



Robert **Bird** Group

Safety in Design Report

North Ryde Station Precinct

M2 Site

Issue: A

Prepared For: UrbanGrowth NSW

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1.0 Introduction

The aim of this Safety in Design report is to identify potential health and safety hazards associated with the project or design element described in this report as a Workplace during its construction, operational life, maintenance, and de-commission, and to identify the mitigation measures that can be put in place through the preparation of the design, documentation and (where applicable) operational and maintenance procedures to effectively manage the risks.

1.1 Definitions

The following definitions are to be read in conjunction with RBG's Safety in Design Register found in Appendix A.

The following definitions and risk matrixes provided to assist in the interpretation of the report.

DESIGNERS' RISK ASSESSMENT

DEFINITIONS

Field Title	Definition
ID	Unique identifier given to each Risk assessment
Date Identified	Initial date item is entered into the register
Hazard	Potential source of harm or loss (provide specific location where possible)
Risk Title	Name possible event or incident associated with the Hazard
Description of Risk	Describe the Risk
Persons Affected	Who will the Risk affect - Customers/ Tenant Staff/ Construction Personnel/General Public/ Maintenance Staff
Controls/Mitigation	Description of Mitigation or Control measure - could be design/ procedural/ surveillance/ ownership transfer etc.
Residual Risk Levels	The consequence and likelihood of the risk occurring are rated here using the attached Risk Matrix chart. (Rating = Consequence level + Likelihood level)
Risk Rating	Negligible risk (white) - rating of 6 - 13; Low risk (green) - rating of 14 -19; Moderate risk (yellow)- rating of 20 - 25; Significant risk (orange)- rating of 26 - 31
Controls/Mitigation Responsibility	Company name or employee position responsible for carrying out the Control/ Mitigation measure
Status	Status of the Risk - choose from Active, Closed, Deleted or Superseded

1.2 Risk Assessment Matrix

The following Risk Assessment Matrix is to be read in conjunction with RBG's Safety in Design Register found in Appendix A

For sole use with Safety in Design assessments

Risk Assessment Matrix

Likelihood	Consequence				
	Insignificant [5]	Minor [7]	Moderate [13]	Major [19]	Catastrophic
Almost Certain	Low	Moderate	Significant	Extreme	Extreme
Likely [12]	Low [17]	Low [19]	Moderate [25]	Significant [31]	Extreme
Possible [7]	Negligible [11]	Low [14]	Moderate [20]	Significant [26]	Extreme
Unlikely [5]	Negligible [10]	Negligible [12]	Low [18]	Moderate [24]	Significant
Very Unlikely [1]	Negligible [6]	Negligible [8]	Low [14]	Moderate [20]	Moderate

where level of risk is above this red line - review design, controls & mitigation to reduce level

Risk Consequence

Risk Consequence	Design Consequence Descriptors
E - Catastrophic	Could result in fatality.
D - Major [19]	Could result in permanent total disability or a fatality
C - Moderate [13]	Could result in permanent partial disability, injuries or illness that may result in hospitalisation of persons.
B - Minor [7]	Could result in injury or illness resulting in one or more lost work days(s) or mitigatable.
A - Insignificant [5]	Could result in injury or illness not resulting in a lost work day.

Note: categories of 'Catastrophic' and 'Almost Certain' deemed not suitable for SID residual risk assessments.



Likelihood Descriptors

Likelihood Descriptor	Design Likelihood Descriptors
5 - Almost Certain	Industry experience suggests design failure is almost certain to occur during the life of the product.
4 - Likely [12]	Industry experience suggests design failure is likely to occur during the life of the product.
3 - Possible [7]	Industry experience suggests design failure is possible some time during the life of the design.
2 - Unlikely [5]	Industry experience suggests design failure is unlikely to occur in the life of design.
1 - Very Unlikely [1]	Industry experience suggests design failure is very unlikely. <u>It can be assumed failure occurrence may not be experienced.</u>

Note: Select the MOST PROBABLE likelihood descriptor for the information available. Consequence should be assessed first so the likelihood rating is the likelihood of the selected consequence occurring.

Acknowledgement

The Australian Chamber of Commerce and Industry (ACCI) together with Consult Australia would like to acknowledge the Department of Employment, Education and Workplace Relations (DEEWR) for its support in this initiative. ACCI has generously allocated funding to Consult Australia for this project, from a grant provided by DEEWR.

