

Engineering Plan Checklist



What is this Checklist for?

This checklist is provided to ensure that an engineering plan is prepared for approval in accordance with the requirements of the City of Monash.

Where a Planning Permit has been issued, the engineering plan is to comply with the relevant conditions documented in the Planning Permit. Designers must read the specific conditions and notes on the Planning Permit and the endorsed Condition 1 plans before preparing their design.

This checklist must be completed and signed by the designer and submitted with the engineering plans.

1	General Information	Yes	No	N/A
1.1	The development site address is shown.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.2	The planning permit number is shown (TPA number).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.3	The Legal Point of Discharge report has been obtained showing the correct Point of Connection. The Point of Connection has been confirmed on-site, levels taken, and the drainage design complies with this report.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.4	The plans are to scale and the scale used is shown.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.5	The designer's name, qualifications and contact details are shown.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.6	The plans are drawn with black lines with no greyscale or coloured lines.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Survey Information	Yes	No	N/A
2.1	All levels provided are shown to Australian Height Datum (AHD).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.2	The location of Benchmarks (BM), Temporary Benchmarks (TBM) and spot levels are shown and details provided. Spot levels are to be shown on all property corners and at 10 metre intervals on all boundaries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.3	All property title boundaries are shown with lengths in metres and show the boundary heading. The total site area is to be shown in square metres.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.4	All easements with the property and adjoining properties are shown correctly with all measurements in metres.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.5	All street names are shown. The north point is shown (up the page is preferred).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.6	Existing site contours are shown at 0.2 metre intervals for flat sites and 0.5 metres on other sites.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2	Survey Information	Yes	No	N/A
2.7	All existing service authority assets (drains, sewers, etc.) within the site and adjoining land (including private property and road reserve) must be shown. Details of the asset depth, size and location are to be provided and must include pit and pipe inverts and top of pits.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.8	All existing features within the road reserve & easements are to be shown. Such features may include, front and back of footpath, vehicle crossings, service authority assets, street trees, kerb and channel etc. The distance between adjoining assets, including proposed assets is to be shown in metres.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.9	All Tree Protection Zones (TPZ) are clearly shown on plans in metres, including those within adjoining properties and road reserve.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	Proposed Dwellings & Site Features	Yes	No	N/A
3.1	The Finished Floor Levels (FFL's) are shown and comply with the Condition 1 approved plans. Where required, the FFL's are designed above the 1% Annual Exceedance Probability (AEP) surcharge levels with adequate freeboard.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.2	Each dwelling/unit is to be clearly numbered.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.3	The site layout on the development drainage plan are to match with the endorsed Condition 1 plans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.3	All impervious areas are shown including rooflines of all proposed structures, paving, driveways, etc. A total impervious area is to be shown in square metres.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.4	Details of the property service meters are shown and are not located in or over easements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.5	All retaining walls and front fences are clearly shown on the plans & approximate heights noted. Provide top & toe levels @ 3 metre intervals and a typical section detail. Front fences are to be shown on or behind the property boundary and not in the road reserve.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.6	All existing and proposed structures and features within or over easements are to be shown and dimensioned. Only structures shown on the Town Planning Condition 1/Secondary Consent plans are permitted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	Detention System Design	Yes	No	N/A
4.1	The design complies with the Permissible Site Discharge (PSD) and On-Site Detention (OSD) volume provided by the City of Monash.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2	No detention storage, charged pipes or pits have been located under any structure or with easements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.3	Where required, the orifice diameter is not less than 65 mm.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.4	The OSD volume stored above ground does not exceed 40% of the total OSD volume.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4	Detention System Design (cont'd)	Yes	No	N/A
4.5	Full details of the flow control and storage systems are shown.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.6	OSD Calculations are provided with the stormwater plans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.7	The detention volume and discharge values are noted on the plan.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.8	Where an orifice pit is used, it complies with the City of Monash standard drawings D10A/B.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	Basement Drainage Design	Yes	No	N/A
5.1	The basement has an on-site detention system for storm events up to the 1% AEP event.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.2	The detention system for the basement is separated from the detention system for the property.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.3	A back-up diesel type pump is installed in the basement floor raised to offer protection during times the basement is flooded because of pumps not working etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.4	Details of the pump and the pump pit are shown.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	Drainage Design	Yes	No	N/A
6.1	The drainage design layout has been shown with pipe sizes, material, grades and all levels. All downpipes and associated private house drains are shown clearly on the plans. This is to include existing dwellings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.2	The drainage system has been designed with consideration to minimise the impact on the TPZ's and the landscape design.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.3	Pipe bends, junctions etc. under pavements are not shown without use of I.O's or pits in accordance with AS3500. The internal design makes direct connections to pits where possible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.4	All drainage pits are shown, numbered and a Pit Schedule has been fully detailed on the plan showing type, material, dimensions, and all relevant levels.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.5	It is recommended that the minimum cover for all pipes is 300 mm.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.6	It is recommended that all pipes, particularly under driveways, is a minimum 100 mm UPVC (ideally 150 mm UPVC).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.7	Drainage pipe long sections have been provided.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.8	Drainage pits are provided for each unit at each low point of private open space (POS) and service yards.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.9	All grated pits in trafficked areas are fitted with "Bike Safe" grates.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6	Drainage Design (cont'd)	Yes	No	N/A
6.10	Drainage pits constructed as part of Council's stormwater system are in accordance with Council's standards, including dimensions, cover/lid, and step irons where required. All other pits are in accordance with AS3500 and are not circular.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.11	Where there is a connection to the kerb and channel, the connection point is at least 1 metre away from any vehicle crossing kerb return.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.12	Only one connection point into the Councils Drainage System is allowed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.13	The outfall drain to the Council drainage system is to be gravity fed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Stormwater Tanks	Yes	No	N/A
7.1	Stormwater tanks are drawn to scale and do not impact windows or doorways with a minimum clearance 500 mm to one side of the tank is required and a grated pit adjacent to the tank.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.2	The capacity of each stormwater tank is shown.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.3	The dimensions of each stormwater tank is shown. (L x W x H)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.4	The stormwater tanks which are contributing to the detention system has orifices installed at a height of approximately two-thirds of the stormwater tank height from the base of the tank.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.5	The roof runoff area directed to each stormwater tank in m ² is to be shown.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.6	The roof runoff area not directed to stormwater tanks in m ² is to be shown.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Pavement & Access Information	Yes	No	N/A
8.1	Pavement levels are provided to edges and invert of all pavements at 3 – 5 metre spacing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.2	The design pavement has a grade of 1 in 40 cross fall into a central invert and a minimum gradient of 1:200 longitudinally and in accordance with AS2890.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.3	The driveway width is to be shown in metres.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.4	The driveway must be fully drained to the internal stormwater system. Where trench grates are provided at the property boundary they are to be a minimum of 300 mm internal width and located behind the property boundary and not in the road reserve.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.5	Vehicle crossover works are clearly shown, dimensioned and with notes. This includes existing, converting double, redundant etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.6	Kerb works, including the reinstatement of redundant crossings are to be clearly shown.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9	Other Requirements	Yes	No	N/A
9.1	Ensure that other requirements that have been previously communicated by the City of Monash have been included on the plan.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.2	Provide a copy of the drainage computations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

This checklist has been completed by

Name

Signed

Date