

Designer's assessment of safety and health hazards/risks		Project: Sallins Park, Sallins, Co. Kildare Project Number: DOBA 2018	
Client Kildare County Council	Design Engineer Donnachadh O' Brien & Alan Lambe	Design Stage: Planning	Revision: 0
Design Team Leader Donnachadh O'Brien & Associates	PSDP: Donnachadh O'Brien & Associates		Date: 14.10.2021
			Number of Sheets: 6
Item No.	Hazards Identified	Evaluations. Design decisions made (or alternative actions)	
1	Risk of drowning Risk of drowning due to works taking place on and adjacent a live stream subject to potential large flows during heavy rainfall. Potential for groundwater in deep excavations.	A site specific construction management plan will be requested by the contractor to allow for works adjacent to the open watercourse. Temporary fencing and signage will be required as part of any construction management plan. To mitigate against risk of drowning or injury during high water flows: 1) Works are to be undertaken in dry weather flow conditions when flows are low. Work is to be stopped if flows become unmanageable due to storm condition or heavy rainfall events. 2) The contractor is to allow for continuous pumping of groundwater from excavations to remove the risk of drowning due to groundwater ingress into excavations.	
2	Vehicle Hazards + Traffic Management The works are taking place on and adjacent to busy public roads. A large number of people will be driving and walking adjacent to the works throughout the day, particularly at peak hours. Temporary traffic management will be required to facilitate the improvement works along the public road. Access must be maintained for vulnerable road users, commuters, residents and emergency vehicles at all times during the works.	The main contractor & PSCS are to prepare a site specific Temporary Traffic Management Plan in agreement with Kildare Co. Co. Works on and immediately adjacent to the public roads are to be carried out outside of peak traffic times and in agreement with Kildare Co. Co. Vulnerable road user crossings and emergency vehicle access are to be maintained at all times by the Contractor through all works areas. It is considered that working adjacent to busy public roads is a normal hazard to be encountered by a competent contractor and no other specific or special design responses are deemed necessary.	
3	Excavations/ Ground Conditions Dangers include possible collapse of side walls of trenches, burial or falls into the excavated trenches, falling debris onto workers within the excavated trenches, contact with buried services, inundation with surface & ground water within trenches	Site investigations were carried out on site. The ground conditions encountered were SANDY GRAVELLY CLAY or MADE GROUND up to 2.0m below ground level. Excavations were noted as being unstable with moderate collapse in some trenches. The drainage networks have been designed as shallow as possible to mitigate against the risk of burial. However, deeper excavations may still be required. All excavations should be supported temporarily during construction. Personnel are prohibited into unsupported excavations greater than 1.2m in depth. Contractor is to allow for the temporary pumping of groundwater during all excavations. Site investigations identified ground water strikes at various depths. Personnel are not to enter excavations during heavy rainfall to mitigate against the risk of drowning. Contractor to refer and adhere to the HSA "Code of Practice for Avoiding Danger from Underground Services" and also "A Guide to Safety in Excavations".	