Disclaimer

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2.0 Project or Design Element

The M2 site is a 9.2 Ha subdivision in Macquarie Park, North Ryde. It is bordered by Epping Road to the South, Delhi Road to the East, the M2 to the north and Wicks Road to the northwest with existing industrial development bordering the site to the west. The site is mostly zoned for residential development, with some mixed use development and public open space areas.

The project consists of public infrastructure which will ultimately serve the development lots. The works will therefore include:

- Site clearance;
- Bulk earthworks;
- Roads, footpaths and lot accesses;
- Intersections with public roads (Wicks Road and Epping Road)
- Parks and public recreation spaces;
- Stormwater infrastructure
- Services, including:
 - High voltage and LV electrical supply
 - Street lighting
 - Potable water
 - Sewerage
 - Gas

3.0 Functional Requirements

The design primarily consists of roads, verges, footpaths and in-ground service infrastructure. The road layout is required to function as an efficient network, with turning space for the type and volume of traffic which would be generated by the types and sizes of development which are anticipated and as detailed in the North Ryde Station Precinct Traffic Management and Accessibility Plan (Parsons Brinckerhoff – 2012).

The Site is also seen as a key opportunity to promote sustainable transport links, given its proximity to North Ryde railway station and offers an opportunity to link the station to existing cycle paths forming a network linking to Macquarie University to the north and Chatswood to the east. Cycle paths, bus infrastructure and on-street parking are required to facilitate this.

4.0 Specific Safety in Design Aims

The design is required to be subject to an independent Road Safety Audit (RSA) process. All issues highlighted by the RSA process are to be considered and mitigated where possible proportionately to their risk rating.

5.0 Process for Identification or Risks

Identification of occupational health and safety risks for our scope of services for the project described in this report has been carried out through a Safety in Design Workshop. The Workshop was attended by members of the design team at Robert Bird Group. The attendees at the Workshop and record of the risks and mitigation measures identified are included in Appendix A of this report (The hazard risk register).

6.0 Outcomes and Actions

6.1 Key Outcomes

Key outcomes from the Safety in Design Workshop are listed in the Risk Register in Appendix A. Key outcomes are identified by a 'High' or 'Extreme' rating in the residual risk column of the register.

6.2 Specific Actions and Outstanding Issues

Issues considered requiring further action by either Robert Bird Group or other parties, are identified in the 'Responsibility' column of the Risk Register.

The issues listed are either unable to be mitigated by Robert Bird Group, or fall outside of our scope for this project.

Specific actions taken by Robert Bird Group are noted in the attached Risk Register in Appendix A of this report.

Three non-standard hazards have been identified relating to the civil design for the Site and are detailed below. A Road Safety Audit is being carried out in parallel to the design process, however has not been received in time to incorporate the Audit's findings into the designs. Thus there may be changes required as a result of the Audit which will be incorporated in the next phase.

6.2.1 Conflicts at 'Mews Road' Driveway Crossovers

The residential allotments on the eastern side of the Spine Street (Lots 201 to 204) are accessed via four driveway crossovers adjoining the Public Open Space (Lot 111), which are expected to link to future 'Mews Roads' and parking facilities within the allotments. Each allotment is likely to generate significant traffic movements, whilst the Public Open Space is intended to attract pedestrian and cyclist use generating the potential for conflicts between users in these areas.

Measures considered in design: A roadside footpath has not been provided, but a shared path has been provided within the adjacent public open space. Where the shared path and driveway crossovers intersect, surfacing materials will indicate continuity of the shared path and therefore highlight the requirement for vehicles to give way to cyclists and pedestrians. The shared path crossings will be a minimum of 5.0m from the Spine Street carriageway to maximise visibility and give space for a vehicle turning off the Spine Street to wait for pedestrians and cyclists to cross without impeding Spine Street traffic. Signs will be provided on Spine Street to warn drivers of the potential for cyclists and pedestrians crossing the driveway crossovers.

Further measures required at detail design: Road Safety Audit to be completed and findings incorporated into the detail design.

