
CHELTENHAM BOROUGH COUNCIL, PROPOSED CREMATORIUM

MEMO - Updated Egress Road Route Opportunities & Constraints

Project Number: 70020522

31st January 2017

The WSP | Parsons Brinckerhoff 'Access Road Study' report dated October 2016 assessed four separate possible egress routes, A, B, C & D for the proposed new Cheltenham Crematorium, adjacent to the existing Crematorium site, Bouncers Lane, Cheltenham. Two of the options, B & C were subsequently selected for further investigation ahead of a final decision. Since production of the initial report in October 2016, the following additional information has been obtained or produced by WSP | Parsons Brinckerhoff;

- Severn Trent Water sewage and water supply statutory records
- Below ground services radar survey of road routes B & C
- Traffic technical note TN-01: Impact of Proposed Crematorium Egress Route (Option C) on Imjin Road (dated 20.01.17) and related additional traffic and parking survey & data collection
- Preliminary Geo-Environmental and Geotechnical Risk Assessment (Desk Based) Report No. 70020522-GEO-R1
- Ecological Verification Survey memo dated February 2017
- Updated Preliminary Ecological Appraisal Report dated January 2017

Additional information has also been made available from other parties, in particular from the design team working on the proposed flood alleviation scheme including additional ecological surveys, archaeological investigation and revised flood alleviation scheme designs. We have also been made aware of proposals for a new housing scheme in fields to the south of the existing cemetery.

A possible further egress route option via the existing site roads through the Gardens of Remembrance is currently being reviewed with regards to traffic safety and vehicle swept path analysis and is to be issued ahead of a final decision on the preferred egress route on the 8th February.

The following tabulated options and constraints are extracted from section 4 of our original October 2016 Access Road Study report for the currently considered routes B and C only and updated comments added in the right hand column where new information exists as of end of January 2017. Where no comments are added, the originally identified opportunity or constraint is not considered to be altered by recent information. Comments should be read in conjunction with the original Access Road Study report, the detailed information listed above and WSP | Parsons Brinckerhoff constraints drawing 70020522-GA-02 'Constraint Plan' revision B, prepared to illustrate the known major constraints related to potential routes B & C.

Route Option B

Ref Opportunities/ Constraints October 2016		January 2017
Opportunities		
1.	Route Option B would result in the bulk of traffic being taken away from the existing internal Cemetery and Crematorium roads (albeit not the section of road located between the two existing gated entrance points), which in turn would reduce internal congestion / delays.	
Constraints		
2.	For the operational phase, this Option would require the provision of a new internal junction where the proposed new section of road (external to the existing Cemetery and Crematorium) would tie into the internal section of road located between the two existing gated entrance points. There is potential for increase congestion / conflict as a result of the proposed arrangement.	
3.	The existing Farm Track, which skirts the southern boundary of the existing Cemetery and Crematorium is narrow and observed to be in poor condition. This would likely require upgrading and resurfacing.	Track would need to be re-constructed to new road specification. Existing below ground services have been identified along this route requiring due coordination and caution in future construction. The narrow width available at the end of this route adjacent to the housing estate will require an oversized storm drainage attenuation pipe to be laid below the new road.

Route Option B

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4.	<p>Of the two options for construction access which are currently considered for the internal section of road located between the two existing gated entrance points (see WSP Parsons Brinckerhoff drawing SK-08):</p> <ol style="list-style-type: none"> 1. In Option 1 – construction traffic would be directed to use the existing Farm Track via Ladysmith Road. This would require that the existing access is upgraded to accommodate construction traffic. 2. In Option 2 – the narrowing of the existing Cemetery and Crematorium access road (to accommodate the construction route) would require the introduction of one-way controlled workings (such as temporary traffic lights). This arrangement would likely lead to increased congestion and delays (particularly during peak hours). 3. In Option 2 – this arrangement would likely lead to increased traffic movements at the existing [modified] access. 4. In Option 2 – there would be a potential requirement to widen the main entrance gates to the existing Cemetery and Crematorium (or control movements). 5. In both Options – it is noted that there are currently areas of parking located along the existing access which could restrict movements / result in congestion. 6. In both options – there would be an intensification of traffic movements, in particular construction vehicles, on the local highway network in the vicinity of the existing access which could result in increased congestion and delays (particularly during peak hours). 	<ol style="list-style-type: none"> 1. The larger potential construction traffic such a full articulated HGV understood to be required for delivery of the cremators would have extremely tight clearance around the garden walls at the bottom 90 degree turning in the lane and would not currently be able to negotiate the pedestrian crossing island at the end of Ladysmith Road. Some degree of re-design and associated highways approvals would therefore be necessary. <p>This exit route (from the existing lane onto Ladysmith Road has until now only been considered for construction traffic, if considered as a future permanent egress route for Crematorium traffic further studies and traffic modelling of the existing Lane, Ladysmith Road, Bouncers Lane junction would be required and likely queueing times considered.</p> <ol style="list-style-type: none"> 4. It is understood that the heritage officer is unlikely to support widening of the gates and therefore it would be prudent to assume that control of traffic movements and queuing at the entrance gates will be necessary.
5.	Potential highway safety implications associated with bringing construction traffic through the existing Cemetery and Crematorium access.	
6.	This Option involves crossing a Main River (Wyman's Brook Tributary) which will likely need a simple assessment of flood risk and water quality impacts in consultation with the Environment	It is understood from discussions to date that the watercourse only becomes an Environment Agency

