and hardened

Group focus on building sites

WARREN HATELY

A NEW collaborative project is looking to cut down the amount of sediment leaving work sites and polluting local waterways.

The Cape-to-Cape Catchments Group is running the program with the help of the Augusta-Margaret River Shire Council following incidents in which building site run-off created river choke points.

Project officer Charlie Cox would provide an information kit to help site supervisors keep a lid on sediment and pollution control ahead of the council considering a local waterways law in 2013.

Council environment officer John McKinney said the ability to give on-the-spot fines for offences would go a long way to improving building site management.

Mr Cox said the aim of the information kits was to change how workers went about their jobs by showing easy ways to protect the river's health.

"Sediment fills up the deep pools in the river, home to a variety of wildlife including marron and fish," the CCCG's Drew McKenzie said.

"Sediment also carries a nutrient load which can lead to algal blooms in the estuary if we are not careful.

"We are really lucky to have a river that we can swim and fish in, not everyone in the South West is that lucky, so it's up to us to look after it."

Local builders will receive a letter with details of the project and an information kit this week.

Additional kits would be available from the CCCG and council offices. Call John McKinney on 9780 5252 or the CCCG on 9757 2202.



Charlie Cox and John McKinney want builders to be aware of stormwater run-off from building sites, which are a threat to local waterways.

PICTURE: DEREK POOL

Best practice sediment management for development

Scoping report

Prepared for the
Shire of Augusta-Margaret River

By Urbaqua

April 2018

urbaqua
land and water solutions

Best practice sediment management for development: Scoping report

CONTENTS

1	Introduction.....	i
2	Context: Shire of Augusta-Margaret River.....	i
2.1	Environmental characteristics	i
2.2	Current practices at the Shire	ii
3	Local and national approaches.....	1
3.1	Implementation mechanisms.....	1
3.2	Technical information	6
3.3	WA local government approaches.....	10
3.4	Queensland	12
3.5	New South Wales	13
3.6	Victoria	13
4	Key Issues.....	15
4.1	Effectiveness of controls	15
4.2	Enforcement by local government.....	19
4.3	Understanding and industry support.....	19
5	Findings and recommendations	21
6	References	24

Figures

Figure 1: Margaret River Climate Summary (BoM, 2018).....	i
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Tables

Table 1: Recommended practices for erosion and sediment control from development	9
Table 2: Effectiveness of statutory mechanisms in the planning and development approvals process	16
Table 3: Summary of mechanisms recommended to improve the management and control of erosion and sediment from development	22

Connect your downpipes



Sediment Tool Box

Summary report

urbaqua
land and water solutions

Prepared for the
Shire of Augusta-Margaret River

By Urbaqua

May 2018

Sediment Tool Box: Summary report

Contents

1	Introduction.....	1
2	Local Law	3
3	Development Conditions	8
3.1	Erosion and Sediment Management Plan Requirements	9
4	Education	12
4.1	Building Information Sheet	13
4.2	Development Information Sheet	17
4.3	Sediment Law Information Sheet.....	21
5	Enforcement	23
5.1	Building Site Assessment Checklist	24
5.2	Development Site Assessment Checklist	29
6	Review	34
7	References and Resources	35

Tables

Table 1: Sediment tool box – recommended roles and responsibilities	2
Table 2: Risk Assessment	10

Sediment and Erosion Management



The *Shire of Augusta Margaret River Site Erosion and Sand Drift Law* has recently been approved. Builders and homeowners are now required to actively prevent erosion on their property. Preventing erosion and downstream sedimentation not only improves environmental habitats and the function of natural waterways, but also reduces the risk of flooding (from clogging of drainage infrastructure); reduces costs associated with supplying building sand and drainage repairs; and improves the streetscape by removing sand and waste from roads and verges.

What is required?

The person in charge of the building site is required to:

1. Maintain a clean site

- Maintain a clean site, including sweeping up loose material and placing all waste material in bins that are regularly collected.
- Ensure all wash down areas (including concrete and mortar slurries) are contained within the site. Do not allow material to enter drainage systems.
- Educate all staff about the requirements to maintain a clean site.



Builders should check the weather forecast and prepare sites for wet weather. As little as five minutes of sweeping of footpaths, roadways and driveways at the end of each working day is relatively inexpensive and provides considerable benefits.

2. Stabilise Access points and stockpiles

- Where possible, restrict vehicle access to one entry/exit point. Placing blue metal at the access point will allow all weather access, reduce the amount of soil carried off the site by vehicles, and provide a permanent base for the driveway. Regularly sweep up and remove any sand off the road.
- Minimise material stockpiling by scheduling deliveries. Place material within the lot and away from the roadway and 2m away from driveways and other hardstand areas.
- Cover stockpiles with plastic sheeting or other material when rain is expected.