6.2.2 Access to Lot 104 from Spine Street

For safety reasons, the Epping Road end of the Spine Street can only be used by vehicular traffic for entry to the site, i.e. left turn only from Epping Road to Spine Street, or into the mixed use allotment Lot 104 slip lane. Lot 104 has also been provided with a one way exit for 12.5m HRV and 19.0m semi-trailers, with entry via Spine Street from the north for standard 5.2m vehicles and 8.8m service vehicles. The above requirements could potentially create confusion with vehicles potentially attempting to access Epping Road from Spine Street.

Measures considered in design: The arrangement of the Lot 104 driveway crossovers from Spine Street has been designed to allow entry by 8.8m service vehicles and standard 5.2m vehicles from both south (Epping Road) and north

directions. The arrangement also provides a physical restriction to prevent southbound vehicles from continuing past the lot entry and attempt to illegally gain access to Epping Road. This is to be reinforced by the use of appropriate signage as detailed on engineering drawings C-0-5-00 to C-0-07. Vehicles exiting Lot 104 will be required to turn right onto Spine Street northbound, which will also be enforced using signage.

Further measures required at detail design: Road Safety Audit to be completed and findings incorporated into the detail design.

6.2.3 Roadside Hazard Assessment

The roadside environment will consist of street furniture (including sign posts and lighting poles), landscaping, structures and buildings. The placement of standard street furniture within the road reserve is consistent with the speed environment (50km/h speed limit) and does not present a significant or unusual hazard. Future buildings will be subject to standard set back requirements and are also not considered to require any protection measures.

A culvert headwall discharging to Porters Creek is proposed to be constructed adjoining Spine Street at the northern end of the site. The headwall will be a minimum of 10.0m set back from the road carriageway and is approximately 10m long with a maximum vertical face height of up to 4.0m. The vertical drop and potentially high flows of water within Porters Creek would present hazards to an errant vehicle which leaves the Spine Street.

Measures considered in design: The use of crash barriers to prevent errant vehicles from accidentally being propelled over the culvert headwall has been considered against the RTA Austroads Guide Supplement (RTA/11.097). The 4m vertical drop to water has a maximum severity index of 7.5. The number of collisions per year has been calculated as 0.021 based on the road geometry (including the curvature of the road and the width of the verge) as the designed verge width provides an opportunity for the majority of errant vehicles to stop or steer back to the road before impacting the hazard. The combination of severity index and frequency of collisions categorises this hazard as being 'low risk'.

An independent check has been carried out against the 'Clear Zone' methodology described in Austroads Guide to Road Design (Part 6: Roadside Design, Safety and Barriers), which calculates a clear zone of 6.75m for the intended road geometry. The clear zone is the area adjacent to the traffic lanes which should not contain unprotected significant hazards.

Due to the low risk of errant vehicles driving over the headwall, it is not proposed to provide a crash barrier in this location.

Further measures required at detail design: Road Safety Audit to be completed and findings to be incorporated into the detail design.

6.3 Process for Review or Revision

Robert Bird Group will continually review Safety in Design requirements where a significant change to the design occurs.

In the event of a significant change, further risk assessment will be conducted on the affected portion of the design.

This report will then be revised accordingly and re-issued to the Client, the Principal Contractor, and other stakeholders.

7.0 Attachments and Reference Documents

Documents referenced by, or used in the compilation of this report are listed in Table 1.


Table 1: Reference Document

Document Reference	Title / Description
Safe Work Australia	Code of Practice for Safe Design of Structures.
Safe Work Australia	Code of Practice for Safe Design, Manufacture, Import and Supply of Plant.
Consult Australia	WHS Risk Assessment Matrix
State legislation	WHS Act - Part 2, section 22
State legislation	WHS Regulations