Route Option B

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	Agency.	Main River at the corner of the existing cemetery and so dependent on the exact final proposed point of crossing of the watercourse, culvert approvals could be made by CBC as opposed to the Environment Agency.
7.	This Option crosses the proposed ditch / culvert offtake from Wyman's Brook Tributary for the Priors Farm Flood Storage Area. The timing of construction and future proofing of the FSA Scheme should be considered in conjunction with its designers.	It is understood from the designers of the FSA Scheme, CH2M, that construction is due to begin in March 2017 and would therefore be expected to be complete or substantially complete before construction of the new Crematorium egress road. It is also understood that a revised FSA Scheme has been submitted for planning permission which relocates the intake ditch to the East which may avoid the need to cross it with the proposed route B road. This scheme was tabled at a meeting 20.01.17 but has not currently been made available to WSP PB in a format that can be overlaid with the current project proposals. We are further aware however following the meeting 20.01.17 that further adjustments to the FSA Scheme are currently being investigated which would potentially return the design closer to that currently indicated on Constraint Drawing 70000522-GA-02.
8.	This Option appears to run within 8m of the Environment Agency's Main River (Wyman's Brook Tributary), alongside the football pitches. An Environmental Permit is required from the Environment Agency for any works within this distance from top of bank	
9.	The proposed route alignment is in close proximity to an active badger sett. Any works within 30 m of the sett will require further consideration. Should the badger sett be directly affected a licence would be required to close the sett. Should works be required within 30 m of the sett, a pre-works check and subsequent ecological method statement would be required. The pre-works check	Updated and further information provided in WSP PB Updated Preliminary Ecological Appraisal Report dated January 2017.

Route Option B

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	should be carried out within eight weeks of the construction start date in case a licence is required.	
10.	The proposed route alignment falls within 250 m of ponds suitable for Great crested newts. A record of Great crested newt was returned by the desk study, located 180 m from the survey area. Previous Great crested newt surveys did not identify any Great crested newt within the pond surveyed. However, only one of the three suitable ponds was surveyed. The Natural England Great crested newt Risk Grading Tool was applied to ascertain the risk of causing an offence under Great crested newt legislation. The results of this were 'Amber: Offence Likely'. It is therefore recommended that presence/likely absence surveys for Great crested newts be undertaken, which would then inform further recommendations.	eDNA testing of the two ponds within the existing Cemetery carried out by CH2M in connection with the FSA Scheme, in combination with the traditional survey by Lepus of the 3 rd suitable pond indicates likely absence of GCN across the site and therefore this risk/constraint is now removed.
11.	The proposed route alignment skirts near existing trees that are suitable for roosting bats. Micro-siting of the road alignment is advised to ensure mature trees are not affected. Should tree works felling be required further survey for bats may be necessary required. This could include aerial assessments and/or dusk/dawn emergence surveys for bats within the bat activity season	In addition, consideration should be given to protecting the trees during construction work.
12.	The area in which the route is proposed contains suitable breeding bird habitat. Clearance works should be carried out outside of the breeding bird season (considered to be March - September). If this were not possible, additional ecological input would be required. This could include pre-works breeding bird checks and ecological supervision of clearance works.	One mature tree has been identified as having potential to support barn owl. Should Option B be taken forward an inspection from height should be made to further assess the potential of the tree to support breeding barn owl.
13.	The area in which the route is proposed contains suitable habitat for reptiles. It is recommended that a detailed Method Statement be written to control vegetation clearance methods and ensure legal compliance.	
14.	Habitats of Principal Importance, specifically existing hedgerows, running water and lowland woodland, have potential to be impacted by the proposed route alignment. This would likely be taken into consideration at the planning stage to comply with relevant legislation. These habitats should ideally be avoided by the proposed route and where this is not possible mitigation measures may be required.	
15.	<p>The proposed alignment would likely impact directly on Bouncers Lane Cemetery, which is a Grade II listed Park and Gardens, and includes the following Grade II Listed buildings / structures:</p> <p>15.1 Main entrance and inner gates to the existing Cemetery and Crematorium;</p> <p>15.2 Cemetery Lodge;</p> <p>15.3 North and South Chapel; and</p>	

