



DECISION STATEMENT

Division 5.1 Review of Environmental Factors

Stockdale Detention Basin, Abbotsbury

Strategic Land Use Planning
City Strategic Planning

1. Background

Fairfield City Council is the proponent and determining authority for the upgrade of Stockdale Detention Basin, Abbotsbury (the proposed activity). The works are required as a result of advice issued by Dam Safety NSW to Council on 11 February 2022, of the need to upgrade the detention basin.

In 2021, as part of the national flood mitigation infrastructure program administered by the then Department of Planning and Environment, grant funding was provided to Council to undertake the upgrade in accordance with specifications issued by the NSW Dept. of Public Works. The proposed activity can be considered under SEPP Transport and Infrastructure 2021 as development permitted without consent under Division 7 - Flood mitigation work, clause 2.56(a) Construction works.

A REF was prepared by Fairfield City Council in January 2024 to assess the potential impacts of the proposed activity. The REF was prepared in accordance with Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act), clause 171 of the Environmental Planning and Assessment Regulation 2021 and the SEPP Transport and Infrastructure 2021. To allow the proposed activity to proceed, Fairfield City Council must make a determination of the REF in accordance with Part 5 of the EP&A Act. The objectives of this Decision Statement are to:

- Assess the environmental impacts of the proposed activity and determine the significance of those impacts.
- Document consultation with agencies and the public.
- Explain clearly why the key conclusions in the REF have been justified.
- Make a determination of the proposed activity to discharge the duty under section 5.5 of the EP&A Act.

2. Site Description and Location

Stockdale Reserve Detention Basin is located in Abbotsbury at the base of a shallow gully feature, in alluvial topography associated with the Orphan School Creek. The Reserve is bound by Stockdale Crescent and Cowpasture Road to the South and East Respectively is one of 11 declared dams owned by Fairfield City Council (FCC). The total catchment area of 197ha drains to the Stockdale Reserve Detention Basin, including piped stormwater, via a surcharge pit in the south-west corner of the basin and overland flow from North, West and South of the basin.

As shown in Figure 1, Stockdale Reserve incorporates two (one small and one large) playing fields. Existing earth fill embankments are located on the northern and eastern sides of the large playing field, forming a detention basin. The southern and western sides of the detention basin are generally cut into the sounding terrain.



Figure 1 Subject Site

On the western side of the playing field is a pond on the original alignment of orphan school creek, which forms the lower reach of the Stockdale Detention Basin Wetland. The pond is surrounded by long grasses and reeds including native derived grassland.

The creek then extends below the northern end of the detention basin through a pipe/culvert discharging into Orphan school creek east of Cowpasture Road. Within the detention basin are four large grated stormwater pit drains in each corner of the large playing field.

The detention basin is grass covered and lined with trees along its eastern and northern boundaries. A single stories amenities building is located outside the north-western corner of the detention basin. Light poles exist along the western batter slope which ranges in height from 2 metres in the northern end to 3.5 metres at the southern end. The southern side of the detention basin is also a large batter slope ranging in height from 2.5 m to 3m. Approximately 4m to 7m behind the crest of the eastern half of the southern embankment were residential properties, which contained single storey houses. The eastern embankment ranges in height from 2 metres to 2.5 metres.

3. Description and objectives of proposed works

In 2022 Dam Safety NSW, advised Council to undertake a risk and safety assessment and to upgrade the existing detention basin embankments. The proposed works for Stockdale Reserve will be predominately bulk earthworks, including the requirement to remove trees as per design, reconstruction of a pond separation bund, concrete path paving and returfing.