Appendix A

RBG Safety in Design Risk Register

SAFETY IN DESIGN RISK REGISTER - CIVIL WORKS

PROJECT NAME: North Ryde Station Project - M2 Site				RBG JOB No: 13656C	PROJECT OWNER: Urban Growth NSW				 RobertBirdGroup		
STRUCTURE Description: The Site is approximately 9.2ha in area and 600m in length. The Site is bound by the M2 motoway, Dehli Road, Epping Road and Wicks Road. The project involves all public domain works including roads, parks and verges plus service infrasturtucre for future development lots.					PARTICIPANTS: Ross Lucas Colin Rope Daniel Mitchell Louis Russel						
Item ID	Date Identified	Hazard	Risk	Description of Risk	Persons Affected	Controls/ Mitigation	Residual Risk levels			Controls / Mitigation	Status
	(date first listed on register)	(potential source of harm)	(possible event, or incident causing injury or loss)	(determines the level of consequence)		(determines the level of likelihood)	Consequence [C]	Likelihood (L)	Rating (C + L)	Responsibility	(Closed, Deleted)
1.01	1/04/2014	Hazardous substance	Exposure	The soil to be excavated and the water to be pumped out may contain contaminants which are hazardous to workers, public or the environment	workers, public, environment	Obtain geotechnical advice, monitor soil & dispose of in accordance with regulations.	13	5	18	Principal Contractor	Active
2.01	1/04/2014	Existing Services	Clash of existing services with Construction activities	Damage to existing in-ground services or injury from contact with existing in-ground services during construction	workers, public	Undertake dial before you dig / pot hole investigation during design stage and assess the likelihood of clashes with existing services. If possible, avoid existing services when positioning new works.	5	7	12	Principal Contractor / RBG	Active
3.01	1/04/2014	Excavation	Collapse of trenches	Deep or surcharged trenches may be subject to collapse and cause injury to workers.	workers, public	Design services alignments to limit the depth of trenches and avoid trenches within the zone of influence for existing and proposed structures. Principal Contractor to ensure trench excavation is undertaken in accordance with industry health and safety requirements.	13	5	18	Principal Contractor / RBG	Active
3.02	1/04/2014	Excavation	Stability of batters	Temporary batters at unsafe angles, surcharged by heavy equipment and/or saturated by water may be subject to collapse	workers	Commission geotechnical investigation to provide advice regarding safe temporary batter angles. Provide a note on the civil works drawings and/or in the specification referring to the geotechnical report and advising the Contractor they must provide safe batter angles, keep earthworks areas drained, and avoid surcharging batters.	19	5	24	Client / Project Manager / RBG	Active
4.01	1/04/2014	Stormwater	Flooding	Backflow from the stormwater drainage network has potential to surcharge in basements or low lying areas causing flooding. Entry of stormwater into basements or low lying areas without overland flowpaths	public, tenants	Ensure connections from basements or low lying areas are higher than hydraulic grade levels of the downstream drainage system during 100yr ARI rainfall events or have backflow prevention and adequate storage during such events.	7	1	8	RBG	closed
4.02	1/04/2014	Stormwater	Flooding	Surcharge from the stormwater drainage system and overland flowpaths may not be adequately identified by building managers who may inadvertently block these areas.	public, tenants	Surcharge pits and overland flowpaths to be included in operations manuals.	7	5	12	Principal Contractor	Active
4.03	1/04/2014	Stormwater	Flooding	People can be sucked into stormwater inlets during storms that produce large flows.	Public, Maintenance Staff	Size inlets small enough to prevent people being sucked in and/or place grates over inlets.	13	1	14	RBG	closed
4.04	1/04/2014	Stormwater	Flooding of temporary culvert	In a major flood event during the construction stage, flooding could occur near the Wicks/Waterloo Road access point. This may impede vehicular access or potentially knock someone off their feet.	Public, workers, maintenance staff	Adequately size the temporary culvert to take the 100 year ARI storm event. Ensure all flows have safe overflow routes into the culvert or Porters Creek.	13	1	14	RBG	closed

