Document history and status

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<th>Revision</th>
<th>Date issued</th>
<th>Reviewed by</th>
<th>Approved by</th>
<th>Date approved</th>
<th>Revision type</th>
</tr>
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<td>Rev A</td>
<td>18 September 2013</td>
<td>Michael Stacey</td>
<td>Amanda Hunter</td>
<td>18 September 2013</td>
<td>Draft for internal practice review</td>
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<tr>
<td>Rev B</td>
<td>02 October 2013</td>
<td>Alastair Hammond / Kenneth Robinson</td>
<td>Bruce Lean</td>
<td>02 October 2013</td>
<td>Draft for Roads and Maritime review</td>
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<tr>
<td>Rev C</td>
<td>04 December 2013</td>
<td>Roads and Maritime</td>
<td>Bruce Lean</td>
<td>04 December 2013</td>
<td>Final draft for Roads and Maritime review</td>
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<tr>
<td>Rev D</td>
<td>20 December 2013</td>
<td>Michael Stacey, Alastair Hammond</td>
<td>Bruce Lean</td>
<td>20 December 2013</td>
<td>Final for Roads and Maritime approval</td>
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<tr>
<td>Rev E</td>
<td>29 December 2014</td>
<td>Alastair Hammond</td>
<td>Bruce Lean</td>
<td>29 January 2014</td>
<td>Final issue</td>
</tr>
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Appendix A. Dial before you dig plans

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Executive summary

Background

The proposal involves upgrading Prospect Highway between Reservoir Road, Prospect and St Martins Crescent, Blacktown, a length of about 3.6 kilometres. The proposal would generally deliver a four lane divided road (two lanes in each direction) with a variable width central median (up to 12 metres wide). Some sections as described below would be six lanes, with the additional lanes being dedicated bus lanes. The widening along Prospect Highway occurs generally to the west of the existing carriageway.

Purpose of this report

This report sets out the results of a Phase 1 Environmental Assessment which was used to identify past and/or current activities that may present a potential contamination risk within and adjacent to the study area. The purpose of this report is to provide input to the Review of Environmental Factors (REF), which is being prepared under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

Findings of this report

Following a review of the available historical and government records, and a site inspection, the key findings of the Phase 1 Environmental Assessment include:

- The study area has remained largely the same since the 1930s, with increased traffic flow through the site until the current day, as well as an extension to the development of the southern portion of the study area.
- Five waterways are located near to the study area which could be potentially impacted by contamination (if present) within the study area.
- There are three sites within two kilometres of the study area that are either regulated or have been notified by the NSW Environment Protection Authority (EPA).
- There are six Areas of Environmental Interest (AEI) within and adjacent to the study area that may present a low to moderate contamination risk to the proposal.

Conclusion and recommendation

Contamination risks to construction activities and workers would be increased if excavation occurs within the six potential AEIs identified in this study. Where excavation works are required within moderate risk areas, the project Construction Environmental Management Plan (CEMP) should detail contingency measures. These measures would manage potentially contaminated materials if materials are suspected and/or encountered and may include:

- Stop work procedures: a suitably qualified and experienced consultant should then assess whether material is or is not contaminated.
- Treat suspected contaminated material as actually contaminated material and employ adequate environmental and safety controls.

It is not recommended that a detailed Phase 2 investigation be undertaken within identified risk areas. However, an in-situ waste classification should be undertaken for any materials which are excavated and removed from the study area. A hazardous materials assessment should also be undertaken for any structure identified for demolition prior to the start of work.
1. Introduction

1.1 Proposal background

The proposal involves upgrading Prospect Highway between Reservoir Road, Prospect and St Martins Crescent, Blacktown, a length of about 3.6 kilometres. Refer to Figure 1-1 for an overview of the proposal.

The Prospect Highway, between Reservoir Road at Prospect and St Martins Crescent at Blacktown, forms the main road corridor connecting the city of Blacktown with the M4 Western Motorway. It is proposed to upgrade the corridor to meet future traffic demand, reduce travel times, and improve road safety. The upgrade will involve improvements to the existing route of the Prospect Highway.

