Purpose

The purpose of this policy is to provide a framework for managing sewage eduction in new estate developments. This Policy details when deferred works may be allowed and the associated risks.

Application

This Policy applies to all developers requesting Greater Western Water's (GWW) consent to the Issue of Statement of Compliance before their development is connected to an operational sewerage outfall.

Background and Risks

Traditionally, development across Melbourne has progressed in a logical manner working upstream from the established treatment plants and trunk infrastructure. However, GWW is experiencing a growing prevalence of fast-paced developments occurring in areas where the logical next in line approach is less common. This occurs due to a number of factors such as topography, greenfield lot size (i.e. smaller hobby farms) and, in some areas, servicing requires outfalls to cross over ridges and even be directed upstream to existing regional treatment plants at established townships. Differences in the timing of estate development and delays in the delivery of essential downstream sewerage infrastructure by neighbouring developments or GWW, has resulted in requests for sewage to be educted to facilitate house construction to commence and occupancy prior to the completion of the permanent sewerage outfall.

There are many risks associated with sewage eduction, including:

- Safety (truck movements through typically new residential areas that include young children, high levels of heavy vehicle traffic at the discharge maintenance holes (MHs), manual handling and fall risks when accessing eduction and discharge MHs)
- Amenity (eduction trucks operating near peoples' new homes is an undesirable experience for them and their visitors due to the inherent odour and noise impacts of this activity)
- Environment (raw sewage spills, odour, noise)
  Amendments to the EPA Act also place more responsibility and accountability on all persons engaging in an activity that may give rise to the risk of harm to human health or the environment from pollution or waste, i.e. these risks must be minimised so far as reasonably practicable (the 'General Environmental Duty').

Objective and Application

The primary objective of GWW is to avoid sewage eduction because of the abovementioned risks. Elimination or substitution measures are more effective than administrative controls.

Ideally the permanent sewerage outfall (either a branch sewer or a permanent pumping station and rising main) is completed prior to GWW providing consent to issue a Statement of Compliance (SOC) for a stage(s) of an estate. It is recognised however, that sometimes delivery of the permanent sewerage outfall will not be possible in a timely manner. For these situations, a temporary pumping station (either a packaged pumping station or duty/standby pumps placed in a MH) and rising main (pressure pipe connecting to the exiting sewerage outfall) is preferable to eduction. Eduction is primarily an administrative control as it relies upon people to follow procedures to monitor and control sewage levels and is less effective with a higher risk.

It is recognised that future homeowners awaiting SOC(s) to enable title to be issued are also GWW's future customers and that from time-to-time circumstances can arise during construction of the sewerage outfall (be it permanent or temporary) that are outside the control of the developer and delay the completion of the required works. When these circumstances arise, GWW recognises that it may be appropriate to consider consenting to the early release of these new titles through eduction to assist developers, facilitate the commencement of housing construction and support the continued progress of housing development.

In these situations, GWW will consider opportunities to enter into a short term (up to 12 months), robust arrangement to accept the risk of a limited number of allotments (less than 150) being released where works have commenced and the sewerage outfall is not yet completed. The instrument to be used for this arrangement will be the Deferred Works Deed.

Deferred Works Deeds

Should GWW be satisfied that extenuating circumstances delaying the completion of construction of the sewerage outfall exist, the Developer will be required to execute a Deferred Works Deed for subsequent GWW execution. This will include prior lodgement of Deferred Works and Eduction Securities in the form of Approved Unconditional Undertakings (e.g. Bank Guarantee), or other security on terms acceptable to GWW. The Developer will be required to engage an accredited Eduction Contractor to perform inspections and eduction (if required), with all costs to be borne by the Developer.

Appendix A shows a Development Works Flowchart including Deferred Works.
The Developer will initially be provided with an Eduction Management Plan (EMP) template and an example Eduction Capacity Spreadsheet (ECS). These documents must be submitted to GWW by the Developer prior to approval being granted and a Deferred Works Deed being executed.

GWW will review the EMP and ECS including:

- assessing for completeness and accuracy of key information;
- confirming the eduction maintenance hole (MH) location meets GWW's requirements;
- confirming the discharge MH location is as prescribed by GWW;
- verifying emergency contractor contact details are current.

