INFRASTRUCTURE - ROAD MATERIALS POLICY

APPROVAL DATE: 19/05/2015
REVIEW DATE: 18/05/2018

This Policy is compliant with the Charter of Human Rights legislation and Council's Heritage Policy

Introduction

Road construction materials are an important part of providing a safe environment for all users of roads. It is also one of several elements that would form an important part of any future streetscape strategy.

The policy seeks to:

- Comply with Council's Heritage policy by encouraging the retention of original bluestone road or laneway materials.
- Conserve and repair the traditional street fabric of Yarra using historic materials, sympathetic to the character of the municipality while also meeting technical, access, safety and health requirements.
- Serve as a guide for developers, consultants, Council and residents who may wish to alter the existing infrastructure.
- Meet the Disability Discrimination Act 1992, Yarra Planning Scheme, Australian Standards AS1428 (Design for Access and Mobility) and other relevant standards with respect to providing safe access to all pedestrians including the disabled, the elderly, cyclists and other road users.
- Promote the use of recycled materials and materials with improved environmental outcomes.

Preamble

In order to have an efficient and cost effective policy for the maintenance of existing road infrastructure, works need to be carried out with minimum time delay and in accordance with specified budgets. To allow this to occur throughout this document a distinction is made between reconstruction and repair/maintenance work. This is particularly relevant in heritage overlay areas where no planning permit is required for repairs or routine maintenance, which do not change the appearance of a heritage place. Where the appearance is changed a planning permit will be required.

HERITAGE OVERLAY AREAS

Local Streets in Residential Zones

Kerb and Channel Reconstruction

All existing bluestone kerb and channel is to be reset to the same pattern as existing and as smoothly as possible. Maintenance works, including any reinstatement works, must ensure that existing materials are reused.

Where a street has had all bluestone kerbs and channel removed in the past and it is to be reconstructed that street is to be constructed to the original bluestone kerb and channel pattern

where this is evident. Where the original pattern is not evident then a bluestone kerb and a two-pitcher channel is to be used. Where limited remedial work is required then the existing material is to be used.

Where there are exceptional circumstances, which may generate safety issues for pedestrians or other road users, the channel may be reduced in width.

Where kerb and channel is to be reconstructed or tree roots are lifting the channel, consideration is to be given to removing part or all of the channel adjacent to the street tree. Council's Arborist is to be consulted and if it is deemed beneficial to the tree, part or all of the channel adjacent to the street tree can be removed and replaced with granitic sand or other permeable material.

In the longer term the site should be assessed as to the practicality of planting trees further into the roadway so as to minimise risks of displacement of kerb.

Where trees planted in the footpath have displaced the kerb and channel, the tree roots are to be trimmed and the kerb and channel replaced on its existing alignment.

Footpaths

Where undertaking limited maintenance work the footpath should be repaired in the same material as existing.

Where the existing footpath is constructed of heritage materials (such as the slate footpath in Nicholson Street, Fitzroy), the existing material is to be retained.

Where significant maintenance work or reconstruction is being undertaken the footpath should be reconstructed in asphalt or concrete, whichever is the heritage material for the street, unless Council has specifically endorsed the use of another material such as sawn bluestone or bluestone pavers.

Medians, Traffic Islands and Neckings

Existing bluestone medians, traffic islands and neckings are to be modified or repaired in bluestone. Where the medians, traffic islands and neckings are not made of bluestone and they require significant repairs or modifications, they will be reconstructed using existing material types unless unusual circumstances warrant reconstruction in bluestone.

Historically, some medians were constructed entirely in precast concrete including their end radials. Some of the median end radials were reconstructed in bluestone in the past. Where the existing precast concrete end radials are damaged they will be replaced in precast concrete. Where the existing end radials are in bluestone and the entire precast concrete median requires reconstruction, the radials will be reconstructed using the same bluestone or where they are damaged, they will be replaced with sawn bluestone radials. The remainder of the median will be reconstructed in precast concrete.

Where existing in situ concrete medians exist including the radials, reconstruction will be in the same materials.

Where the existing street kerb and channel is bluestone pitchers or dressed kerb, new neckings are to be constructed with bluestone pitcher kerb and channel.

New median islands and traffic islands should be constructed of bluestone. However charcoal coloured concrete or non-traditional materials can be used as an alternative if there are site-specific reasons why bluestones should not be used. Where landscaping is not practical, asphalt, bluestone or non-traditional materials can be used as an infill.

Pedestrian paths are to be constructed in asphalt, sawn bluestone pitchers (smooth side up), bluestone pavers or charcoal coloured concrete or pavers. Care must be taken to ensure all paths are suitable for disabled access.

Dressed Kerb and Bluestone Channel

For reconstruction works existing dressed kerbstone (historical, large, cut bluestone kerbing with 2 smooth surfaces) is to be re-used. Alternatively, bluestone pitcher kerb stones or modern sawn kerbstone can be used where there is insufficient dressed kerbstone.

If the existing channel is intact, this is to be retained. However where the bluestone channel has been substantially changed in the past then it is to be reconstructed in the original material and pattern where this is evident. Where the original pattern is not evident, a two-pitcher channel is to be constructed.

Where kerb and channel is to be reconstructed or tree roots are lifting the channel, consideration is to be given to removing part or all of the channel adjacent to the street tree. Council's Arborist is to be consulted and if it is deemed beneficial to the tree, part or all of the channel adjacent to the street tree can be removed and replaced with granitic sand or other permeable material.

In the longer term the site should be assessed as to the practicality of planting trees further into the roadway so as to minimise risks of displacement of kerb.

Where trees planted in the footpath have displaced the kerb and channel, the tree roots are to be trimmed and the kerb and channel replaced on its existing alignment.

Vehicle Crossings

Where full reconstruction is required:

- Reconstruct existing asphalt or concrete vehicle crossings in asphalt with the layback constructed in the same material as the adjoining kerb and channel. A concrete base with an asphalt overlay can also be used.