The key features of the Prospect Highway upgrade are:

- Upgrading to two lanes in each direction.
- Duplicating the bridges over the M4 Western Motorway and the Great Western Highway.
- Providing a new two way road between the Great Western Highway and the Prospect Highway, with traffic lights at either end of the new road, to improve access.
- Providing new traffic lights at:
  - Stoddart Road.
  - M4 Western Motorway eastbound entry and exit ramp.
  - Reservoir Road.
- Changing access arrangements at:
  - Tudor Avenue.
  - Roger Place.
  - Vesuvius Street.
  - Ponds Road.
- Upgrading the shared path/cycleway on the western side of the Prospect Highway between the M4 Western Motorway westbound carriageway and Harrod Street.
- Improving bus priority by providing two dedicated kerbside bus lanes between Lancelot Street and St Martins Crescent.

1.2 Purpose of this report

This report sets out the results of a Phase 1 Environmental Assessment to consider potential contamination issues of relevance to the proposal. This assessment has identified past and/or current activities that may present a potential for contamination to be present within and adjacent to the study area.

A detailed methodology for the Phase 1 Environmental Assessment is provided in Section 2.1.2.

The purpose of this report is to provide input to the Review of Environmental Factors (REF) which is being prepared under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

1.3 Report structure

This report is structured as follows:

Section 1: Introduction.
Section 2: Methodology.
Section 3: Existing environment.
Section 4: Site history.
Section 5: Potential impacts.
Section 6: Conclusions and recommendations.
Section 7: Limitations.
Section 8: References.

1.3.1 Construction activities

Construction activities would be guided by a Construction Environmental Management Plan (CEMP) to allow works to be completed. The CEMP would include the safeguards described in the Project REF.
2. Methodology

2.1 Approach to this study

2.1.1 Study area

The Prospect Highway Upgrade study area (ie the study area) includes the 3.6 kilometre length of Prospect Highway from Reservoir Road, Prospect to St Martins Crescent, Blacktown. For the historical review section of this report, the study area includes residential and commercial/industrial areas directly adjacent to the proposal, and the surrounding suburbs of Seven Hills, Toongabbie, Girraween, Huntingwood and Arndell Park. Refer to Figures 1-1 and Figure 5-1 for details.

2.1.2 Methodology

The Phase 1 Environmental Assessment identifies past and/or current activities that may have presented or continue to present a potential for contamination to exist within the study area. The assessment focusses on the general conditions of the study area, the historical use of surrounding properties, historical aerial photographs, previous environmental investigations, and other publicly available information (refer to Section 4) to identify potentially contaminating activities. The assessment has identified potential Areas of Environmental Interest (AEIs) in the study area associated with past and/or current activities. The Phase 1 assessment also provides an indication of the probability of encountering acid sulfate soils (ASS) during the construction of the proposal.

Specific tasks that were completed for the Phase 1 assessment comprised:

- Review of information held on the study area by Roads and Maritime Services (such as previous investigations).
- Review of publicly available data (eg historical aerial photographs (Land and Property Information Division), geological plans (Geological Series Maps), topographical maps (Spatial Information Exchange), groundwater resource maps (NSW Natural Resources Database), and ASS risk maps (NSW Natural Resources Database).
- Review of information held by State Government Departments (Environment Protection Authority and Office of Environmental and Heritage).
- Study area inspection and photographic record of current conditions.
- If available, assessment of anecdotal evidence collected during the site inspection.

SKM undertook a Dial Before You Dig search of the study area to assess the presence and location of underground services. The results of the Dial Before You Dig search can be found in Appendix A.

2.1.3 Site history methodology

Various sources of historical information were reviewed and a summary of information provided by each of the respective sources to determine the historical land use within the study area. These include:

- NSW Land and Property Management Authority, Land and Property Information Division (LPI): Historical aerial photographs (1930 to 2002).
- NSW Roads and Traffic Authority (now Roads and Maritime) historical aerial photographs of Sydney in 1943.
- NSW EPA Contaminated Sites Register (accessed September 2013).
2.2 Legislative review, policy setting, criteria

The study has been completed in accordance with the requirements specified for a Phase 1 Environmental Assessment as published in the:

3. **Existing Environment**

3.1 **Land use and zoning**

At the time of preparing this Phase 1 Environmental Assessment, the current zoning of the study area was Land Zone 5(b) Arterial Road under the Blacktown City Council Local Environmental Plan 1988 (Blacktown LEP). In Blacktown, the northern section of the study area is a four lane dual carriageway. As the highway travels south from St Martins Crescent to Prospect it varies between a four lane and two lane undivided carriageway. The study area contains one major roundabout and two road bridges. According to the Blacktown LEP (1988) the land use surrounding the study area is primarily Low Density Residential with some areas of SP2 Infrastructure, light industrial, general industrial, and private recreation.