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4	<p>Contact with services There is a risk of contact with live public services within the existing public roads including existing surface water drainage, foul drainage, watermain, ESB, Gas, public lighting, telecoms whose exact location is unknown.</p>	<p>In order to safely carry out excavations on site, information on existing services is required. DOB&A have mitigated against the risk of contact with services as follows:</p> <ul style="list-style-type: none"> • A topographical survey has been carried to confirm the as-constructed locations of the existing foul and SW manholes and all other hardstanding areas and surface features. • Public utility information has been requested from all utility providers. <p>A further mitigation measure which may be considered at tender stage is a Ground Penetrating Radar (GPR) survey of the existing road network to identify the approximate location and depth of existing underground services in the vicinity of the proposed works areas.</p> <p>Following completion of a GPR survey, slit trenches using hand digging (with non-conductive tools) and scanning for services prior to machine excavation are to be carried out by the contractor to verify the exact location of services.</p> <p>Contractor to refer and adhere to the HSA Code of Practice for Avoiding Danger From Underground Services and also the HSA A Guide to Safety in Excavations.</p> <p>It is considered that encountering live electrical and utility services is a normal hazard to be encountered by a competent building engineering contractor and no other specific or special design responses are deemed necessary.</p>
5	<p>Contact with Electrical services Overhead and underground electrical cables are known to exist across the site. The ESB maps illustrate the approximate location of existing overhead and underground cables in the area. There is a risk of contact with these services during excavation and site works.</p>	<p>In order to safely carry out excavations on site, information on existing electrical services is required. DOB&A have mitigated against the risk of contact with services as follows:</p> <ul style="list-style-type: none"> • A topographical survey has been carried to confirm the as-constructed locations of all surface features. • Public ESB record drawings were obtained in relation to electrical services in the vicinity of the site and have been issued to the contractor. <p>DOB&A have submitted a NW1 form to the ESB to determine a route for the diverted overhead lines (if required) to mitigate against the risk of contact with the overhead lines following installation of ball stop netting and floodlighting.</p> <p>Scanning for services and hand digging (with non-conductive tools) slit trenches are to be carried out by the contractor to verify the exact location of any existing underground services prior to carrying out machine excavations to mitigate against the risk of contact with services.</p> <p>Contractor to refer and adhere to the ESB CoP for Avoiding Danger from Overhead Electricity Lines and the HSA CoP for Avoiding Danger from underground Services</p> <p>Encountering live electrical services is a normal hazard expected to be encountered by a competent contractor on a normal site and no other specific or special design responses are deemed necessary.</p>
6	<p>Public Access to site The site is located adjacent a populated residential area. There is a risk associated with members of the general public accessing the site during/after working hours and harming themselves or causing damage to site/plant.</p>	<p>To mitigate against the risk of public access to the site, the main contractor is to provide for properly secured and hoarded working site areas with personnel monitoring access points to the site for unauthorised personnel. Contractor to ensure that any excavations are backfilled at the end of each day or securely protected with appropriate temporary reinstatement.</p> <p>Contractor to maintain access for vulnerable road users (pedestrians / cyclists) around and through all works areas especially along public roads.</p>

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7	<p>Rodents / Vermin / Confined Space Risk of contact with Rodents / Vermin along existing road boundaries / hedges Excavations for connections into the existing foul network could be classified as confined space entry due to the potential presence of heavy gases</p>	<p>Contractor is to refer and adhere to the HSA guide to working in Confined Spaces. All personnel carrying out works adjacent to the existing foul network must have confined space training.</p> <p>Contractor to ensure that adequate PPE is provided for all personnel working on project and that all necessary cleaning / disinfecting measures are taken to mitigate against the risk of exposure to rodents / vermin.</p> <p>Weil's Disease: Adhere to a rigid hygiene policy. Cover all cuts, scratches and abrasions with a waterproof dressing.</p> <ul style="list-style-type: none"> • Wash cuts and grazes immediately with soap and running water and cover all cuts and broken skin with waterproof plasters before and during work. • Wear protective clothing especially gloves when handling soil, vegetation, animal feeds, tools or equipment that may be contaminated. • Wash your hands after handling any animal, or any contaminated clothing or other materials and always before eating, drinking or smoking • Avoid touching mouth and nose. Food stuffs should not be consumed in the work area <p>Contractor is to ensure that adequate PPE is provided for all personnel working on project and that all necessary and appropriate cleaning / disinfecting measures are available on site during the works.</p>
8	<p>Work involving the assembly or dismantling of heavy prefabricated components Sections of the precast concrete manholes, attenuation tank, pipes are all heavy prefabricated components</p>	<p>The contractor is to provide mechanical lifting machinery to mitigate against the risk of injury due to working with heavy prefabricated components.</p> <p>It is considered that working with heavy prefabricated components is a normal hazard to be encountered by a competent contractor and no other specific or special design responses are deemed necessary.</p>
9	<p>Noise / Dust / Vibration Excavations for new drainage pipes will create vibration, noise and dust for local residents</p>	<p>Contractor to carry out condition surveys of the existing boundary walls and dwellings adjacent to the proposed works. Contractor to provide vibrations and noise monitoring during the construction works.</p> <p>When working adjacent to existing dwellings the resultant ground wave velocities shall be limited to the following:</p> <ul style="list-style-type: none"> (i) 20mm/sec at existing walls (ii) 10mm/sec at any structure or existing service. <p>Contractor / PSCS to engage road sweeping and cleaning services at all times during the works to keep the public roads clear of debris arising from the construction works.</p>