Existing bluestone vehicle crossings

- Reconstruct the vehicle crossing footpath/pedestrian area in bluestone pitchers cut in half and laid smooth side up. The bluestone channel, layback and ramp are to be retained as uncut bluestone pitchers. Where there is a centre invert, in the pedestrian area the bluestone pitchers are to be cut in half and laid smooth side up and in the ramp the bluestones pitchers are to be uncut pitchers.

Where partial reconstruction is required:

- Where partial reconstruction of a vehicle crossing (ramp and layback only) is required, retain the existing vehicle crossing and match into the existing using the same materials as the existing.

Wet Crossings

Where an existing bluestone wet crossing is to be reconstructed, the bluestone channel, layback and ramp is to be reconstructed as whole bluestone pitchers. The depth of the invert is to be reduced so that vehicles can travel through the invert comfortably and without scraping. The bluestone pitchers in the pedestrian area are to be cut in half and laid smooth side up.

Where the existing wet crossing is not bluestone, the channel is to be constructed to match the adjoining channel. If the adjoining channel is bluestone then a bluestone channel and one or two pitcher layback is to be used. The ramp and pedestrian area are to be constructed in asphalt or charcoal coloured concrete depending on the adjoining road surface.

Main Roads/Arterials

Kerb and Channel

Main roads and arterial roads generally have clearways, which require cyclists to ride close to the channel. All kerb and channels are to be reconstructed as a bluestone kerb and two-pitcher channel, except where the kerb side lane is equal to or less than the minimum Australian standard for a combined bicycle and through-traffic lane. Where the kerb side lane is equal to or less than the minimum Australian Standards for a combined bicycle and through traffic lane the channel is to be constructed in charcoal coloured concrete. Kerb and channel on main roads is the responsibility of VicRoads, therefore these modifications are subject to VicRoads agreement.

Where kerb and channel is to be reconstructed or tree roots are lifting the channel, consideration is to be given to removing part or all of the channel adjacent to the street tree. Council's Arborist is to be consulted and if it is deemed beneficial to the tree, part or all of the channel adjacent to the street tree can be removed and replaced with granitic sand or other permeable material.

In the longer term the site should be assessed as to the practicality of planting trees further into the roadway so as to minimise risks of displacement of kerb.

Where trees planted in the footpath have displaced the kerb and channel, the tree roots are to be trimmed.

Medians, Traffic Islands and Neckings

Existing medians, traffic islands and neckings are to be modified or repaired in the same or matching materials unless there is some planned redevelopment for these to be upgraded.

New medians and traffic islands are to be constructed using charcoal coloured concrete kerb and channel or precast concrete blocks. Pedestrian paths can be asphalt, charcoal coloured concrete or other smooth paving suitable for disabled access. Where landscaping is not practical, asphalt, bluestone and non-traditional materials can be used as an infill. Neckings are to be constructed to match the adjoining kerb and channel.

Vehicle Crossings

Where full reconstruction is required:

- Reconstruct existing asphalt or concrete vehicle crossings in asphalt with the layback constructed in the same material as the adjoining kerb and channel. A concrete base with an asphalt overlay can also be used. Where there are exceptional circumstances charcoal coloured concrete can also be used.

Existing bluestone vehicle crossings:

- Reconstruct the vehicle crossing footpath/pedestrian area in bluestone pitchers cut in half and laid smooth side up. The bluestone channel, layback and ramp are to be retained as uncut bluestone pitchers. Where there is a centre invert, in the pedestrian area the bluestone pitchers are to be cut in half and laid smooth side up and in the ramp the bluestones pitchers are to be uncut pitchers.

Partial Reconstruction:

- Where partial reconstruction of a vehicle crossing (ramp and layback only) is required. Retain the existing vehicle crossing and match into the existing using the same materials as the existing.

Footpaths

Where undertaking limited maintenance work the footpath should be repaired in the same material as existing.

Where the existing footpath is constructed of heritage materials (such as slate) the existing material is to be retained.

Where significant maintenance work or reconstruction is being undertaken the footpath should be reconstructed in asphalt or concrete, whichever is the heritage material for the street, unless Council has specifically endorsed the use of another material such as sawn bluestone or bluestone pavers.

Commercial/Light Industrial Streets

Kerb and Channel

All existing bluestone kerb and channel is to be reset to the same pattern as existing. Maintenance works, including any reinstatement works, must ensure that existing materials are reused.

Where a street has had all bluestone kerbs and channel removed in the past and it is to be reconstructed that street is to be constructed to the original bluestone kerb and channel pattern where this is evident. Where the original pattern is not evident then a bluestone kerb and a two-pitcher channel is to be used. Where limited remedial work is required then the existing material is to be used.

Where there are exceptional circumstances, which may generate safety issues for pedestrians, or other road users the channel may be reduced in width.

Where kerb and channel is to be reconstructed or tree roots are lifting the channel, consideration is to be given to removing part or all of the channel adjacent to the street tree. Council's Arborist is to be consulted and if it is deemed beneficial to the tree, part or all of the channel adjacent to the street tree can be removed and replaced with granitic sand or other permeable material.

In the longer term the site should be assessed as to the practicality of planting trees further into the roadway so as to minimise risks of displacement of kerb.

Where trees planted in the footpath have displaced the kerb and channel, the tree roots are to be trimmed as approved by Council's arborist.

Vehicle Crossings

Where full reconstruction is required:

- Reconstruct existing asphalt or concrete vehicle crossings in asphalt with the layback constructed in the same material as the adjoining kerb and channel. A concrete base with an asphalt overlay can also be used. Where there are exceptional circumstances charcoal coloured concrete can also be used.

Existing bluestone vehicle crossings:

- Reconstruct the vehicle crossing footpath/pedestrian area in bluestone pitchers cut in half and laid smooth side up. The bluestone channel, layback and ramp are to be retained as uncut bluestone pitchers. Where there is a centre invert, in the pedestrian area the bluestone pitchers are to be cut in half and laid smooth side up and in the ramp the bluestones pitchers are to be uncut pitchers.

Partial Reconstruction:

- Where partial reconstruction of a vehicle crossing (ramp and layback only) is required. Retain the existing vehicle crossing and match into the existing using the same materials as the existing

Footpaths

Where undertaking limited maintenance work the footpath should be repaired in the same material as existing.