The objective of this project is to maximise the level of flood detention service and protection to the downstream community and environment along Orphan School Creek. A Review of Environmental Factors (REF) was prepared in line with section 5.1 of the Environmental Planning and Assessment Act in relation to the following works associated with the project:

<ul style="list-style-type: none"> • Excavation at top of existing embankment (up to 85mm) and backfill if suitable to raise the embankment (generally by 650mm) and at one point a max of 1.5m (at the south eastern section of the detention basin embankment). • Widening of embankment base (ranging from 3m to 4m), located predominantly on the inner face of the embankment comprising the playing field/recreation areas. • Site stripping of existing grass and stockpiling of topsoil on site for re-use (if suitable) • Landscaping and seeding of new grass across the entire construction area. • Reconstruction of the pond separation bund for Stockdale wetland including Removal of existing footpath (including northern footpaths also). • Construction of a 125 mm thick 420mm high block retaining wall along existing footpath ramps. 	<ul style="list-style-type: none"> • Construction of a clay core wall (900 mm wide and 450mm high) at the base of the southern Stockdale wetland pond separation bund, including placement of geotextile layers and 150mm thick reinforced grass downstream. • Construction of a spillway at the eastern embankment including 300mm thick reinforced concrete base slab and a 150mm thick reinforced grass across both adjacent batters. • Removal of 56 trees and retention of 41 trees (requiring tree protection measures) • Provision of 56 replacement trees (Ratio 1:1) of a Cumberland plain woodland species • Temporary removal and replacement of flood sensors and monitor.
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The general extent/footprint of the above works are shown in Figure 2 (over page) and are generally restricted to the footprint of the existing embankment areas running from the northern to the southern sections of the existing detention basin. The works will not result in any change to the internal levels of the basin, where the existing playing fields/recreation areas are located. As referred to in the above table, the works will raise the height of the embankment generally by 650mm to result in an overall height of 1.65m above the existing playing field/recreation areas contained within the detention basin.

The proposed maximum increase in height of 1.5m to the embankment is in the area that adjoins 5 residential properties in the southeast corner of the detention basin. This increase in height will mean that post reconstruction, the top of the embankment will be approx. 1m above the rear yard areas of the adjoining residential properties. The REF approval includes a condition requiring further consultation with the affected properties to determine suitable mitigation measures to address any concerns raised by the landowners in relation to the amenity of their properties.



The extent of works are also located and outside the footprint of an 'upstream pond' that is classified as a coastal wetlands under the SEPP (Resilience and Hazards) 2021. The works are however in land classified as land in proximity to a coastal wetland as such Clause 2.8, "Development of Land in Proximity to Coastal Wetlands and Littoral Rainforest", applies to the land.

It must be determined that the proposed activity does not significantly impact Biophysical processes, hydrological integrity of the adjacent coastal wetland and that the quantity and quality of surface and ground water flows to and from the adjacent coastal wetland are not significantly impacted. Council officers undertook an assessment of proposed activity against the, "NSW Coastal Design Guidelines 2023" (see attachment B to the REF for further information). The review determined that the proposed activity does not have a significant effect on the upstream pond identified as coastal wetland.

4. Consideration of Environmental Impacts

A Preliminary Environmental Assessment (PEA) undertaken by the NSW public Works, determined the following potential issues that needed to be addressed as part of the Review of Environmental Factors:

- Impacts of potential land use conflicts, noise, traffic and access
- Potential to disturb Aboriginal heritage sites
- Potential for flora and fauna impacts to the upstream coastal wetlands
- Potential for contamination
- Positive impacts associated with improved flood risk management

A. Contamination

A Preliminary Site Investigation (PSI) was undertaken JK Environments in October 2020 including 11 targeted Boreholes at the areas of the proposed works. Three fibre cement fragments were observed over the ground area of the east section of the site. Review of historic information indicated that historically the site had been used for agricultural and residential purposes (including market garden uses) until development of the site into sports fields in the mid 1980's. Council considered the potential sources of contamination potentially being:

- Fill material across the site including deep fill in former creeks and dams at the site;
- Historical agricultural use
- Use of pesticides
- Hazardous building material as a result of former building and demolition activities

JKE's PSI confirmed asbestos fragments on the surface being samples of fibro found in the eastern corner of the embankment. The bore hole sample testing did not identify levels above the adopted assessment criteria. The 3 asbestos fragments were Emu picked by the consultant at subsequent site visits. In addition to the 2020 PSI report, two further supplementary contamination screenings were undertaken by JKE in October and November of 2022 respectively.

