

**M1 Junction 15 West, Northampton Gateway  
Environmental Statement  
Chapter 6; Geology, Soils and Groundwater**

**Matrix 6.2: Construction Phase Short Term Impact and Effects Risk Assessment**

| Existing Source / Hazard Magnitude  | Potential Impacts  | Construction Receptor Sensitivity (Tab 6.2) | Construction Effects (Table 6.4) | Construction Strength of pathway | Construction Likelihood (Tab 6.5) | Construction Risk (Tab 6.6) | Construction Stage Mitigation  | Revised Post Mitigation Construction Risk |
|---|--|---|----------------------------------|----------------------------------|-----------------------------------|-----------------------------|--|---|
| <b>Contaminated soils</b><br><br><b>Very Low hazard rating Greenfield Site</b><br>No significant sources of contamination identified. | Inhalation, ingestion and dermal contact                                 | Construction Workers (H)                    | Moderate/Minor                   | Strong                           | Unlikely                          | Low Risk/Very Low Risk      | Greenfield Site. No contamination identified within soil or Groundwater. Construction would utilise only clean natural site won soils.<br><br>Appropriate plant and methods of working. Minimal contact. Detailed risk assessment and provision of training and PPE. Monitoring of personnel and works. Provision of suitable welfare, hygiene, Dust control dampeners to be used where necessary. Vigilance to be maintained throughout and any minor areas of potential contamination isolated and investigated and appropriate strategy adopted- none identified to date. | Negligible                                |
|   | Inhalation, ingestion and dermal contact                                 | Adjacent Site Users (H)                     | Moderate/Minor                   | Weak                             | Unlikely                          | Low / Very Low Risk         | Greenfield Site. No contamination identified within soil or Groundwater. Construction would utilise only clean natural site won soils.<br><br>Main works areas to be fenced and access limited to operatives only. Environmental Management Plan to monitor dust. Dust control dampeners to be used where necessary. Well designed programme of works with phasing designed to minimise effects on local population, haul roads and plant routes to be sited away from nearby property and footways. Footpaths to be redirected and stopped up while works take place.       | Very Low to Negligible                    |
|   | Contamination of local surface water features via run off or groundwater | Surface Water Features (H)                  | Moderate/Minor                   | Moderate                         | Unlikely                          | Low Risk/Very Low Risk      | Greenfield Site. No contamination identified within soil or Groundwater. Construction would utilise only clean natural site won soils.<br>Suitable site controls to be in place to manage and control surface water generation as works progress. This will include temporary cut off drains together with silt interceptors and treatment areas with sufficient lagoons storage prior to licensed tested discharge to sewer/rivers.   | Very Low to Negligible                    |
|   | Contamination of Principal/Secondary aquifer                             | Groundwater (H)                             | Moderate/Minor                   | Moderate                         | Unlikely                          | Low Risk/Very Low Risk      | Greenfield Site. No contamination identified within soil or Groundwater. Construction would utilise only clean natural site won soils.<br>Works to be undertaken in stages to minimise the areas opened and disturbed which are likely to result in an increase of infiltration. Vigilance to be maintained throughout and any minor areas of potential contamination isolated and investigated and appropriate strategy adopted- none identified to date.   | Very Low to Negligible                    |