3.2 **Topography and drainage**

The topography of the study area is undulating throughout, with a general slope in a northerly direction from the southern end of the study area, where the study area forms a peak between the eastbound entry ramp of the M4 Western Motorway and the Great Western Highway. The NSW Natural Resources Atlas (NRA) database topographic maps of the Prospect and Blacktown area indicates that the study area has an average elevation of about 70 metres Australian Height Datum (AHD). The topographic maps indicate that the height of the study area ranges from 55 metres AHD at the northern end of the site to 95 metres AHD in the area between the Great Western Highway and the M4 Western Motorway.

The majority of the surface water within the study area is expected to be controlled by the installation of or sections of formalised kerb and guttering. The drains from the road mainly discharge to Blacktown Creek located to the west of the study area. There is also a water quality basin located between the westbound carriageway of the M4 Western Motorway and the westbound exit ramp. Surface water on the unsealed portions of the study area (ie grass verge) is likely to infiltrate directly into the ground and recharge localised groundwater.

3.3 **Geology**

The Sydney 1:250,000 Geological Series Sheet S1 56-5 (Geological Survey of NSW Department of Mineral Resources 1966) indicates that the study area is underlain by Bringelly shale, Minchinbury sandstone, and Ashfield Shale (ie shale with some sandstone beds), with ‘special clay’ mineral deposits of kaolin, fire clay, stoneware and terracotta clay, and a basalt and dolerite dyke located in the north eastern portion of the study area.

3.4 **Soils**

The Penrith1:100,000 Soil Landscape Series Sheet 9030 (Soil Conservation Service of NSW 1989) indicates that the residual soils underlying the study area are of the Blacktown soil landscape group. These soils are found on gently undulating rises on Wianamatta Group shales with a local relief to 30 metres and slopes of usually less than 5 per cent. The soils of the group consist of shallow to moderately deep hardsetting mottled texture contrast soils, red and brown podzolic soils on crests grading to yellow podzolic soils on lower slopes and in drainage lines.

3.5 **Acid Sulfate Soils risk**

Acid Sulfate Soil (ASS) Risk Maps from the NSW NRA database were reviewed to identify the potential presence of ASS within the study area. Based on this information, there are no known areas of ASS risk within or immediately adjacent to the study area.
3.6 Hydrogeology

The actual direction of groundwater flow could not be assessed based on current information, although the surrounding topography suggests that regional groundwater would flow in a northerly direction towards Blacktown Creek and Toongabbie Creek.

3.7 Sensitive environments

According to the Blacktown LEP (1988) there are no areas of Environmental Management or Environmental Conservation within a one kilometre radius of the study area. Additionally, Toongabbie Creek, Greystanes Creek, Blacktown Creek, Girraween Creek and Prospect Reservoir are sensitive environments located in the study area (although greater than one kilometre).

3.8 Previous site investigations

No previous contamination investigations are known to have been undertaken within the study area or were provided for review.

3.9 Site inspection

A site inspection of the study area was conducted on 3 September 2013 by an SKM environmental scientist. The site inspection focussed on the study area, including adjacent commercial/industrial areas and Areas of Environmental Interest (AEIs).

3.9.1 General

At the time of the site inspection the study area was a major arterial road in Sydney's west, with a varying number of lanes; from a two lane undivided carriageway, to a four lane divided carriageway. The road appeared to facilitate a moderate to heavy traffic flow with the busiest intersections being at the two M4 Western Motorway interchanges.

The road appeared to be in fair condition with low density residential land use and some areas of commercial/industrial land use adjacent to the study area.