Where the existing footpath is constructed of heritage materials (such as slate) the existing material is to be retained.

Where significant maintenance work or reconstruction is being undertaken the footpath should be reconstructed in asphalt or concrete, whichever is the heritage material for the street, unless Council has specifically endorsed the use of another material such as sawn bluestone or bluestone pavers.

Laneway Repair/Reconstruction

Where a laneway requires immediate temporary minor patching to ensure public safety, proper drainage or vehicle access then the patching will be undertaken in asphalt.

Existing surface material whether bluestone or asphalt is to be used for minor permanent patching. Where the laneway requires significant rehabilitation or reconstruction then the laneway will be fully restored with the existing surface materials, whether bluestone or asphalt.

Where it is determined that disabled access along a bluestone laneway is required, construct a smooth bluestone surface 1.2 to 1.8m wide on one side of the laneway from the development to the nearest abutting street using bluestones cut in half and laid smooth side up.

Vehicle Crossings at Laneways

Where a bluestone laneway intersects with an abutting street, the section between the building line and the street channel shall be constructed as a vehicle crossing i.e.

Where full reconstruction is required:

- Reconstruct existing asphalt or concrete vehicle crossings in asphalt with the layback constructed in the same material as the adjoining kerb and channel. A concrete base with an asphalt overlay can also be used. Where there are exceptional circumstances charcoal coloured concrete can also be used.

Existing Bluestone Vehicle Crossings:

- Reconstruct the vehicle crossing footpath/pedestrian area in bluestone pitchers cut in half and laid smooth side up. The bluestone channel, layback and ramp are to be retained as uncut bluestone pitchers. Where there is a centre invert, in the pedestrian area the bluestone pitchers are to be cut in half and laid smooth side up and in the ramp the bluestones pitchers are to be uncut pitchers.

Partial reconstruction:

- Where partial reconstruction of a vehicle crossing (ramp and layback only) is required, retain the existing vehicle crossing and match into the existing using the same materials as the existing.

New Developments Adjacent To Bluestone Laneways

Where a planning permit application referral is received for a new development with pedestrian access on to an existing bluestone laneway, the developer is to construct a 1.2 to 1.8m wide smooth bluestone pavement on one side of the laneway, from the development to the nearest

abutting street. The pavement is to be constructed using whole bluestones laid as smooth as possible or bluestone pitchers cut in half and laid smooth side up. The method to be used is to be determined by Council's Engineering Services Unit as part of the planning permit referral process. The pavement is to provide improved pedestrian access and satisfy the Disability Discrimination Act 1992.

Disability Access in Bluestone Lanes

Where it is determined that disabled access along a bluestone laneway is required, construct a smooth bluestone surface 1.2 to 1.8m wide on one side of the laneway from the development to the nearest abutting street using bluestones cut in half and laid smooth side up.

Pram Crossings

Pram crossing ramps are part of the footpath and are to be constructed to match the footpath material. Where there is a bluestone channel the ramp is to have a one-pitcher layback and the channel width must match the abutting channel. The bluestones in the layback and channel are to be cut in half and laid smooth side up.

Tactile Ground Surface Indicators

Tactile ground surface indicators for the orientation of people with vision impairment should be a colour that is sympathetic to the surrounding area i.e. steel grey or an alternative colour agreed by Council's Heritage Advisor, but must still meet the luminar difference specified in Australian Standards AS1428.4. Tactile pavers are to be installed in high use pedestrian areas and in the vicinity of public facilities as part of construction works.

NON-HERITAGE OVERLAY AREAS

Local Streets in Residential Zones

Kerb and Channel Reconstruction

Existing bluestone kerbing is to be retained in all cases where reconstruction is required. Where there is an existing bluestone channel it is to be constructed with a two-pitcher channel. Where the channel is concrete it is to be reconstructed as concrete.

Existing concrete kerb and channel will be replaced with the same material unless there is some planned redevelopment of the street or exceptional circumstances where the use of bluestone or charcoal coloured concrete is deemed to be more appropriate.

Where kerb and channel is to be reconstructed or tree roots are lifting the channel, consideration is to be given to removing part or all of the channel adjacent to the street tree. Council's Arborist is to be consulted and if it is deemed beneficial to the tree, part or all of the channel adjacent to the street tree can be removed and replaced with granitic sand or other permeable material.

In the longer term the site should be assessed as to the practicality of planting trees further into the roadway so as to minimise risks of displacement of kerb.

Where trees planted in the footpath have displaced the kerb and channel, the tree roots are to be trimmed and the kerb and channel replaced on its existing alignment.

Footpaths

Where undertaking limited maintenance work the footpath should be repaired in the existing material.

Where significant maintenance work or reconstruction is being undertaken the footpath should be reconstructed in the existing material for the street, unless the use of another material such as asphalt, concrete, sawn bluestone or bluestone pavers has been approved either by Council planning endorsement or by the approval of Council's supervising officer.

Medians, Traffic Islands and Neckings

Existing median, traffic islands and neckings are to be modified or repaired in the same or matching materials unless there is some planned redevelopment for these to be upgraded.

All new medians and traffic islands are to be constructed using charcoal coloured concrete kerb and channel. New neckings are to be constructed to match the street kerb and channel. Asphalt, bluestone, charcoal coloured concrete and other paving materials can be used as an infill material where landscaping is not practical. Pedestrian paths are to be constructed in asphalt charcoal coloured concrete or smooth non-traditional materials suitable for disabled access.

Dressed Kerb and Bluestone or Concrete Channel

For reconstruction works existing dressed kerbstone is to be re-used. Alternatively, pitcher kerbstones can be used where there is insufficient dressed kerbstone. A two-pitcher channel is to be constructed. Where the existing channel is concrete it is to be reconstructed with concrete.

Where kerb and channel is to be reconstructed or tree roots are lifting the channel, consideration is to be given to removing part or all of the channel adjacent to the street tree. Council's Arborist is to be consulted and if it is deemed beneficial to the tree, part or all of the channel adjacent to the street tree can be removed and replaced with granitic sand or other permeable material.

In the longer term the site should be assessed as to the practicality of planting trees further into the roadway so as to minimise risks of displacement of kerb.