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| Existing Source / Hazard Magnitude  | Potential Impacts  | Construction Receptor Sensitivity (Tab 6.2) | Construction Effects (Table 6.4) | Construction Strength of pathway | Construction Likelihood (Tab 6.5) | Construction Risk (Tab 6.6) | Construction Stage Mitigation  | Revised Post Mitigation Construction Risk |
|---|--|---|----------------------------------|----------------------------------|-----------------------------------|-----------------------------|--|---|
| <b>Contaminated groundwater</b><br><br><b>Very Low hazard rating Greenfield Site</b><br>No significant sources of contamination identified. | Ingestion and dermal contact with contaminated water                     | Construction Workers (H)                    | Moderate/Minor                   | Moderate                         | Unlikely                          | Low Risk/Very Low Risk      | Greenfield Site. No contamination identified within soil or Groundwater. Construction would utilise only clean natural site won soils.<br><br>Vigilance to be maintained throughout and any minor areas of potential contamination isolated and investigated and appropriate strategy adopted- none identified to date. Appropriate plant and methods of working. Minimal contact. Detailed risk assessment and provision of training and PPE. Monitoring of personnel and works. Provision of suitable welfare, hygiene. Dust control dampeners to be used where necessary. | Very Low to Negligible                    |
|   | Contamination of local surface water features via run off or groundwater | Surface Water Features (H)                  | Moderate/Minor                   | Strong                           | Unlikely                          | Low Risk/Very Low Risk      | Greenfield Site. No contamination identified within soil or Groundwater. Construction would utilise only clean natural site won soils.<br>Main risk is fines and silts entering water course. Suitable site controls to be in place to manage and control surface water generation as works progress. This will include temporary cut off drains together with silt interceptors and treatment areas with sufficient lagoons storage prior to licensed tested discharge to sewer/rivers.   | Very Low to Negligible                    |
|   | Contamination of Principal/Secondary aquifer                             | Groundwater (H)                             | Moderate/Minor                   | Strong                           | Unlikely                          | Low Risk/Very Low Risk      | Greenfield Site. No contamination identified within soil or Groundwater. Construction would utilise only clean natural site won soils.<br>Works to be undertaken in stages to minimise the areas opened and disturbed which are likely to result in an increase of infiltration. Vigilance to be maintained throughout and any minor areas of potential contamination isolated and investigated and appropriate strategy adopted- none identified to date.   | Very Low to Negligible                    |
| <b>Contaminated dusts</b><br><br><b>Very Low hazard rating Greenfield Site</b><br>No significant sources of contamination identified.       | Inhalation of contaminated dusts   | Construction Workers (H)                    | Moderate/Minor                   | Moderate                         | Unlikely                          | Low Risk/Very Low Risk      | Greenfield Site. No contamination identified within soil or Groundwater. Construction would utilise only clean natural site won soils.<br><br>Appropriate plant and methods of working. Minimal contact. Detailed risk assessment and provision of training and PPE. Monitoring of personnel and works. Provision of suitable welfare, hygiene, Dust control dampeners to be used where necessary. Vigilance to be maintained throughout and any minor areas of potential contamination isolated and investigated and appropriate strategy adopted- none identified to date. | Very Low / Negligible                     |

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|--|--|---|----------------------------------|----------------------------------|-----------------------------------|-----------------------------|---|---|
|  | Inhalation of contaminated dusts           | Adjacent Site Users (H)                     | Moderate/Minor                   | Weak                             | Unlikely                          | Low / Very Low Risk         | <p>Greenfield Site. No contamination identified within soil or Groundwater. Construction would utilise only clean natural site won soils.</p> <p>Main works areas to be fenced and access limited to operatives only. Environmental Management Plan to monitor dust. Dust control dampeners to be used where necessary. Well designed programme of works with phasing designed to minimise effects on local population, haul roads and plant routes to be sited away from nearby property and footways. Footpaths to be redirected and stopped up while works take place.</p> | Very Low / Negligible                     |
| <b>Ground gases &amp; odours</b><br><br><b>Very Low hazard rating</b><br>no significant sources of gas identified or recorded. | Inhalation of ground gases, explosive risk | Construction Workers (H)                    | Moderate/Minor                   | Moderate                         | Unlikely                          | Low Risk/Very Low Risk      | <p>Greenfield Site. No contamination identified within soil or Groundwater. No abnormal or significant soil gas detected. Construction would utilise only clean natural site won soils.</p> <p>Precautionary confined space protocols to be used for all works particularly where entry of excavations below ground are required. Where necessary personal gas alarms and atmosphere testing to be used.</p>  | Negligible                                |
|  | Inhalation of ground gases, explosive risk | Adjacent Site Users (H)                     | Moderate/Minor                   | Weak                             | Unlikely                          | Low / Very Low Risk         | <p>Greenfield Site. No contamination identified within soil or Groundwater. No abnormal or significant soil gas detected. Construction would utilise only clean natural site won soils.</p>   | Negligible                                |