The commercial/industrial centres adjacent to the study area consisted mainly of homeware stores (ie white goods, furniture, kitchens, blinds etc) and some car related industry (ie smash repairs and lubricants). The commercial/industrial centres located to the south of the study area consisted of storage facilities, a Boral compound, Linfox depot and Hitachi facility.

St Bartholomew’s Anglican Church and Cemetery is present to the northeast of the M4 Western Motorway roundabout, which is located in a lower section of the study area.

At the time of the inspection Thornley Road (on the south exit of the M4 Western Motorway interchange) was surrounded by vacant land where some illegally dumped waste was observed.
4. Site history

4.1 Historical aerial photography

Historical aerial photographs from the NSW Land and Property Management Authority, Land and Property Information Division were reviewed for the years: 1930, 1956, 1965, 1978, 1986, 1994, and 2004. Historical aerial photography from 1943 was sourced from the RTA *From the Skies: Aerial photographs of Sydney in 1943*. The findings of the historical aerial photograph review are summarised in Table 4-1. Aerial photographs are presented in Appendix B.

<table>
<thead>
<tr>
<th>Date of Aerial Photograph</th>
<th>Study area</th>
<th>Surrounding Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1930</td>
<td>The study area has not yet been fully constructed. The existing route is present from St Martins Crescent until Blacktown Road where it forms an intersection with Old Church Lane, then continues on the present route until around Watch House Road. The M4 Western Motorway and Great Western Highway do not yet exist nor do the associated overpasses of the Prospect Highway.</td>
<td>The study area is predominately surrounded by agricultural land and some areas of dense woodland. There is little to no residential land use surrounding the study area. There is a large land disturbance/cleared land at the intersection of Blacktown Road and Old Church Lane. A quarry (ie Prospect Quarry) is visible several kilometres south of the study area. The Great Western highway can be seen at the southern end of the Prospect Highway route.</td>
</tr>
<tr>
<td>1943</td>
<td>The land use of the study area remains largely the same as in 1930.</td>
<td>The surrounding area remains largely agricultural with an increase in built up areas to the north and south of the study area. Prospect quarry to the south of the study area has significantly increased in size.</td>
</tr>
<tr>
<td>1956</td>
<td>The land use of the study area remains largely the same as in 1943.</td>
<td>There has been an increase in the construction of roads adjoining the Prospect Highway route. The land disturbance at the intersection of Blacktown Road and Old Church Lane is still apparent however appears to be better vegetated.</td>
</tr>
<tr>
<td>1965</td>
<td>The land use of the study area remains largely the same as in 1956.</td>
<td>The surrounding land use remains largely agricultural, although there are areas of increased residential land use. Several more arterial roads have been constructed surrounding the Prospect Highway route. Prospect Quarry has increased in size further to the north.</td>
</tr>
<tr>
<td>1978</td>
<td>The southern section of the Prospect Highway (bypassing Old Church Lane intersection) is under construction but has not yet joined with Blacktown Road.</td>
<td>The surrounding land use is now low density residential across the majority of the study area, as well as some areas of vacant land/public recreation. The Great Western Highway has been continued through Prospect, heading west. A major land disturbance is apparent near St Martins Crescent. Prospect Quarry and a storage/transport facility are in operation to the south of the study area. A service station has been erected opposite to the corner of Blacktown Road and Leabons Lane.</td>
</tr>
</tbody>
</table>
Phase 1 Environmental Assessment

<table>
<thead>
<tr>
<th>Date of Aerial Photograph</th>
<th>Study area</th>
<th>Surrounding Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>The Prospect Highway bypass of Old Church Lane with additional turning lanes and connection with the Great Western Highway is complete.</td>
<td>A commercial/industrial centre has been established at the southern end of the study area. Bungarribee Road has been constructed at the northern end of the study area, and the major land disturbance immediately to the south of this road (as observed in the 1978 photograph) is still present.</td>
</tr>
<tr>
<td>1994</td>
<td>St Martins Crescent has been created. The Prospect Highway has been extended to cross the recently built M4 Western Motorway and continues onto Reconciliation Road (two major roundabouts and associated on/off ramps are included in this extension).</td>
<td>The land disturbance (near St Martins Crescent) has now been transformed into part commercial centre, part residential land. The commercial/industrial centre to the south of the study area has been further developed.</td>
</tr>
<tr>
<td>2004</td>
<td>The study area remains largely the same as in 1994.</td>
<td>The commercial/residential centre to the south of Bungarribee Road has been further developed. The land between the Old Church Lane intersection and the Prospect Highway has been developed into residential land. A commercial/industrial centre has been built to the south of the study area where the quarry was formerly located.</td>
</tr>
</tbody>
</table>