Where trees planted in the footpath have displaced the kerb and channel, the tree roots are to be trimmed and the kerb and channel replaced on its existing alignment.

Vehicle Crossings

Where an existing vehicle crossing requires modification as a result of kerb and channel or footpath works then, where surface levels allow, the vehicle crossing will be retained and modified in the existing material, except where the vehicle crossing is all bluestone. The layback will be constructed of the same material as the adjoining kerb and channel material.

Where a non-bluestone vehicle crossing must be fully reconstructed as a result of kerb and channel or footpath works, then a charcoal coloured concrete or asphalt ramp can be constructed. The channel and layback is to be constructed of the same material as the adjoining kerb and channel.

Existing bluestone vehicle crossings in non-heritage areas are to be reconstructed so that the ramp is constructed of uncut bluestone pitchers and the pedestrian area is bluestone pitchers cut in half and laid smooth side up. The channel and layback material is to match the adjoining channel. Where the adjoining channel is bluestone, the layback and channel must be uncut bluestones.

Wet Crossings

Where an existing bluestone wet crossing is to be reconstructed, the bluestone channel, layback and ramp is to be reconstructed as whole bluestone pitchers. The depth of the invert is to be reduced so that vehicles can travel through the invert comfortably and without scraping. The bluestone pitchers in the pedestrian area are to be cut in half and laid smooth side up.

Where the existing wet crossing is not bluestone, the channel is to be constructed to match the adjoining channel. If the adjoining channel is bluestone then a bluestone channel and one or two

pitcher layback is to be used. The ramp and pedestrian area are to be constructed in asphalt or charcoal coloured concrete depending on the adjoining road surface.

Main Roads/Arterials

Kerb and Channel

Main roads and arterial roads generally have clearways, which require cyclists to ride close to the channel. Bluestone kerb and channels are to be reconstructed as a bluestone kerb and two-pitcher channel, except where the kerb side lane is equal to or less than the minimum Australian standards for a combined bicycle and through traffic lane. Where the kerb side lane is equal to or less than the minimum Australian Standards for a shared bicycle through-traffic lane the channel is to be constructed in charcoal coloured concrete. Existing concrete kerb and channel is to be reconstructed in concrete. Kerb and channel on main roads is the responsibility of VicRoads, therefore these modifications are subject to VicRoads agreement.

Where kerb and channel is to be reconstructed or tree roots are lifting the channel, consideration is to be given to removing part or all of the channel adjacent to the street tree. Council's Arborist is to be consulted and if it is deemed beneficial to the tree, part or all of the channel adjacent to the street tree can be removed and replaced with granitic sand or other permeable material.

In the longer term the site should be assessed as to the practicality of planting trees further into the roadway so as to minimise risks of displacement of kerb.

Where trees planted in the footpath have displaced the kerb and channel, the tree roots are to be trimmed and the kerb and channel replaced on its existing alignment.

Medians, Traffic Islands and Neckings

Existing medians, traffic islands and neckings are to be modified or repaired in the same or matching materials unless there is some planned redevelopment for these to be upgraded.

New medians and traffic islands are to be constructed using charcoal coloured concrete kerb and channel or precast concrete blocks. Pedestrian paths can be asphalt, charcoal coloured concrete or other smooth paving material suitable for disabled access. Where landscaping is not practical, asphalt, bluestone and non-traditional materials can be used as an infill. Neckings are to be constructed to match the adjoining kerb and channel.

Vehicle Crossings

Where an existing vehicle crossing requires modification as a result of kerb and channel or footpath works then, where surface levels allow, the vehicle crossing will be retained and modified in the existing material, except where the vehicle crossing is all bluestone. The channel and layback will be constructed of the same material as the adjoining kerb and channel material.

Existing bluestone vehicle crossings in non-heritage areas are to be reconstructed so that the ramp is constructed of uncut bluestone pitchers and the pedestrian area is bluestone pitchers cut in half and laid smooth side up. The channel and layback is to match the adjoining channel. Where the adjoining channel material is bluestone, the layback and channel must be uncut bluestones.

Where a non-bluestone vehicle crossing must be fully reconstructed as a result of kerb and channel or footpath works, then a charcoal coloured concrete or asphalt ramp can be constructed. The channel and layback is to be constructed of the same material as the adjoining kerb and channel.

Footpaths

Where undertaking limited maintenance work the footpath should be repaired in the existing material.

Where significant maintenance work or reconstruction is being undertaken the footpath should be reconstructed in the existing material for the street, unless the use of another material such as asphalt, concrete, cut bluestone or bluestone pavers has been approved either by Council planning endorsement or by the approval of Council's supervising officer.

Commercial/Light Industrial Streets

Kerb and Channel

For commercial and industrial zones, existing bluestone kerb and channel will be reconstructed with a bluestone kerb and two-pitcher channel. Where existing kerb and channel is concrete it will be reconstructed in charcoal coloured concrete.

Where kerb and channel is to be reconstructed or tree roots are lifting the channel, consideration is to be given to removing part or all of the channel adjacent to the street tree. Council's Arborist is to be consulted and if it is deemed beneficial to the tree, part or all of the channel adjacent to the street tree can be removed and replaced with granitic sand or other permeable material.

Where trees planted in the footpath have displaced the kerb and channel, the tree roots are to be trimmed.

Vehicle Crossings

Where an existing vehicle crossing requires modification as a result of kerb and channel or footpath works then, where surface levels allow, the vehicle crossing will be retained and modified in the existing material, except where the vehicle crossing is all bluestone. The channel and layback will be constructed of the same material as the adjoining kerb and channel material.

Existing bluestone vehicle crossings in non-heritage areas are to be reconstructed so that the ramp is constructed of uncut bluestone pitchers and the pedestrian area is bluestone pitchers cut in half and laid smooth side up. The channel and layback material is to match the adjoining channel. Where the adjoining channel is bluestone, the layback and channel must be uncut bluestones. Where there is a centre invert, in the pedestrian area the bluestone pitchers are to be cut in half and laid smooth side up and in the ramp the bluestones pitchers are to be uncut pitchers.