3. Connect Downpipes

The Completion of roof and guttering before downpipes or connections to soakwalls and/or street drainage poses a significant risk for erosion on building sites. Rooves are a large collector of rainfall and uncontrolled runoff can mobilise sediment offsite and therefore downpipe connections should be completed as soon as possible. Where this is not possible during construction, temporary downpipes must be installed and/or gutter bypass systems that pipe water from gutters to street drainage in temporary pipes and prevent runoff across the site.

Note: some building companies do not include downpipe connections in their building quote. Check with your building company and request that they do this as site flooding can also damage your house.



4. Control Sediment: Use sediment barriers when necessary

If you minimise soil disturbance, cover your soil stockpile and divert water away from your site then there will be less need for sediment controls. Sediment controls typically only capture coarse sediment, but let through fine sediment. Where bare soil cannot be avoided, install a suitable sediment barrier such as straw bales or a sediment fence, and regularly maintain the structure.



LOCAL GOVERNMENT ACT 1995

SHIRE OF AUGUSTA MARGARET RIVER

EROSION AND SEDIMENT CONTROL LOCAL LAW 2019

Under the powers conferred by the *Local Government Act 1995* and under all other powers enabling it, the Council of the *Shire of Augusta Margaret River* resolved on 27 February 2019 to make the following local law.

PART 1 - PRELIMINARY

1.1 Citation

This local law may be cited as the *Shire of Augusta Margaret River Erosion and Sediment Control Local Law 2019*.

1.2 Commencement

This Local Law will come into operation 14 days after the day on which it is published in the *Government Gazette*.

1.3 Application

The provisions of this local law apply and have force and effect throughout the whole of the district.

1.4 Definitions

(1) In this local law unless the context otherwise requires -

Act means the *Local Government Act 1995*;

Authorised person means a person authorised by the local government under section 9.10 of the Act to perform any of the functions of an authorised person under this local law;

Best Management Practice means a physical, chemical, structural or managerial practice that prevents, reduces, or treats the contamination of water, or which prevents or reduces soil erosion;

Builder means any person who holds, or will hold, a building permit issued in respect of building works on a building site, or any person who has, or will have, effective control of a building site;

Building Code means the latest edition of the Building Code of Australia published by, or on behalf of, the Australian Building Codes Board, as amended from time to time, but not including explanatory information published within the code;

Building site means any lot of land for which a building permit is current, but does not include a lot upon which there exists a commercial, industrial or residential building and-

(a) the current building permit is issued in respect only of a pergola, patio, shed or other Class 10 building as classified by the Building Code; and

(b) means of collection and removal of rubbish, satisfactory to the local government but other than



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amrshire.wa.gov.au

See Shire websites for detailed fact sheets
amrshire.wa.gov.au/services/building



Building Information Sheet

Sediment and Erosion Management

May 2018

With the coming introduction of the *Shire of Augusta Margaret River Site Erosion and Sand Drift Law 2018*, builders and home owners are required to actively prevent erosion and sedimentation from activities on their lot. The Shire has experienced ongoing erosion associated with region's clay soils. Preventing erosion and downstream sedimentation not only improves environmental habitats and the function of natural waterways, but also reduces the risk of flooding (from clogging of drainage infrastructure); reduces costs associated with supplying building sand; and improves the streetscape within the community by removing sand and waste from roads and verges.

This fact sheet provides guidance on the sediment control measures that should be implemented on building sites.

This fact sheet has been prepared acknowledging that a one-size-fits-all approach may lead to unnecessary buildings costs. Land owners and occupiers (including builders and contractors) should undertake a site assessment and apply the appropriate controls for their site risk. Note that if your site meets any of the criteria in the higher risk categories, that is the risk level to apply.

If you are unsure of how to assess your site, please contact the Shire's Environmental Officer on 08 9780 5255.

Shire staff will regularly inspect building sites within the region and have the ability to issue fines for non-compliance with the *Shire of Augusta-Margaret River Site Erosion and Sand Drift Law 2018*.



Shire of Augusta Margaret River

Site Assessment

Low Risk

- ☐ Large lots (>2000m²)
- ☐ Soils comprised of coarse sand
- ☐ Onsite vegetation to protect soil outside of building pad
- ☐ Lot and surrounding slopes <1:10
- ☐ No waterways (creeks, rivers, streams) within the property boundary or within 250m downstream

Medium Risk

- ☐ Urban lots (>500m²)
- ☐ Soils comprised of mainly sandy clays or silt
- ☐ Lot and surrounding slopes between 1:10 and 1:4
- ☐ No waterways (creeks, rivers, streams) within the property boundary or within 100m downstream
- ☐ No downstream drainage infrastructure (roadside entry pits, grates and pipes)

High Risk

- ☐ Urban lots (<500m²)
- ☐ Soils comprised mainly of clay and silt material
- ☐ Presence of dispersive clay soils onsite and downstream
- ☐ Lot and surrounding slopes >1:4
- ☐ Downstream waterways (creeks, rivers, streams) within 100m of property boundary (including any waterways within the property)
- ☐ Waterways (creeks, rivers, streams) within the property boundary and/or within 250m downstream
- ☐ Downstream drainage infrastructure (roadside entry pits, grates and pipes)



Building Information Sheet

Sediment and Erosion Management

May 2018

Connecting Downpipes

Completion of roof and guttering before downpipes or connections to soakwells and/or street drainage poses a significant risk for erosion on building sites. Roofs are a large collector of rainfall and uncontrolled runoff can mobilise sediment offsite and therefore downpipe connections should be completed as soon as possible. Where this is not possible during construction, temporary downpipes must be installed (hard flexible or non-flexible pipes) and/or gutter bypass systems that pipe water from gutters to street drainage in temporary pipes and prevent runoff across the site.