4.2 NSW EPA Contaminated Sites Register and Record of Notices

A search of the NSW EPA Contaminated Sites Register and Record of Notices (under Section 58 of the Contaminated Land Management Act 1997) indicated that there were three sites within two kilometres of the study area that were either regulated or have been notified. Table 4-2 describes these sites in relation to the study area.

<table>
<thead>
<tr>
<th>Suburb</th>
<th>Notified Site Address</th>
<th>Notified Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prospect</td>
<td>354 Flushcombe Road</td>
<td>Service station</td>
<td>1.27 km west of the study area</td>
</tr>
<tr>
<td>Seven Hills</td>
<td>1 Powers Road</td>
<td>Transport Infrastructure Development Corporation</td>
<td>1.74 km north east of the study area</td>
</tr>
<tr>
<td>Blacktown</td>
<td>Reservoir Road</td>
<td>Unclassified land</td>
<td>1.90 km west of the study area</td>
</tr>
</tbody>
</table>

4.3 Groundwater bore search

A search of the NSW Natural Resources Atlas (NRA) database identified no registered groundwater wells within the study area. Thirteen wells are registered within a two kilometre radius of the site. Details of the 13 wells are summarised in Table 4-3.
### 4.4 Site history summary

The historical aerial photography review indicates that the study area has changed little since the 1930s. Blacktown Road has facilitated an increase in traffic flows since this time. It has been extended to form Prospect Highway and to provide a crossing of the Great Western Highway in the 1970s. Prospect Highway was again extended to pass over the M4 Western Motorway in the 1990s. The surrounding land use has changed from a historically agricultural land use to a current low density residential land use. Prospect Quarry is a distinct feature of the Prospect landscape, however, is located outside the study area.

Currently, there are three notices for land within two kilometres of the study area in the surrounding suburbs of Prospect, Blacktown and Seven Hills. The sites present low risks with respect to contamination due to the proximity of the sites to the study area, and potential migration pathways.

### 4.5 Integrity assessment

Historical and site information was sourced from NSW Government departments with no known interest in the site. SKM has relied on the accuracy of the documentation provided and our experience in historical document interpretation. While there is a small margin for error in interpretation, SKM considers the information presented in this assessment to be accurate.

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### Table 4-3 Registered NRA boreholes

<table>
<thead>
<tr>
<th>Borehole ID</th>
<th>Licence No.</th>
<th>Easting</th>
<th>Northing</th>
<th>Bore Usage</th>
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<tr>
<td>GW101177</td>
<td>10BL158460</td>
<td>307482</td>
<td>6256771</td>
<td>Industrial</td>
</tr>
<tr>
<td>GW111067</td>
<td>10BL604054</td>
<td>306050</td>
<td>6258549</td>
<td>Monitoring</td>
</tr>
<tr>
<td>GW111069</td>
<td>10BL604054</td>
<td>306026</td>
<td>6258556</td>
<td>Monitoring</td>
</tr>
<tr>
<td>GW018680</td>
<td>10BL010771</td>
<td>308660</td>
<td>6260862</td>
<td>Waste Disposal</td>
</tr>
<tr>
<td>GW018375</td>
<td>10BL010773</td>
<td>308660</td>
<td>6260893</td>
<td>Waste Disposal</td>
</tr>
<tr>
<td>GW018679</td>
<td>10BL010772</td>
<td>308609</td>
<td>6260861</td>
<td>Waste Disposal</td>
</tr>
<tr>
<td>GW018374</td>
<td>10BL010475</td>
<td>308608</td>
<td>6260892</td>
<td>Waste Disposal</td>
</tr>
<tr>
<td>GW107205</td>
<td>10BL165294</td>
<td>307968</td>
<td>6261070</td>
<td>Monitoring</td>
</tr>
<tr>
<td>GW107203</td>
<td>10BL165294</td>
<td>307994</td>
<td>6261088</td>
<td>Monitoring</td>
</tr>
<tr>
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<td>307952</td>
<td>6261107</td>
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<td>GW107832</td>
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<td>308411</td>
<td>6256578</td>
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</tr>
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<td>GW107831</td>
<td>10BL165697</td>
<td>308468</td>
<td>6256269</td>
<td>Monitoring</td>
</tr>
<tr>
<td>GW018574</td>
<td>10BL012055</td>
<td>306255</td>
<td>6261461</td>
<td>Waste Disposal</td>
</tr>
</tbody>
</table>
5. Potential impacts