Where a non- bluestone vehicle crossing must be fully reconstructed as a result of kerb and channel or footpath works then a charcoal coloured concrete or asphalt ramp can be constructed. The channel and layback is to be constructed of the same material as the adjoining kerb and channel.

Footpaths

Where undertaking limited maintenance work the footpath should be repaired in the existing material.

Where significant maintenance work or reconstruction is being undertaken the footpath should be reconstructed in the existing material for the street, unless the use of another material such as asphalt, concrete, sawn bluestone or bluestone pavers has been approved either by Council planning endorsement or by the approval of Council's supervising officer.

Laneway Repair/Reconstruction

Where a laneway requires immediate temporary minor patching to ensure public safety, proper drainage or vehicle access then the patching will be undertaken in asphalt.

Existing surface material whether bluestone or asphalt will be used for minor permanent patching.

Where a non-bluestone laneway requires significant rehabilitation or reconstruction then the laneway pavement will be fully restored with the same surface materials, whether asphalt or concrete unless another material has been approved either by Council planning endorsement or by the approval of Council's supervising officer.

The invert of a non-bluestone laneway will be rehabilitated or reconstructed using whole bluestone pitchers, cut bluestone pitchers or charcoal coloured concrete. The material to be used will be chosen by Council's supervising officer after considering the existing invert material type, the adjoining street channel material, the character of the area, vehicle traffic and pedestrian usage in the lane.

If a bluestone laneway requires reconstruction, the existing bluestone pitchers are to be retained and reused however if there are insufficient bluestone pitchers available then the bluestone pitchers are to be saw-cut in half and laid smooth side up.

Where a bluestone laneway crosses the footpath, existing bluestone vehicle crossings are to be reconstructed so that the pedestrian area is bluestone pitchers cut in half and laid smooth side up. The ramp is to be uncut bluestone pitchers and the channel and layback is to match the adjoining channel.

Where the laneway crosses the footpath, and the existing vehicle crossing is not bluestone, asphalt will be used. Where an invert extends across the footpath the invert will be constructed in bluestone or charcoal coloured concrete.

New Developments Adjacent To Bluestone Laneways

Where a planning permit application referral is received for a new development with pedestrian access on to an existing bluestone laneway, the developer is to construct a 1.2 to 1.8m wide smooth bluestone pavement on one side of the laneway, from the development to the nearest abutting street. The pavement is to be constructed using whole bluestones laid as smooth as possible or bluestone pitchers cut in half and laid smooth side up. The method to be used is to be determined by Council's Engineering Services Unit as part of the planning permit referral process. The pavement is to provide improved pedestrian access and satisfy the Disability Discrimination Act 1992.

Disability Access in Bluestone Lanes

Where it is determined that disabled access along a bluestone laneway is required, construct a smooth bluestone surface 1.2 to 1.8m wide on one side of the laneway from the development to the nearest abutting street using bluestones cut in half and laid smooth side up.

Pram Crossings

Pram crossing ramps are part of the footpath and are to be constructed to match the footpath material. Where there is a bluestone channel the ramp is to have a one-pitcher layback and the channel width must match the abutting channel. The bluestones in the layback and channel are to be cut in half and laid smooth side up.

Tactile Ground Surface Indicators

Tactile ground surface indicators for the orientation of people with vision impairment should be a colour that is sympathetic to the surrounding area i.e. steel grey for asphalt footpaths or an alternative, which meets the luminar difference specified in Australian Standards AS1428.4. Tactile pavers are to be installed in high use pedestrian areas and in the vicinity of public facilities as part of construction works.

Streets and Lanes on Boundaries of Heritage and Non-Heritage Overlay Areas

Where a residential street or a lane forms a boundary between a heritage and non-heritage overlay area, the street or lane is to be reconstructed to the equivalent standard for a residential street in a heritage overlay area.

Remove Bluestone Rumble Strips and Road Humps with Bluestones

In the past some raised pavements, road humps and rumble strips were constructed using bluestones or a combination of bluestones and asphalt. These treatments will be removed when road works occur in those locations.
The road humps will be replaced by road humps made of asphalt only. Raised pavements and rumble strips will be reconstructed with a smooth surface material such as sawn bluestone, bluestone pavers, concrete, pavers, coloured asphalt or asphalt.

Traffic Management Treatments

Traffic management treatments in heritage areas are not considered to be heritage infrastructure and new treatments can be constructed with non-heritage materials. However the materials used should be sympathetic to the location. Refer to the sections on Medians, Traffic Islands and Neckings in heritage and non-heritage areas for further details.

Recycled Materials, Sawn Bluestones and Permeable Pavements

As part of Capital works programs, new road construction products that provide improved environmental outcomes such as recycled crushed rock with glass fines, recycled asphalt, glassphalt, green asphalt, coloured asphalt prephalt and Tonerpave will be trialled and assessed on a case by case basis. Where possible Council; will seek to meet the maximum recycled content that is approved by Vic Roads specifications. The use of different solutions for improved environmental outcomes is dictated primarily by specifications approved by Vic Roads and Australian Standards.

Water Sensitive Urban Design (WSUD) Treatments

WUSD treatments are constructed in accordance with the Water Sensitive Urban Design (WSUD) Policy for Council Assets in both heritage and non-heritage areas. In heritage areas WSUD features such as kerb and channel, pathways and pavements will be constructed in materials that are sympathetic to the heritage nature of the street they are built in. The materials that can be used include bluestone pitchers, charcoal coloured concrete, asphalt, sawn bluestones pitchers and bluestone paving. Plants and water filter materials used in the treatment will be chosen on a case by case basis and selected with a view to providing the required water quality.

Permeable Pavements

Permeable pavements are pavements that allow surface runoff to filter into the road substrata and then into the underlying soil. These treatments can be constructed in both heritage and non-heritage areas. Where the treatment is to be built in a heritage area every effort should be made to use materials that are sympathetic to the streetscape.

General

Where infrastructure works will affect some significant urban design, heritage or landscape feature in a manner contrary to this policy, advice will be sought from the relevant Unit or Division (i.e.