This Policy recognises the need to ensure that robust controls are necessary to mitigate the risks identified above and promotes the inclusion of key eduction conditions within the Deferred Works Deed that include, but are not limited to:

- The eduction MH must not impact customer amenity and is required to be located:
    - along an existing road and clear of existing residential development to minimise noise and odour complaints (if not located alongside an existing road the Developer is required to construct and maintain an all-weather access track);
    - not in proximity to waterways to minimise the risk of contamination due to sewage spills; and
    - so that they can preferably be accessed via unoccupied streets.
- The eduction MH is required to have either:
    - A high-level alarm, linked to the Eduction Contractor and GWW's Operational Control Centre (OCC). If the critical alarm is triggered, a notification will be sent out to the eduction company and the OCC, simultaneously. The OCC will contact the eduction company directly to attend the site. If unsuccessful, GWW will perform the eduction at the Developer's cost.
    - An active monitoring system, including an independent high-level alarm. Levels of 60%, 80% and 100% shall be notified to the relevant GWW PM. For 100%, the GWW PM will contact the eduction company directly to attend the site. If unsuccessful, GWW will perform the eduction at the Developer's cost.
- Alarms are a fail-safe device and are not to be used as the trigger to educt.
- Educted sewage must only be discharged to a MH nominated by GWW. Discharge MHs will be located:
    - nearby on the Developer's land (although this is rare); or
    - in an industrial area with provision for truck parking to minimise or eliminate potential odours, noise, blocking of traffic and spillages;
    - away from residences or industrial buildings;
    - where the receiving sewer is at least 225 mm diameter to accept the flows; and where there is not a pumping station downstream;
    - or where otherwise directed by GWW.
- The Developer is to ensure all eduction MHs are inspected and monitored on a weekly basis as a minimum, with increased frequency should there be stormwater build up that

requires eduction. Once sewage eduction commences, this is to be carried out on a weekly basis as a minimum.

- Should the network capacity be less than the estimated daily sewage flow generated by the relevant stage(s), a below ground storage vessel is required to be constructed to provide the additional storage volume required.
- In the event of any spilling of sewage, odour or noise complaint, the Developer is fully responsible for all clean up and any associated works costs including any EPA / other authority fines and costs.
- Any proposed changes by the Developer to eduction and / or discharge MHs must be submitted for approval to GWW for consideration.
- All eduction contractors must be accredited to SC10 (Live Sewer Non-Entry) as specified in the Deferred Works Deed. Failure to follow agreed processes could result in accreditation being revoked.
- The Developer must demonstrate procedures it has in place to ensure that it, and all persons engaged in eduction and transportation services, will at all times comply with the requirements of the Heavy Vehicle National Law.
- The Developer must comply with any registration, permit or licencing requirements under the current EPA Act.
- The Developer is to bear all costs associated with the management of the temporary eduction of sewage and compliance with GWW's conditions.
- The Developer may be required to relocate eduction discharge to a different discharge MH from that nominated and is solely responsible for any additional costs incurred.
- The eduction MH and/or eduction trucks are subject to random quality sampling by GWW.
- The Developer is to prepare a communication plan for properties in the vicinity of the eduction MH.
- Approvals to extend the date for completion of a Deferred Works Deed due to the permanent sewerage outfall being incomplete will be at GWW's discretion.
- A Deferred Works Deed will not be permitted for industrial developments that require trade waste agreements.

All Deferred Works Deeds are overseen by the GWW Project Manager to monitor adherence by the Developer.

The eduction status is to be proactively managed by the Developer throughout the life of the Deferred Works Deed. Eduction arrangements will be subject to regular review and strict controls. Controls will progressively become more stringent for the following:

- Completion of the outfall is taking longer than anticipated, i.e. the duration of eduction increases; and/or
- Eduction of additional stages is requested (and approved due to extenuating circumstances only), i.e. the total number of lots increases; and/or

- There is a risk to safety, amenity or the environment identified by GWW during the eduction period.

An Eduction Controls Matrix has been developed to this effect, which is shown in **Appendix B**. This matrix defines risk levels from Low to Significant and the associated controls, based on the duration (number of months) from execution of the initial Deferred Works Deed against the estimated or actual numbers of lots to be educted. The maximum number of lots that can be approved for an estate is 150, which may comprise several stages.

The Deferred Works Deed will expire when the sewerage outfall works have been completed, eduction has ceased and Acceptance of Works has been awarded. The balance of the Deferred Works Security and Eduction Security (if any) will then be returned.