Item ID	Date Identified (date first listed on register)	Hazard (potential source of harm)	Risk (possible event, or incident causing injury or loss)	Description of Risk (determines the level of consequence)	Persons Affected	Controls/ Mitigation (determines the level of likelihood)	Residual Risk levels			Controls / Mitigation Responsibility	Status (Closed, Deleted)
							Consequence [C]	Likelihood (L)	Rating (C + L)		
4.05	1/04/2014	Embankments	Collapse; Flooding	Collapse of embankments have potential to bury people or sweep people away in large flows.	Workers, Tenants, Public, Maintenance Staff	Obtain specialist geotechnical advice to design the embankment walls and specify required material properties. Provide an adequate overflow structure so that water does not spill over the side of the dam causing erosion and failure of the dam wall. Concrete encase pipes through the dam wall to reduce the chances of piping. Ensure a geotechnical engineer supervises construction and certifies the dam walls.	19	5	24	Geotechnical Eng / RBG	closed
5.01	1/04/2014	Disabled access	Improper access routes	Disabled persons restricted from accessing buildings or carparks may put themselves at risk trying to gain access	Tenants, Public, Maintenance Staff	Design accessibility compliant paths for routes likely to be travelled by disabled people.	7	1	8	Architect / RBG	closed
5.02	1/04/2014	Pedestrian access	Improper access routes	People will take the most direct route from one point to another regardless of whether safe paths of travel are provided.	Tenants, Public, Maintenance Staff	Provide direct pedestrian routes for likely paths of travel. If necessary, block unsafe paths of travel.	7	1	8	Architect / RBG	closed
6.01	1/04/2014	Stormwater grates	Slip, Trip & Fall	Stormwater grates can trip people and peoples shoes can get stuck in the grate.	Public, Maintenance Staff	Provide pedestrian friendly grates in pedestrian paths.	7	1	8	RBG	closed
6.02	1/04/2014	Stormwater grates	Slip, Trip & Fall	Stormwater grates have potential to get bicycle tyres stuck in the grate.	Public	Orient grates perpendicular to bicycle travel and provide bike friendly grates.	7	1	8	RBG	closed
6.03	1/04/2014	High kerbs	Slip, Trip & Fall	People stepping up a kerb are generally expecting a standard height. A higher profile kerb can cause surprise and someone to trip	Workers, Tenants, Public, Maintenance Staff	Provide colour contrast between the road pavement and kerbs/area behind the kerb and avoid large height kerbs in likely paths of travel. If necessary block paths of travel.	7	5	12	Architect / Landscaper / RBG	closed
6.04	1/04/2014	Low kerbs	Slip, Trip & Fall	Small height kerbs can be difficult to see and can cause people to trip	Workers, Tenants, Public, Maintenance Staff	Provide colour contrast between the road pavement and kerbs/area behind the kerb and avoid small height kerbs in likely paths of travel. If necessary block paths of travel. Design flush edge at pram ramps	7	5	12	Architect / Landscaper / RBG	closed
6.05	1/04/2014	Smooth surfaces	Slip, Trip & Fall	Smooth and slippery surfaces can cause people to slip.	Workers, Tenants, Public, Maintenance Staff	Pavers to be in accordance with Australian Standards for slip resistance. Roads and footpaths to have appropriate finish such as asphalt or broom finish for concrete.	7	5	12	Architect / Landscaper / RBG	closed
6.06	1/04/2014	Sediment basins / dams	Slip, Trip & Fall	People could fall/trip into sediment basins or dams, potential for bodily injury or drowning if basins are full of water.	Workers, Tenants, Public, Maintenance Staff	Provide clear safety fencing around basins / dams on plans. Provide embankment and pond slopes in accordance with industry guidance for safety at water bodies. Manage basins to ensure water depths are shallow after rain events.	19	5	24	Principal Contractor / RBG	Active
6.07	1/04/2014	Differential Settlement	Slip, Trip & Fall	Settlement of footpaths over time may present trip hazards at footpath joints and building entries	Tenants, Public, Maintenance Staff	Where appropriate (e.g.. poor soils) provide improved subbase, dowelled/tied connections and link slabs.	7	5	12	RBG	closed
6.08	1/04/2014	High retaining walls	Slip, Trip & Fall	People walking alongside the top of retaining walls and maintenance staff could potentially fall from the wall. Basement entry ramps also have potential to create large falls from ground level.	Tenants, Public, Maintenance Staff	Provide barriers as required by the BCA when falls greater than 1 metre. If practicable, provide paths of travel away from areas with fall potential. Provide low maintenance finishes at the top of retaining walls.	7	5	12	Architect / Landscaper / RBG	closed
6.09	1/04/2014	Drainage channel	Slip, Trip & Fall	Where drainage channels are crossed by pedestrian routes, people could trip or fall in the steep sides of the channel.	Tenants, Public, Maintenance Staff	Provide suitable crossing points with bridges/culverts or flattening the channel slopes to provide a suitable crossing point.	7	5	12	Architect / Landscaper / RBG	closed