Open Space Planning, Urban Planning, Council's Heritage Advisors, Community Development Division) to determine the best way to proceed. The Director - Infrastructure Services Division and the Director - City Development will decide the final design treatment or refer the project to Council for consideration.
Where road infrastructure works contrary to this policy are approved as part of a VCAT Planning Permit decision, the VCAT decision must be adhered to unless Council can negotiate an amendment to the planning permit condition with the developer.

Community Engagement

Engineering Services distributes works notification letters to residents affected by road works prior to the works commencing, and responds to any inquiries or concerns that residents raise from the notification letter. This communication is in accordance with Council's Community Engagement and Consultation Policy.

Communications to residents will include a translation panel with a reference number to assist people from CALD backgrounds.

Bike Paths

Bike paths are to be constructed and maintained in either asphalt or charcoal coloured concrete (reinforced) depending on the zoning or maintenance needs, except where they cross existing heritage infrastructure. Where they cross heritage infrastructure the heritage material is to be retained.

Waste Minimisation

Any excess bluestone material is to be stockpiled at Council's nominated depot for reuse.
All other salvageable materials excavated on site must be reused or recycled wherever possible.

Exceptions

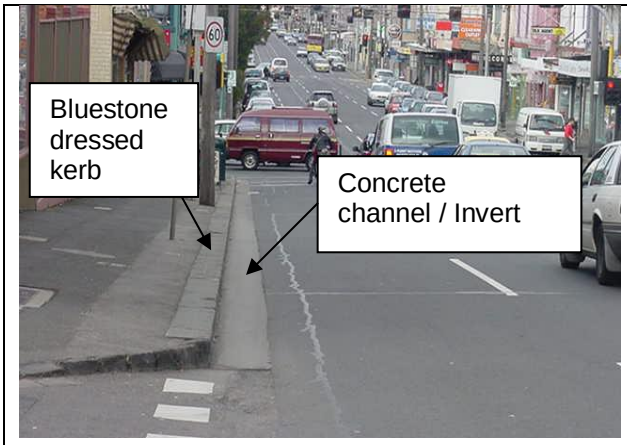
The following items are also exempt from this policy:

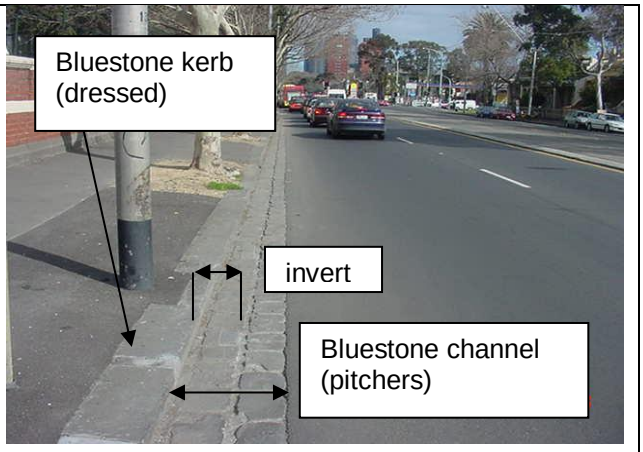
(a) All traffic management trials and temporary treatments; and

(b) Safety standard requirements including such devices as raised reflective pavement markers for road delineation and regulatory street signs.

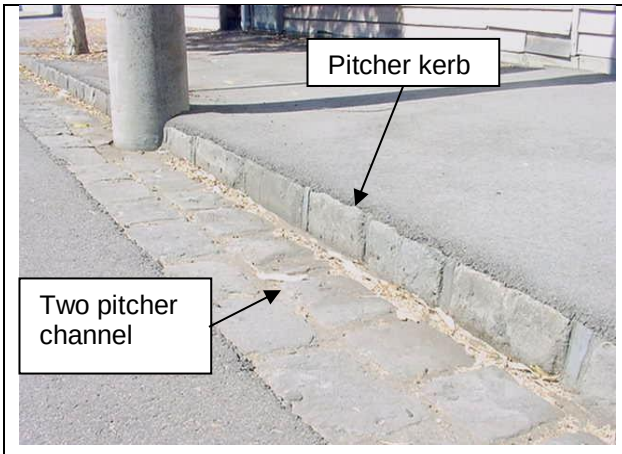
Infrastructure- Road Materials Policy, Explanation of Terminology