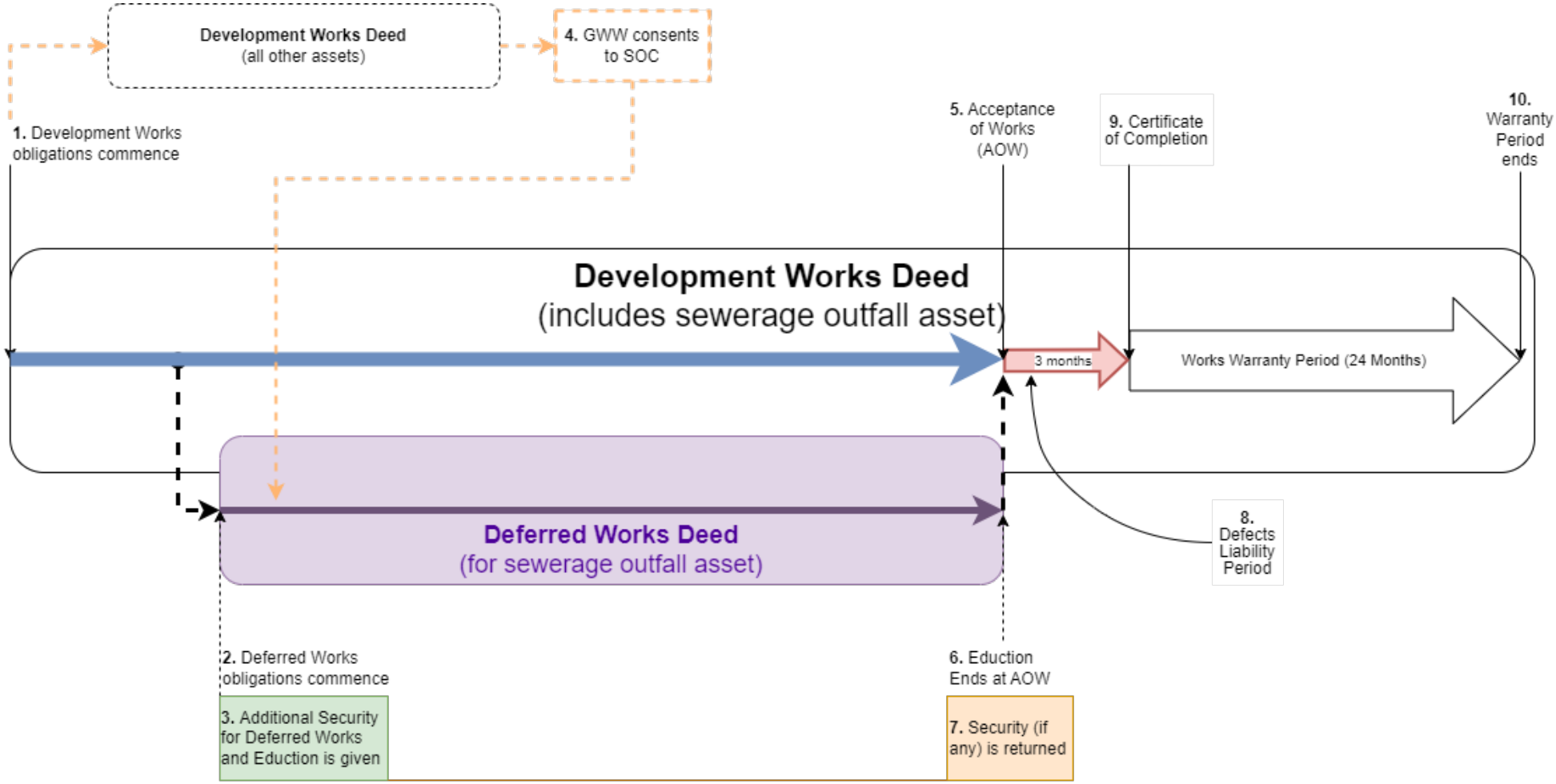
Review Process

The policy will be reviewed as required
Approved on 28/11/2024.
Next due for review by Head of Growth & Development in June 2026.

Version control table

Version No.	Doc Owner	Change / Update	Date
1.0	Major Development Team Leader	New Policy	1/06/2025

Appendix A – Development Works Flowchart including Deferred Works



Appendix B – Eduction Controls Matrix

GWW Eduction Controls Matrix (to be used when Deferred Works Deed is approved due to extenuating circumstances during construction of the outfall, whether permanent or temporary)

Notes

The eduction status is to be proactively managed by the Developer and/or their Consultant throughout the life of the Deferred Works Deed. Should the duration of eduction increase and/or the total number of lots increases (the latter following GWW approving SOC of additional stage(s) due to further extenuating circumstances only), the risk level may rise and more stringent controls would then be applied.