No further contamination was found in ground or on the surface during these investigations. In order to ensure that contamination is appropriately dealt with if encountered during construction this decision statement recommends the following conditions as actions (see below recommendations) to be undertaken by the construction contractor prior to the commencement of construction activities at the site.

Resilience and Hazards SEPP (Previously SEPP 55)

This assessment considers site contamination results and recommendations of the Preliminary Site Investigation authored by JK Environments in 2020 and the two subsequent supplementary contamination screenings undertaken in October and November of 2022 respectively. The investigations have not found in ground contamination and the surface contamination has been emu picked and clearance certificates provided to Council. Due to this Chapter 4 – "Remediation of Land" of the SEPP Resilience and Hazards does not currently need to be taken into consideration. Should contamination be found as a result of the detailed site investigation (conditioned to be undertaken prior to commencement of construction) or subsequently during construction works, remediation of the land in line with Chapter 4 of the Resilience and Hazards SEPP will be required to be undertaken by a suitably qualified contaminated land consultant.

Recommendations

- An Emu pick to screen for surface contamination is to be undertaken prior to commencement of works by a suitably licenced contractor and clearance certificate provided to Council by a licenced asbestos assessor.
- A detailed Site Investigation is to be undertaken prior to commencement of works to determine whether remediation/ or future remediation works needs to be carried out on the site.
- An asbestos management plan is to be prepared for the works
- A waste management plan is to be prepared for the works.
- An unexpected Asbestos Finds Protocol be in place for the duration of works
- Should asbestos be found in ground a Remediation Action Plan be prepared by a suitable qualified person and a Long Term Environmental Management Plan be made and furnished to Councils Parks teams and assets maintenance contractors for reference.

B. Aboriginal Cultural Heritage

The site contains two known registered AHIMS artefacts (two in-situ red silcrete flakes) and previously a third artefact now removed from the site. The site is identified by Councils Aboriginal Heritage Study as being within an Aboriginal Potential Investigation Area (PIA) as a result of its location in proximity to orphan school creek. As a result of this status Council engaged Coast History and Heritage to undertake an Aboriginal Due Diligence Assessment and an Aboriginal Cultural Heritage Assessment Report (ACHAR), authored by Coast History and Heritage, dated 2021 and 2024 respectively. The due diligence assessment report and ACHAR undertook extensive search of the AHIMS register, site history analysis and onsite investigations including consultation with registered aboriginal parties and land councils.

The relics which currently sit on the surface in-situ would be destroyed by the works should they remain onsite. Council's consultant is currently preparing a Section 90 Aboriginal Heritage Impact Permit Application (AHIP) under the National Parks and Wildlife Act. The AHIP is issued by the NSW Department of Energy the Environment Climate Change and Water (DEECCW) and ensures the preservation of the relics in consultation with recommendations from the relevant aboriginal land council. An AHIP application will be lodged with the DEECCW once the REF has been approved. The AHIP approval and relic preservation must take place prior to construction works commencing.

Councils heritage advisor reviewed the ACHAR and due diligence assessment and does not raise any concerns regarding the methodology, conclusions, recommendations of these reports.

Recommendation

Council officers support the recommendations and ameliorative measures detailed in Coast History and Heritages due diligence assessment authored in 2021 and ACHAR authored in 2024, all of which must be implemented in full by the onsite contractor and Councils project manager. In addition it is recommended that a unexpected archaeological finds protocol be placed as a condition on the REF approval. All onsite contractors must be briefed in how to identify an aboriginal archaeological relic by Councils project archaeologist prior to construction works beginning.

C. Flora

The site contains vegetation associated with Cumberland Plain Woodland that was planted (approximately 25 years ago) along the eastern and southern side of the eastern embankment, as part of original construction of the detention basin. In order to undertake the works approximately 56 trees will be required to be removed due to the widening of the batter slope along the eastern side of the eastern embankment. 41 trees will be maintained which will be impacted by the works.