Notes Regarding Providing Information	Item Nos. (from above)	Remarks
a) For client's designers	2,3,4	Temporary traffic management plan to be carried out Temporary works design for excavations adjacent to live traffic Slit trenches required to verify location of existing services along route of proposed pipes
b) 'Schedule 1' hazards / particular risks	1,3, 5	Risk of burial/drowning in excavations ,Works adjacent to overhead and underground electrical cables,
c) Other 'particular risks'	2	Temporary traffic management for works on public road
d) Re assumed construction methods	2, 3	Works adjacent to live traffic. Subject to PSCS and Contractors method of safe construction, carrying out deep excavations
e) For safety file	4,5	Existing services encountered on the site
f) In-house: b/f to future stages	4,5	Existing services encountered on the site

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Signed: Design Engineer 	Assessment Sheet Forwarded to PSDP YES	Assessment Sheet Forwarded to PSCS NO
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Other parties please take note: These are designer's risk evaluations of design options carried out in-house for the purpose of our complying with designers' duties under the Safety, Health and Welfare at Work (Construction) Regulations 2006. The evaluations relate only to those aspects/elements of the project which we are responsible for designing under the terms of our appointment by our client. Other parties should not rely on these evaluations for their own purposes; in particular, contractors who must deal with and control all risks arising during construction, must carry out their own definitive risk assessments ab initio for that purpose.

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Information for the Project Supervisor Design Process			Project: Sallins Park, Sallins, Co. Kildare Project Number DOBA 2018
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Design Team Leader Donnachadh O'Brien + Associates	PSDP: Donnachadh O'Brien + Associates		Revision: 0 Date: 14.10.2021
	'Particular Risks': The following comprises our opinion of when we believe construction of our design will involve any of the ten forms of work listed in Schedule 1 of the regulations and thus gives rise to statutory particular risks.		Exist (YES / NO)
	<ul style="list-style-type: none"> Work which puts persons at work at risk of (a) falling from a height, (b) burial under earthfalls, or (c) engulfment in swampland, where the risk is particularly aggravated by the nature of the work or processes used or by the environment at the place of work or construction site. 		YES
	<ul style="list-style-type: none"> Work which puts persons at work at risk from chemical or biological substances constituting a particular danger to the safety and health of such persons or involving a statutory requirement for health monitoring 		YES
	<ul style="list-style-type: none"> Work with Ionizing radiation requiring the designation of controlled or supervised areas as defined in directive 96/29/Euratom 		NO
	<ul style="list-style-type: none"> Work near high voltage power lines 		YES
	<ul style="list-style-type: none"> Work exposing persons at work to the risk of drowning 		YES
	<ul style="list-style-type: none"> Work on wells, underground earthworks and tunnels 		NO
	<ul style="list-style-type: none"> Work carried out by divers at work having a system of air supply 		NO
	<ul style="list-style-type: none"> Work carried out in a caisson with a compressed air atmosphere 		YES
	<ul style="list-style-type: none"> Work involving the use of explosives 		NO
	<ul style="list-style-type: none"> Work involving the assembly or dismantling of heavy prefabricated components 		YES
Note: Where a particular risk is present, and where the presence of this work or its associated particular risks would not otherwise be apparent to a competent contractor, the work / hazard (or the particular risk) should be described for inclusion in the Preliminary Safety & Health Plan. We consider that the particular risks listed above, where present, would be apparent to a competent contractor.			
Signed: Design Engineer 		Assessment Sheet Forwarded to PSDP YES	Assessment Sheet Forwarded to PSCS NO

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	Key Construction Hazards (or Risks) Identified	Evaluation. Design Decision made (or Alternative Actions).	
	Other Particular Risks Other particular risks (i.e. risks which are substantial and unusual in the context of the project) which have been identified <ul style="list-style-type: none"> Potential for significant flows through the existing stream across the site during heavy rainfall. No personnel are to carry out works to the existing stream during heavy rainfall. 		
	There are no other particular risks to advise on, for this current stage of the tender design stage.		
	<p>Note: Where a particular risk is present, and where the presence of this work or its associated particular risks would not otherwise be apparent to a competent contractor, the work / hazard (or the particular risk) should be described for inclusion in the Preliminary Safety & Health Plan.</p> <p>We consider that the particular risks listed above, where present, would be apparent to a competent contractor.</p>		
Signed: Design Engineer 		Assessment Sheet Forwarded to PSDP YES	Assessment Sheet Forwarded to PSCS NO

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