Route Option B

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	15.4 Octagonal Lodge (located approximately 15m northwest of the North and South Chapel).	
16.	The proposed alignment would directly impact on existing deciduous woodland which is identified within the Priority Habitat Inventory.	
17.	The proposed alignment would directly impact on the following tree types: → Cedar (Category B1/C1 tree).	
18.	The proposed route would impact on areas of mixed vegetation (trees, hedgerows), which have not been included as part of the arboriculture survey, and may be of potential local conservation importance.	
19.	The route would skirt the northern boundary of Oakley Playing Fields, which is an historic landfill site. The stability of the landfill site is unknown, and would likely require a separate Ground Investigation Study.	A ground investigation study has been scoped and specified and is currently out to tender.
20.	The proposed route would directly impact on the existing residential properties (approximately 16 in total) (in terms of noise and pollution) which skirt the southern boundary of the Farm Track. There is also potential that the existing playing fields could be contaminated.	
21.	The option crosses a water body. This means riparian species have potential to be impacted. Depending on the final route alignment, further surveys for otters, water vole and white clawed crayfish may be required.	A habitat suitability assessment for these species has concluded no potential likelihood and this constraint/risk can now be removed.
22.	The route alignment would impact on the existing basketball court and northernmost football pitch.	The constraints drawing 70000522-GA-02 demonstrates a potential relocation of the affected football pitch. It is understood that some form of pitch drainage may exist and therefore potentially need relaying.

Route Option C

Ref	Opportunities/ Constraints October 2016	January 2017
Opportunities		
1.	Route Option C would not impact on the existing Cemetery and Crematorium.	

Route Option C

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2.	The provision of a new separate road to the existing Cemetery and Crematorium would reduce traffic movements at the existing Cemetery and Crematorium access (from Bouncers Lane).	
3.	The proposed route alignment would not directly impact on the existing car park which serves Oakley Playing Fields.	
4.	Route Option C could be used to access potential future development land / proposed flood alleviation scheme located to the south of the proposed new Crematorium.	The current proposals for the Crematorium egress road are for a 3m wide unadoptable construction. Whilst this could potentially be increased in width and specification to allow widening and conversion to an full two-way adoptable road appropriate to a housing scheme in the future this would involve additional initial construction works and considerable disruption and construction activities in relation to road works and service upgrading/relaying whilst the road was maintained as a live Crematorium egress route. Given the early nature of the potential housing scheme proposals it is also likely that any final option C route would act as a constraint to the housing proposals.
Constraints		
5.	<p>This Option would require traffic (construction and operational) to use Imjin Road. The potential implications associated with this are as follows:</p> <ol style="list-style-type: none"> 1. Potential for access to be obstructed by motorists parking along both sides of Imjin Road; and 2. Potential congestion / delays resulting from increased traffic using Imjin Road; 3. Increased safety concerns resulting from increased traffic using Imjin Road; and 4. Potential impacts on wider network, including along B4075 Priors Road. 	<p>Further traffic and parking data collection and analysis has concluded that existing capacity of Imjin road and the Imjin Road/Priors Road junction is acceptable for the anticipated Crematorium operational traffic volumes.</p> <p>Perceived safety concerns and possible resident objections are highlighted as possible.</p> <p>Full details are provided in technical note TN-01 dated 20th January 2017.</p>