Item ID	Date Identified (date first listed on register)	Hazard (potential source of harm)	Risk (possible event, or incident causing injury or loss)	Description of Risk (determines the level of consequence)	Persons Affected	Controls/ Mitigation (determines the level of likelihood)	Residual Risk levels			Controls / Mitigation Responsibility	Status (Closed, Deleted)
							Consequence [C]	Likelihood (L)	Rating (C + L)		
7.01	1/01/2014	Mobile Plant	Vehicle collision with public	People will take the most direct route from one point to another regardless of whether safe paths of travel are provided. Pedestrian can therefore place themselves at risk of being hit by vehicles if crossing roads at unsafe points.	Tenants, Public, Maintenance Staff	Design safe crossing points along likely paths of travel. If necessary, block unsafe paths of travel.	7	1	8	Architect / Traffic / RBG	closed
7.02	1/04/2014	Mobile Plant	Vehicle collision with public	Maintenance staff inspecting or accessing stormwater pits may be struck by vehicles if placed in the carriageway	Maintenance Staff	Avoid placing stormwater pits in the carriageway where practicable. Check all pits can be accessed in a safe manner.	7	1	8	RBG	closed
7.03	1/04/2014	Mobile Plant	Slip, Trip & Fall	Overloading of stormwater pits causes pit covers to break and creates open pits that people can fall into.	Tenants, Public, Maintenance Staff	Provide appropriate pit class for likely loading, including allowance for trucks mounting footpaths to negotiate sharp corners or for maintenance access.	7	1	8	RBG	closed
7.04	1/04/2014	Mobile Plant	Vehicle collision with structure	Sensitive infrastructure or structures adjacent to roads and parking areas may collapse if struck by vehicles.	public, constructed element	Relocate sensitive items clear of vehicle areas where possible. Provide separation between the road and structures / infrastructure to road authority, Australian Standards or industry practice requirements as appropriate. Provide wheelstops / kerbs / bollards / guardrails as appropriate for protection of elements as required.	13	1	14	Architect / Traffic / Services / RBG / Client	closed
7.04	1/04/2014	Mobile Plant	Vehicle falling from road	Vehicle areas with significant drops adjacent may create dangerous falls for vehicles, particularly if pedestrian paths are below the vehicle area.	Workers, Tenants, Public, Maintenance Staff	Follow road authority advice with regards to requirement for barriers. Provide barriers as appropriate. Principal Contractor to provide temporary barriers as appropriate.	13	1	14	Architect / Traffic / RBG	closed
7.05	1/04/2014	Mobile Plant	Unsafe horizontal geometry	Lack of adequate sight distance due to sharp bends produces situations prone to vehicle collision with other vehicle or pedestrians	Public, Maintenance Staff	Provide safe sight distance and minimum horizontal curve radius as required by road authorities appropriate for design speeds. Obtain road safety audit as required by road authorities.	13	1	14	Architect / Traffic / RBG	closed
7.06	1/04/2014	Mobile Plant	Unsafe horizontal geometry	Larger vehicles may need to mount the footpath to negotiate inadequate corners and potentially clash with pedestrians and strike road furniture.	Public, Maintenance Staff	Design in accordance with appropriate standards and run vehicle turning movements where doubt exists.	7	5	12	Architect / Traffic / RBG	closed
7.07	1/04/2014	Mobile Plant	Unsafe vertical geometry	Lack of adequate sight distance due to sharp crests produces situations prone to vehicle collision with other vehicle or pedestrians	Public, Maintenance Staff	Provide safe sight distance and minimum vertical curve lengths as required by road authorities appropriate for design speeds. Obtain road safety audit as required by road authorities.	13	5	18	Architect / Traffic / RBG	closed
7.08	1/04/2014	Mobile Plant	Confusion for drivers	Drivers faced with uncertainty and confusion will be inattentive to potential hazards, particularly at intersections.	Public, Maintenance Staff	Provide clear direction to drivers with traffic islands, road marking and signage including advanced warning signage sufficiently distant and separated from needing to make decisions as required by road authorities appropriate for design speeds. Obtain road safety audit as required by road authorities.	13	5	18	Architect / Traffic / RBG	Active
7.09	1/04/2014	Mobile Plant	Unsafe intersections	Intersections are guaranteed points of conflict for vehicles and contain numerous hazards.	Public, Maintenance Staff	Design intersections in accordance with road authority requirements. Obtain road safety audit as required by road authorities.	19	5	24	Architect / Traffic / RBG	Active
7.1	1/04/2014	Mobile Plant	One way at Epping Road access point	The access point at Epping Road is left turn, entry only. For a quick exit from the Site to Epping Road, motorists may drive down the wrong side of the road and exit out of the Epping Road entry point.	Public, Tenants, Workers	Provide a road island to stop vehicles heading southbound to illegally exit the Site using the Epping Road entry point. Signage and linemarking shall be provided to guide drivers the correct way, or to alert drivers if they are going in the wrong direction. Obtain road safety audit as required by road authorities.	19	5	24	Architect/ Traffic Engineer/ RBG	Active