Lake Macquarie City Council.

Public Safety

Implementation of any sediment controls within verges, footpaths and roadways should ensure that they do not present a hazard for vehicles and/or pedestrians.

Further Information

- Shire of Augusta Margaret River website (<https://www.amrshire.wa.gov.au/>)
- Call the Shire's Environmental Officer on 08 9780 5255
- Erosion and Sediment Control Manual for the Darling Range, Perth, WA;
- Guidelines for Erosion and Sediment Control at Building Sites in the South West of WA; and,
- International Erosion Control Association (Australasia) (IECA) (www.austieca.com.au)

What about new home owners?

When land owners receive their keys before landscaping, driveways and other features are installed and exposed soil is left by the builders, the owner must do the following:

- ☐ Don't remove existing controls left by the builder (unless they are unsafe or ineffective)
- ☐ Check to see if they are installed correctly
- ☐ Install sediment measures (consistent with this fact sheet)
- ☐ Aim to finish landscaping works as a priority
- ☐ Clean up any sediment that is washed or blown onto the verge, footpath, gutter or roadway

Exposed soil, particularly in front yards, should be covered as soon as possible with a ground cover such as mulch, gravel, vegetation or geo-fabric. It is important to do this prior to any rainfall.

Contact the Shire with any questions.

Acknowledgements

This fact sheet has been prepared with information from the referenced documents, consultation with other local authorities (including Lake Macquarie City Council) and information provided by the Sediment Task Force (Perth NRM).

Note that the guidance is general and specific site erosion and sediment control designs may be required to ensure compliance with the *Shire of Augusta Margaret River Site Erosion and Sand Drift Law 2018*.



Wooditjup Bilya Protection Strategy

Wooditjup Bilya Protection Strategy

*Working together to protect the
Margaret River*



July 2019



natural resource
management program



The critically endangered hairy murray (*Dorippe australiensis*) and Margaret River burrowing crayfish (*Geogaster australis*)

JOIN US TO CELEBRATE THE LAUNCH OF THE
**WOODITJUP BILYA
PROTECTION STRATEGY**

**SATURDAY 23RD NOVEMBER
3-5PM AT ROTARY PARK**

- Welcome to Country
- Shire President's Address
- Key achievements
- Margaret River Primary School's River Project
- Afternoon tea
- River walk with cultural custodian Zac Webb

ALL WELCOME

Shire of Augusta Margaret River

Nature Conservation
MARGARET RIVER REGION

Government of Western Australia
natural resource
management program

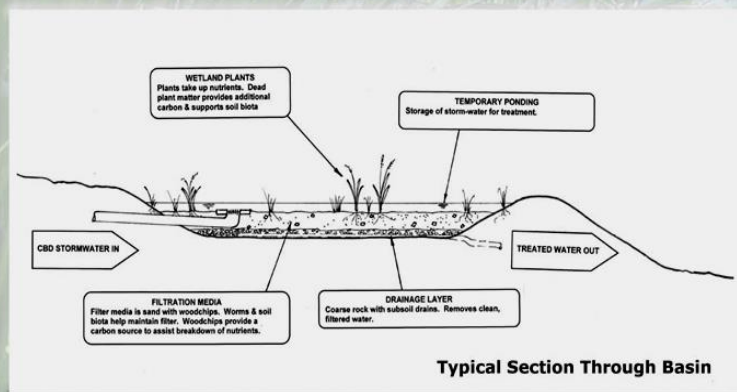
Water

SHIRE OF AUGUSTA
MARGARET RIVER

Margaret River CBD 'Rain Garden'

The Rain Garden is a bioretention basin that treats the storm water from the Margaret River CBD, removing sediment, nutrients, rubbish and other pollutants before stormwater enters the Margaret River.

Local native vegetation is planted in the basins and the surrounding area as part of the treatment process and rehabilitation of previously weed infested area.



Bioretention systems (or filtration trenches) can provide efficient treatment of stormwater through fine filtration, extended detention and some biological uptake. They also provide flow retardation and have good potential for nitrogen removal via uptake and denitrification.



This Bioretention basin and sedimentation treatment system captures water from the 27Ha town centre catchment. The water flows out of the bypass channel to the GPT and from one basin to the other, then back to the existing channel before entering the river.