Council engaged East Coast Ecology to undertake a Flora and Fauna Assessment to determine whether the activity would trigger the requirements of the Biodiversity Offset Scheme (BOS) under the Biodiversity Conservation Act 2016. Due to the area of vegetation impact being 0.29ha the area threshold triggering the BOS has not been activated and a Biodiversity Development Assessment Report (BDAR) are not required.

A tree protection plan was prepared in line with an arboriculture assessment report to determine which trees could be saved, which trees would need to be removed and what techniques could be used during construction to protect retained trees. The report makes recommendations to be implemented during construction in line with relevant Australian Standards.

Recommendation

Councils Natural Resources, Open Space and Assets teams have reviewed the recommendations of the Flora Fauna Assessment Report, Arborist report and tree protection plan and support the recommendations they contain. The REF will be conditioned to ensure that a project arborist and ecologist be appointed prior to construction works. In addition to the arborist report recommendations the following have been recommended by Council officers as conditions to the REF:

- A replacement planting rate of 1:1 consisting of Cumberland Plain Woodland species.
- Use of a slow drop method when felling trees to ensure that any remaining fauna has time to vacate a tree.
- The trees that are removed, the logs can be placed as a border around the bushland area located between the basins and Gleeson Place. This will denote an edged between the bushland and the mown area. An example of how they can be placed can be found at Fitzgerald Avenue between the no-mow zone and the park.

The detailed recommendations, ameliorative methods and recommended conditions included in the arborist report, tree protection report and Flora and Fauna Report have been placed in the REF as conditions of approval.

D. Fauna

A Geotechnical report was prepared as animal burrows (potentially made by swallows and foxes) were encountered during preliminary site investigations by JK Environmental. The Geotechnical report concluded that the animal burrows along the western side of the eastern embankment potentially undermined the existing structural adequacy of the eastern embankment wall. The consultant recommended that successful embankment rectification works could be achieved by undertaking works in line with AS3798-2007 'Guidelines on Earthworks for Commercial and Residential Developments'.

Recommendations

Council officers recommend the ameliorative measures outlined in JK Geotechnical report be included as conditions of approval in the REF and implemented during the earthworks stage of the activity including post construction inspections of the eastern embankment per the report's recommendations.

E. Flooding

Currently the site is impacted by part high, part medium and part low mainstream flooding as a result of proximity to Orphan School Creek.

Currently the 1% AEP flood event (1 in 100 year flood) would overtop the basin embankment by 0.62m. Based on the detailed design. Post basin upgrade the development would successfully maintain a 0.55m freeboard over the peak 1:100,000 year flood event.

The hydraulic models for the site have been updated to include the latest survey of the basin and the embankment, inclusion of more pits and pipes not included in the previous TUFLOW model and inclusion of the latest hydrographs.

Council officers sought advice and review of the modelling from the NSW Department of Planning, Housing and Infrastructure. They endorsed the work done and generally were in support of the proposal.

Recommendations

Council officers support the flood modelling updates undertaken to inform the final embankment design and specifications. Councils Development Engineering Team have conducted a peer review assessment of the flood and design aspects of the detention Basin Upgrade in a post development scenario and raise no concerns with the works.

F. Pedestrian Safety, Access, and Traffic Management

The site is directly accessible by vehicle from the southern side of Stockdale Crescent. Commuter parking exists at the southern side of the park. The site is accessible via pedestrian footbridge over Cowpasture road on the site's eastern boundary and directly from the west and North via Stockdale Crescent and Gleeson Place respectively. A shared pedestrian pathway circuit exists on the northern and southern sports field and around Stockdale wetland.

During construction the eastern section of the southern sports field will be temporarily unavailable due to levy raising works. Diversionary pedestrian pathways will be required at the site's eastern boundary along Cowpasture road to ensure that pedestrians using the Cowpasture Road footbridge have adequate way finding signage. The section of shared pedestrian pathway located adjacent to the eastern pond of the Stockdale wetlands will be unavailable for use during construction works.