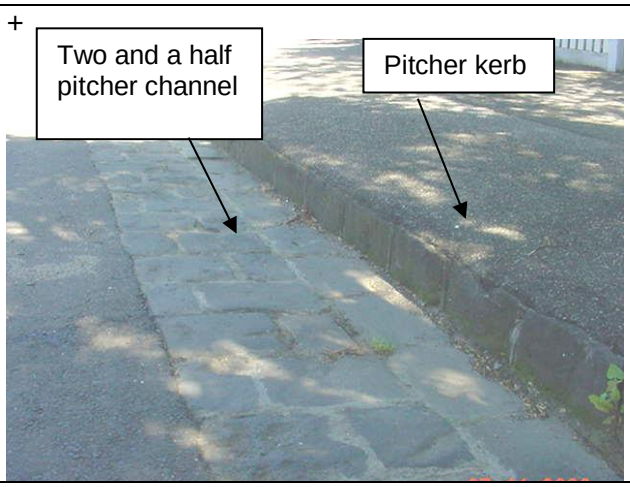
Kerb and Channel Components

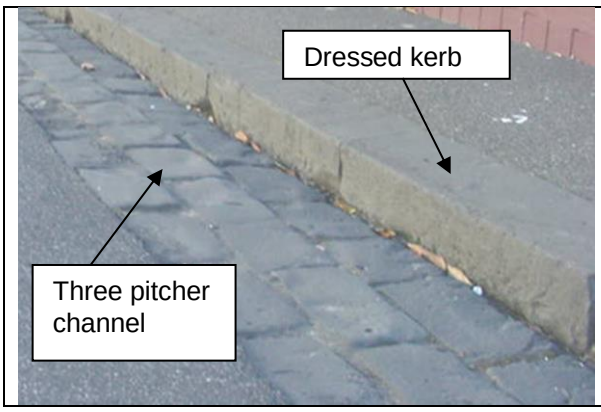


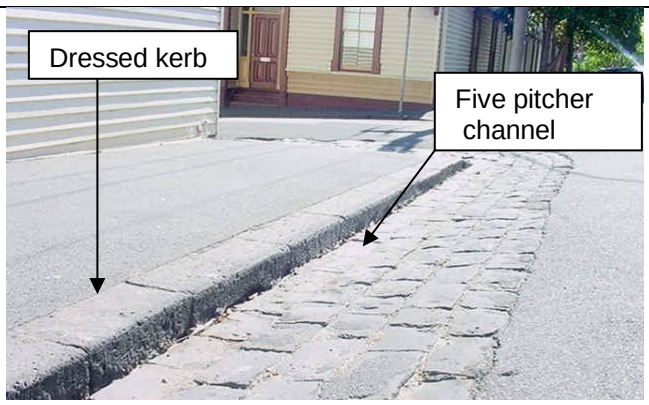


Bluestone Kerb and Channel Types









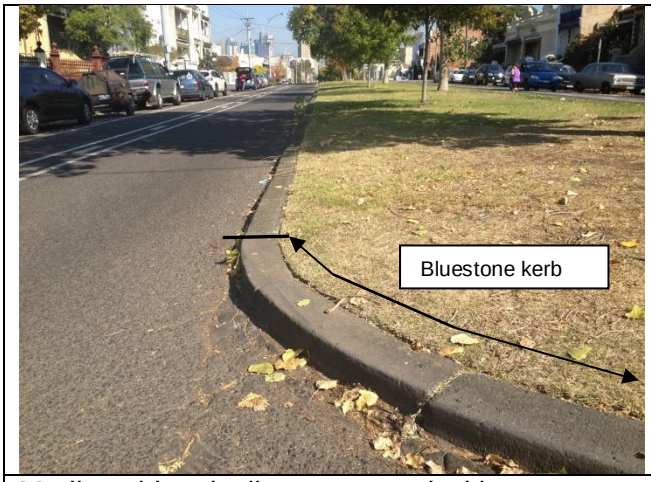
Necking / Kerb Extension

Typical necking/kerb extension in residential areas where the necking kerb has been constructed to match the street bluestone kerb and channel.

Bluestone Splitter Island in Heritage Area

Splitter island constructed with bluestone to match with the street bluestone kerb and channel in a residential area.

Median Island with Historical Precast Concrete Kerb



Medians historically constructed with precast concrete kerbing in North Carlton. Where the existing precast concrete end radials are damaged they will be replaced with concrete. If the end radials are bluestone, they will be replaced with bluestone.

Sawn Bluestone Pitcher Vehicle Crossing

Michael St North Fitzroy- sawn pitchers provide a smooth pedestrian surface.

Original Heritage Wet Crossing (carries water across road)

Original wet crossing with wide bluestone pitcher apron extending across pedestrian area.

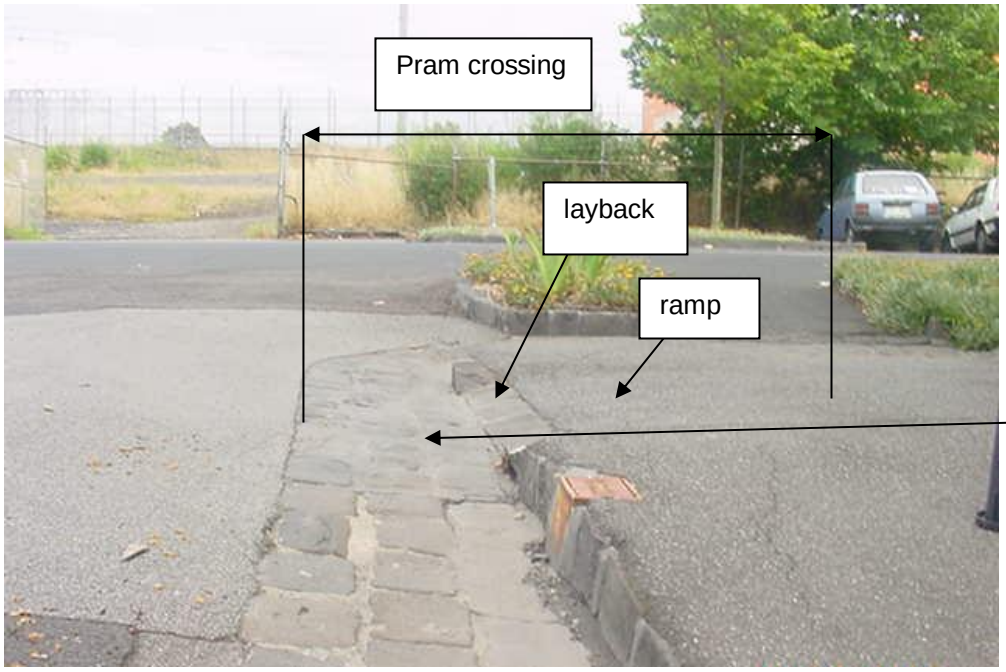
This pedestrian area will now be reconstructed with bluestones cut in half and laid smooth side up

Wet Crossing Profile where Pitcher Ramp has been Removed in the Past

A wet crossing with a one or two pitcher wide layback. This will be built where there are no existing bluestones in the ramp or pedestrian