5.1.1 Potential areas of environmental interest (AEIs)

A number of potential AEIs were identified during the information review and site inspection.

Table 5-1 outlines the potential AEIs located within and/or adjacent to the study area and their associated risks to the study area and site users. Refer to Figure 5-1 for the location of potential AEIs across the study area.

Table 5-1  Potential areas of environmental interest and associated risks

<table>
<thead>
<tr>
<th>Potential AEI</th>
<th>Location relative to site</th>
<th>Potential contamination sources</th>
<th>Risk rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobil Service Station</td>
<td>1.27 km west of the study area</td>
<td>Fuel storage</td>
<td>Low</td>
</tr>
<tr>
<td>Transport Infrastructure Development Corporation</td>
<td>1.74 km north-east of the study area</td>
<td>Historical activities / fuel storage</td>
<td>Low</td>
</tr>
<tr>
<td>Former Sunnyholt Express Service Station</td>
<td>400 m north of the study area</td>
<td>Fuel storage</td>
<td>Moderate</td>
</tr>
<tr>
<td>Commercial/industrial centres</td>
<td>Adjacent to the study area</td>
<td>Current activities</td>
<td>Low</td>
</tr>
<tr>
<td>St Bartholomew’s Church and Cemetery</td>
<td>Within study area</td>
<td>Cemetery</td>
<td>Low</td>
</tr>
<tr>
<td>Unsealed areas eg nature strips/residential gardens</td>
<td>Within study area</td>
<td>Deposition of particulates and spills/leaks from use as a road, historical use as agricultural land</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

5.2 Summary of potential areas of interest

Potential areas of interest and associated contaminants of concern:

- The Mobil service station to the west of the study area represents a potential source of contamination associated with leaks and spills from fuel storage infrastructure. However, this site poses a low contamination risk to the proposal as it is over one kilometre west of the study area.

- The Transport Infrastructure Development Corporation site has been notified to the NSW EPA as a contaminated site. Potential contamination sources could be associated with fuel storage (ie hydrocarbons, metals), or proximity to a railway corridor (ie hydrocarbons, metals, hazardous materials). However, this site poses a low contamination risk to the study area as it is over 1.7 kilometres north-east of the study area.

- The former service station (Sunnyholt Express) adjacent to the study area in the north represents a potential source of contamination. This would be associated with leaks and spills from fuel storage infrastructure which could migrate onto the study area via groundwater and vapour, potentially contaminating soils. The risk to site users during construction is moderate. This is due to the increased likelihood of exposure to potential contamination associated with excavation in these areas, especially at depth.
- The commercial/industrial centres located adjacent to the study area are considered to pose a low risk with respect to contamination due to these centres being relatively modern facilities, the proximity of the premises to the study area, potential contamination types, and migration pathways.

- St Bartholomew’s Anglican Church and Cemetery is located adjacent to the study area in the south and represents a potential source of contamination. This would be associated with biological hazards and chemicals associated with the embalmment process (ie formaldehyde) and the breakdown of human remains. The cemetery poses a low contamination risk because the site is located in a lower section of the study area, which limits migration pathways for potential contaminants.

- Historical and continued land use as a road corridor. There is the potential for localised point sources of contamination to exist along the road corridor, in nature strips and residential gardens. This could be associated with spills, leaks and particulate deposition from vehicles. Without appropriate controls, the risk to site users during construction is moderate. This is due to the increased likelihood of exposure to potential contamination associated with excavation in these areas.