Construction vehicles will be required to access the site during civil and earthworks stages. It is proposed that the site be made accessible via Cowpasture Road and Stockdale Crescent. Material storage and stockpiling locations will be required to be made available. Potential impacts from these activities include amenity impacts from vehicle noise to surrounding residential properties at Stockdale Crescent, pedestrian impacts, on street parking impacts to Stockdale Crescent and a minor increase to traffic on the local road network.

Recommendation

The REF has been conditioned that the construction contractor provides a pedestrian management plan to the satisfaction of Councils Open Space Manager, this will ensure adequate diversionary routes, signage explaining the works and provision of a contact officer at Council to assist members of the public with enquiries and information.

A construction traffic management plan has been conditioned to be prepared by the construction contractor including, construction vehicle routes, details of the largest design vehicle accessing the site and locations of storage and stockpile of materials. The construction traffic management plan will need to be prepared to the satisfaction of Councils traffic team.

5. Stake holder and community Consultation

In order to inform the environmental impacts and civil requirements of this REF Councils project manager has liaised with the following internal teams:

- Development engineering
- Natural Resources
- Traffic and transport

- Design Team
- Catchment Planning
- Strategic Landuse Planning
- Open Space and Assets

Advice was sought from the following State agencies:

- Transport NSW
- Department of Energy the Environment, Climate Change and Water (DECCW)
- Department of Planning Housing and Industry (DPH&I)
- Department of Fisheries
- Heritage NSW

The assessment outcomes including the conclusions, recommendations and ameliorative measures provided by the above internal and external stakeholders have been incorporated into the design, flood modelling and conditions that form part of this REF.

The community, businesses, schools, SES and all NSW emergency services will be informed of the impending works by the construction contractor.

Recommendation

A community engagement and feedback plan will be required to be developed by Council including information flyers for effected residents regarding the project and website material for viewing. In addition more targeted community feedback plans will be required to be provided by the Council to those residences at the southern side of the eastern embankment who will be potentially affected by the raising of the embankment adjacent to their rear property boundaries.

Conclusion

The upgrade to Stockdale Detention Basin is required as a result of a advice issued by Dam Safety NSW to Council on 11 February 2022 .The REF addresses the requirements of Section 5.5 of the EP&A Act by considering the fullest extent possible, all matters affecting or likely to affect the environment from the proposed activity. The REF also considers factors prescribed under clause 171 of the EP&A Regulations 2021.

The REF also considers the requirements of the Commonwealth Environmental Protection and Biodiversity Conservation Act (EPBC Act) 1999, and any impacts on Commonwealth land.

The REF has been assessed in line with supporting technical documentation that considered the developments impact in relation to contamination, biodiversity, fauna and flood mitigation. These reports may be made available under The Government Information (Public access) Act 2009 (GIPA Act) through a formal access to information request.

Based on the REF document, other information and the advice from other relevant authorities

- The proposed activity is not likely to have a significant impact on the environment and therefore an EIS is not required.
- The proposed activity will not be carried out in a declared area of outstanding biodiversity value and is not likely to significantly affect threatened species, populations or ecological communities, or their habitats or impact biodiversity values, meaning a SIS and BDAR is not required.
- The proposed activity may proceed based on the matters and recommendations outlined in this decision statement.
- Mitigation measures and reasons of conditions to eliminate, minimise and manage environmental impacts where set out within the REF document are imposed in the conditions of development of the REF document.

Determination

I certify that I have reviewed and endorsed the contents of this REF document and, to the best of my knowledge, it is in accordance with the EP&A Act, the EP&A Regulation and the Guidelines approved under clause 170 of the EP&A Regulation, and the information it contains is neither false nor misleading.



Date: 11.03.2024

Patrick Warren
SNR STRATEGIC PLANNER
CITY STRATEGIC PLANNING
As Review Officer



27/3/2024.

Date:

George Vlamis
DIRECTOR
CITY DEVELOPMENT
As Delegate