Eduction will not be permitted for industrial developments that require trade waste agreements.

Estimated/Actual Duration of Eduction

Note: This refers to months from execution of initial Deferred Works Deed

<6
6-9
9-12
>12

Estimated/Actual No. Residential Lots to be Educted

Note: Non-residential flows (e.g. schools) within residential estates to be converted to residential lots based on 450 L/lot/day

<50
50-100
101-150
>150

Matrix

Duration	Estimated/Actual No. Residential Lots to be Educted			
	<50	50-100	101-150	>150
>12	Medium	High	Significant	Significant
9-12	Medium	Medium	High	Significant
6-9	Medium	Medium	Medium	High
<6	Low	Low	Low	Low

Definitions

Risk Level	Controls	Comments
Low	- Executed Deferred Works Deed (including Deferred Works Security lodged) - Eduction Security lodged - Eduction MH minimum 50 m from nearest occupied lot - Storage (min. 1 day @450 L/lot/day - in network or in network plus underground tank - land for tank to be reserved) - High level alarm or active monitoring (although houses unlikely to be occupied, these are required for any stormwater intrusion or groundwater infiltration) - Separate truck access or <2 trucks per day - Monthly report on number of lots occupied and progress on outfall delivery	- May only be a few houses occupied by 6 months - Longer buffer (i.e. at least 75 m) required if nearest lot to east (based on prevailing winds to east) - Developer is required to construct and maintain an all-weather access track if the eduction MH is not located alongside an existing road
Medium	- Executed Deferred Works Deed (including Deferred Works Security lodged) - Eduction Security lodged - Eduction MH minimum 50 m from nearest occupied lot - Storage (min. 1 day @450 L/lot/day - in network or in network plus underground tank - land for tank to be reserved) - High level alarm or active monitoring - Special eduction MH cover assembly (reinforced concrete with DN230 DI Lid) installed in place of standard MH cover - Separate truck access or <3 trucks per day - Monthly report on number of lots occupied and progress on outfall delivery	- Longer buffer (i.e. at least 75 m) required if nearest lot to east (based on prevailing winds to east) - Special eduction MH cover assembly reduces odour and improves safety - standard MH cover to be reinstated once eduction ceases or pumping utilised (refer High and Significant Risk Levels) - Developer is required to construct and maintain an all-weather access track if the eduction MH is not located alongside an existing road
High	- Executed Deferred Works Deed (including Deferred Works Security lodged) - Eduction Security (x2) lodged - Eduction MH minimum 50 m from nearest occupied lot - Storage (min. 1 day @450 L/lot/day - in network or in network plus underground tank - land for tank to be reserved) - High level alarm or active monitoring - Temporary pump installed in MH plus rising main to network (managed by developer - eduction still required if necessary as backup) - Separate truck access or ≤4 trucks per day (of at least 20 kL capacity) - Monthly eduction performance review meetings (consultant and contractor) - Monthly report on number of lots occupied and progress on outfall delivery	- Longer buffer (i.e. at least 75 m) required if nearest lot to east (based on prevailing winds to east) - High priority for outfall to be completed - Developer is required to construct and maintain an all-weather access track if the eduction MH is not located alongside an existing road
Significant	- Executed Deferred Works Deed (including Deferred Works Security lodged) - Eduction Security (x2) lodged - Eduction MH minimum 50 m from nearest occupied lot - Storage (min. 1 day @450 L/lot/day - in network or in network plus underground tank - land for tank to be reserved) - High level alarm or active monitoring - Temporary pump installed in MH plus rising main to network (managed by developer - eduction still required if necessary as backup) OR Construct temporary SPS plus rising main to network - Separate truck access or >4 trucks per day (20 kL capacity) - Monthly eduction performance review meetings (consultant and contractor) - Monthly report on number of lots occupied and progress on outfall delivery	- Longer buffer (i.e. at least 75 m) required if nearest lot to east (based on prevailing winds to east) - Very high priority for outfall to be completed - Developer is required to construct and maintain an all-weather access track if the eduction MH is not located alongside an existing road