Appendix B

RBG Safety in Design Review Process

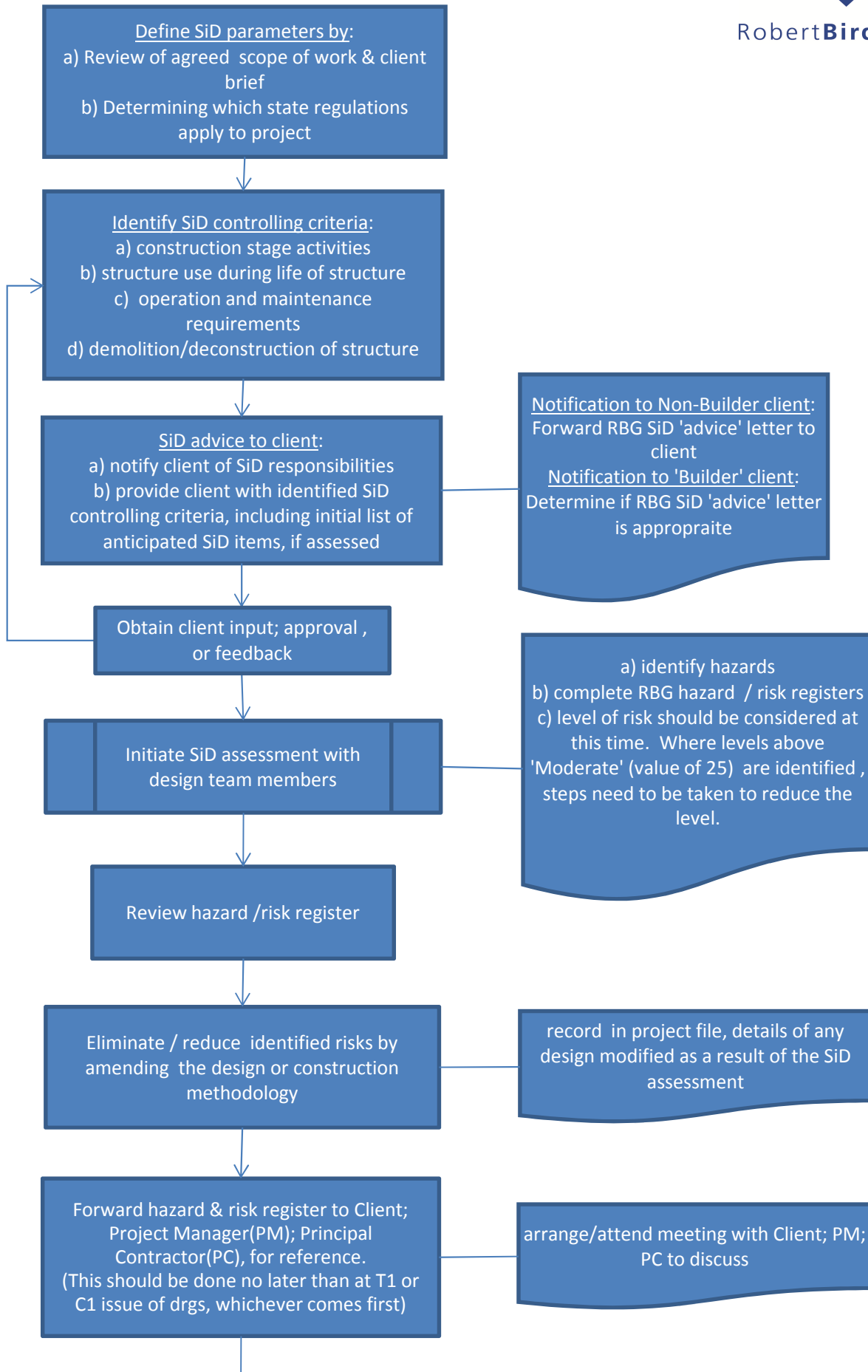
RBG Safety in Design review

SAFETY IN DESIGN (SiD) PROCESS

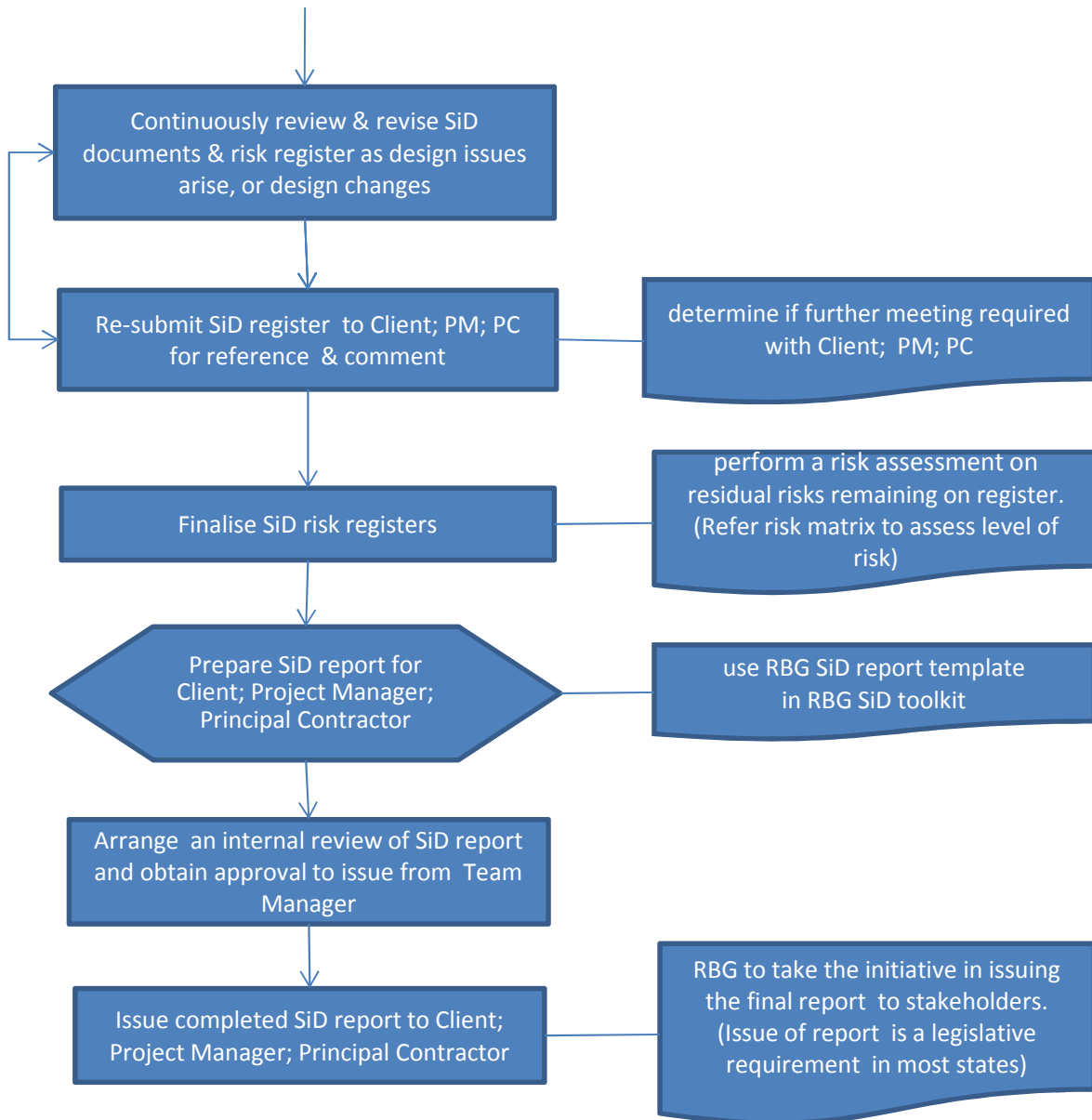
Revised: 6/6/13



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RBG Safety in Design review





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