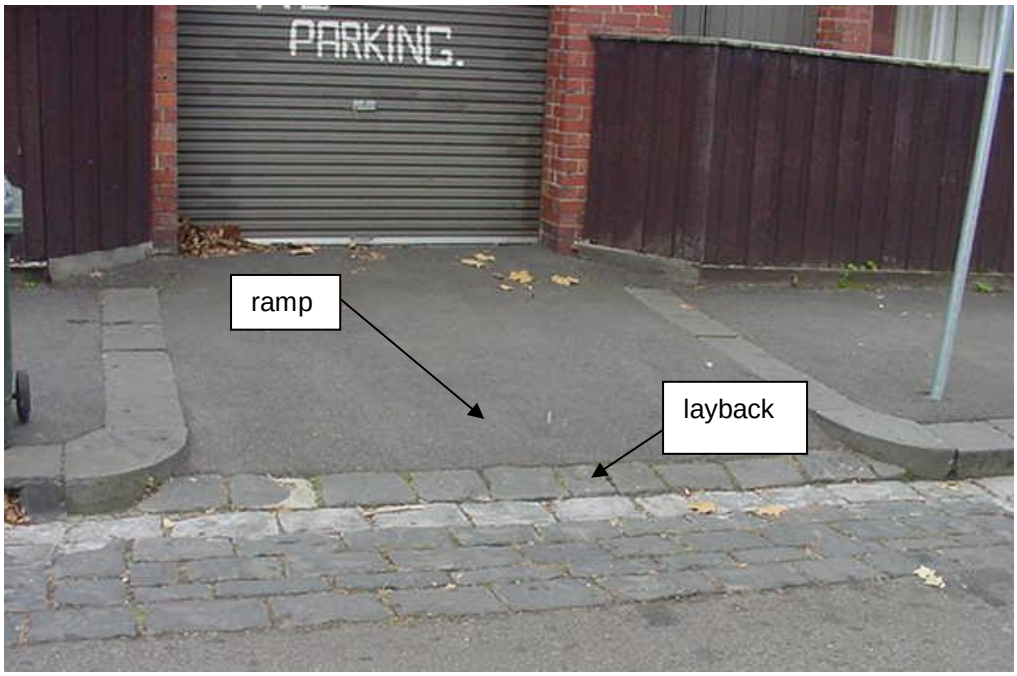
Channel is to match the adjoining channel. If the channel is bluestone pitchers then a one or two pitcher layback is to be used. The ramp is to match the adjoining road pavement.

Pram crossing



When bluestone pitcher channels at pram crossings are reconstructed the pitchers in front of the pram crossing will be cut in half and laid smooth side up.

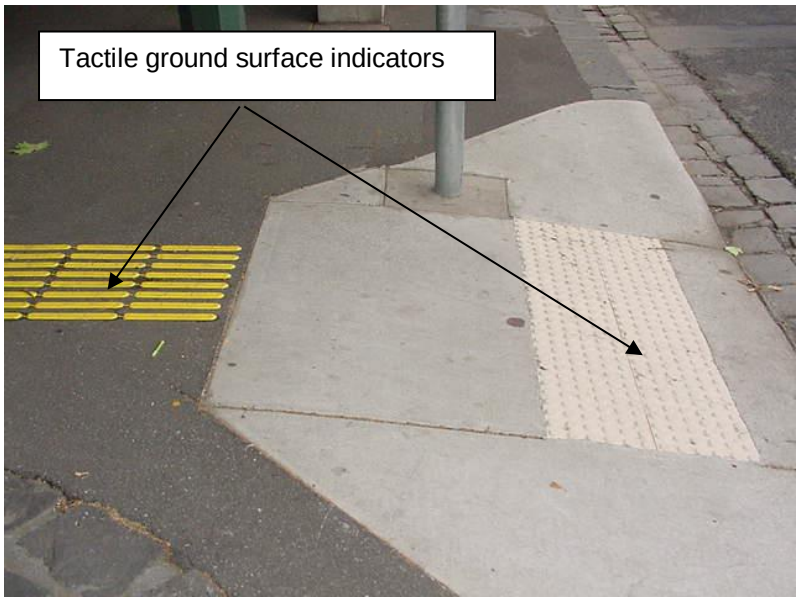
Bluestone and Asphalt Vehicle Crossing



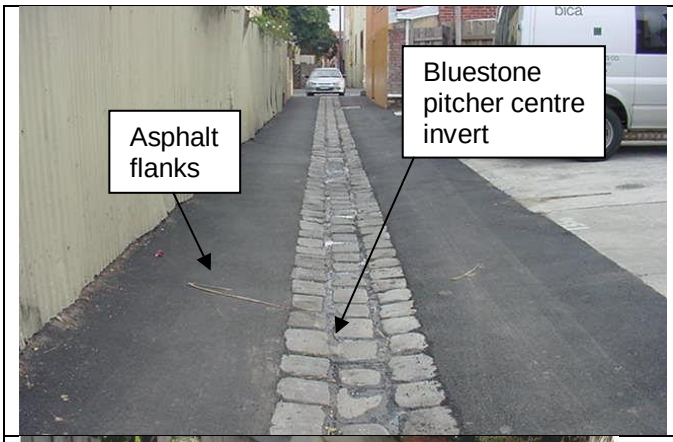
In heritage areas non-bluestone vehicle crossings will be constructed in asphalt. If there are existing heritage features such as the dressed kerb across the footpath and the radials, these will be retained.

Single Bluestone Invert Behind Street Tree

Tactile Ground Surface Indicators



Lane Profiles in Non-Heritage Areas



Non-Bluestone Lanes

In non-heritage areas, the invert in non-bluestone lanes can be reconstructed with whole bluestone pitchers, cut bluestone pitchers laid smooth side up or charcoal coloured concrete. The flanks will be asphalt. The material to be used will be chosen by Council's supervising officer after considering the existing invert material type, the adjoining street channel material, the character of the area, vehicle traffic and pedestrian usage.

Bluestone Lanes

Bluestone lanes are to be reconstructed in bluestone in both heritage and non-heritage areas. Lane off Melrose Street Richmond.

Sawn Bluestone Pitchers in Intersection Treatments

Charles Street, Richmond- Intersection at grade using sawn bluestone pitchers and asphalt.

Sawn Bluestone Pavers- New Developments Subject to Planning Endorsement

Sawn bluestone pavers on the footpath and sawn bluestone kerb and channel –Young Street Fitzroy

Road pavement constructed of sawn bluestone paving in shared zone –Young Street Fitzroy

Bluestones in Road Humps and Rumble Strips

Intersection at grade at entry to side street with rumble strip.

When reconstruction occurs, the rumble strip will be replaced with alternative materials that will provide a smoother surface such as asphalt and/or sawn bluestone.

Bluestone in raised pavement.

When reconstruction occurs, the raised pavement will be replaced with alternative materials that will provide a smoother surface such as asphalt and/or sawn bluestone.

Bluestone road hump. When reconstruction occurs the road hump will be reconstructed in asphalt.