The AEIs in relation to the study area are shown in Figure 5-1. The AEI ‘historical and continued use as a road corridor’ is not shown on the figure due to the diffuse extent of the area.
The proposal boundary
The proposal
Potential areas of interest
1 - Mobil service station
2 - Transport Infrastructure Development Corporation
3 - Former service station (Sunnyholt Express)
4 - Commercial/industrial centres adjacent to the study area
5 - St. Bartholomew’s Anglican Church and Cemetery
National park/reserve
Park
LGA boundary
Suburb boundary
Waterbody
Waterway

Figure 5-1
Areas of Environmental Interest (Indicative locations)
6. Conclusions and recommendations

6.1 Conclusion

Following a review of the available historical and government records, and a site inspection, the key findings of the Phase 1 Environmental Assessment include:

- The study area has remained largely the same since the 1930s, with increased traffic flow through the site until the current day, as well as an extension in development of the southern portion of the study area.
- Five waterways are located near to the study area which could be potentially impacted on by contamination (if present) within the study area.
- There are three sites within two kilometres of the study area that are either regulated or have been notified by the NSW EPA.
- There are six AEIs located within or in proximity to the study area that may present a low to moderate contamination risk to the proposal.

6.2 Recommendations

Contamination risks to construction activities and workers would be increased if excavation occurs within the six potential AEIs identified in this study. Where excavation works are required within moderate risk areas, the project Construction Environmental Management Plan (CEMP) should detail contingency measures. These measures would manage potentially contaminated materials if materials are suspected and/or encountered and may include:

- Stop work procedures: a suitably qualified and experienced consultant should then assess whether material is or is not contaminated.
- Treat suspected contaminated material as actually contaminated material and employ adequate environmental and safety controls.

It is not recommended that a detailed Phase 2 Investigation be undertaken within identified risk areas. However, an in-situ waste classification should be undertaken for any materials which are excavated and removed from the study area. A hazardous materials assessment should also be undertaken within any structure identified for demolition prior to the start of work.
7. Limitations

The sole purpose of this report is to present the findings of a Phase 1 Environmental Assessment carried out by SKM for Roads and Maritime Services (the Client) in connection with the Prospect Highway Upgrade. This report was produced in accordance with and is limited to the scope of services set out in the contract between SKM and the Client. That scope of services, as described in this report, was developed with the Client.

The scope of services was not intended to provide a definitive or quantitative investigation of the environmental impacts, performance and compliance of the subject sites. Environmental conditions may exist at the sites that are beyond the scope of our investigations and this report.

The findings presented in this report are professional opinions based solely upon information and data provided or made available by the Client or otherwise available in the public domain including:

- Visual observations of the site and its vicinity.
- Interviews with site personnel.
- Documentation made available by Roads and Maritime.

SKM has relied upon and presumed that this data is accurate and representative of the environmental conditions at the sites. Except as otherwise stated in the report, SKM has not attempted to verify the accuracy or completeness of any such information. If the information is subsequently determined to be false, inaccurate or incomplete, or if site conditions change beyond the agreed dates then it is possible that our conclusions as expressed in this report may change.

SKM has prepared this report in accordance with the usual care and thoroughness of the consulting profession and by reference to applicable auditing procedures and practice at the date of issue of this report. For the reasons outlined above, however, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this report.

Except as specifically stated in this report, SKM makes no statement or representation of any kind concerning the suitability of the sites for any purpose or the permissibility of any use. Use of the site for any purpose may require planning and other approvals and, in some cases, EPA (or OEH) and accredited site auditor approvals. SKM offers no opinion as to the likelihood of obtaining any such approvals, or the conditions and obligations which such approvals may impose, which may include the requirement for additional environmental investigations and/or works.

This report should be read in full and no excerpts are to be taken as representative of the findings. No responsibility is accepted by SKM for use of any part of this report in any other context.

This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in accordance with the contract between SKM and the Client. SKM accepts no liability or responsibility whatsoever for or in respect of any use of or reliance upon this report by any third party.
8. References


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Appendix A. Dial before you dig plans
Appendix B. Historical aerial photographs