Route Option C

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6.	This Option involves crossing a Main River (Wyman's Brook Tributary) which will likely need a simple assessment of flood risk and water quality impacts in consultation with the Environment Agency.	It is understood from discussions to date that at the proposed point of crossing of the watercourse, culvert approvals could be made by CBC as opposed to the Environment Agency.
7.	This Option crosses two proposed culverts associated with the Priors Farm Flood Storage Area. The timing of construction and future proofing of the FSA Scheme should be considered in conjunction with its designers. Suitable cover should be sought over the culvert.	We understand that construction of the FSA Scheme is currently due to commence in March and would therefore be expected to be complete or substantially complete prior to construction of the egress road. The team were advised by FSA designers CH2M during a meeting at CBC's offices on 20.01.17 that the scheme design had been revised and submitted to planning indicating the spillway relocated to the south of the FSA and connecting with Wymans Brook. This would mean route C would have to cross the spillway, either utilising the spillway as road surface or by means of raised culvert or bridging structures. The scheme understood to have been submitted for planning approval has not currently been made available to WSP PB to overlay on the Crematorium project proposals. Further to the meeting 20.01.17 and requests by the housing scheme team, we understand further amendments to the FSA Scheme are currently being considered.
8.	This Option appears to run within 8m of the Environment Agency's Main River (Wyman's Brook Tributary), alongside the football pitches. An Environmental Permit is required from the Environment Agency for any works within this distance from top of bank.	It is understood from discussions to date that the watercourse only becomes an Environment Agency Main River at the corner of the existing cemetery and so dependent on the exact final proposed point of crossing of the watercourse, culvert approvals could be made by CBC as opposed to the Environment Agency.

Route Option C

Ref	Opportunities/ Constraints October 2016	January 2017
9.	The proposed route alignment falls within 250 m of ponds suitable for Great Crested Newts. A record of Great Crested Newt was returned by the desk study, located 180 m from the survey area. Previous Great Crested Newt surveys did not identify any Great Crested Newt within the pond surveyed. However, only one of the three suitable ponds was surveyed. The Natural England Great Crested Newt Risk Grading Tool was applied to ascertain the risk of causing an offence under Great Crested Newt legislation. The results of this were 'Green: Offence Highly Unlikely' due to the location of the ponds and the extent of habitat to be affected. Therefore no surveys are required in this instance. It is recommended that once the exact scope of works has been agreed this assessment is confirmed. It is recommended that should Option C be taken forward, all works are carried out under a precautionary method of working for great crested newts.	As noted for route B above, Great Crested Newt eDNA testing in the two ponds within the existing site has returned negative results. In combination with the likely absent conclusion of the previous Lepus survey to the 3 rd pond assessed as having GCN potential, Great Crested Newt risk can now be discounted as a constraint.
10.	The proposed route alignment skirts near existing trees that are suitable for roosting bats. Micro-siting of the road alignment is advised to ensure mature trees are not affected. Should tree works be required further survey for bats may be necessary. This could include aerial assessments and/or dusk/dawn emergence surveys for bats within the bat activity season.	It is believed disturbance to the relevant trees can be avoided, consideration would also be required to protection during construction activities.
11.	The area in which the route is proposed contains suitable breeding bird habitat. Clearance works should be carried out outside of the breeding bird season (considered to be March – September inclusive). If this were not possible, additional ecological input would be required. This could include pre-works breeding bird checks and ecological supervision of clearance works.	
12.	The area in which the route is proposed contains suitable habitat for reptiles. It is recommended that a detailed Method Statement be written to control vegetation clearance methods and ensure legal compliance.	
13.	The option crosses one water body and comes in close proximity to another. This means riparian species have potential to be impacted. Depending on the final route alignment, further surveys for otters, water vole and white clawed crayfish may be required.	Further survey work has concluded habitat is unsuitable, risk of Otter, Water Vole and Crayfish can now be discounted.
14.	Habitats of Principal Importance, specifically existing hedgerows, have potential to be impacted by the proposed route alignment. This would likely be taken into consideration at the planning stage to comply with relevant legislation. These habitats should ideally be avoided by the proposed route and where this is not possible impacts should be minimised.	
15.	The proposed route would impact on areas of mixed vegetation (trees, hedgerows), which have not been included as part of the arboriculture survey, and may be of potential local conservation importance.	
16.	The route would skirt the southern boundary of Oakley Playing Fields, which is an historic landfill	A ground investigation study has been scoped and

Route Option C

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	site. The stability of the landfill site is unknown, and would likely require a separate Ground Investigation Study. There is also potential that the existing playing fields could be contaminated.	specified and is currently out to tender.
17.	The proposed route alignment would impact on the existing football fields and associated changing facilities (effectively bisecting the two).	
18.	The proposed route alignment would impact on the existing children's playground.	
19.	The proposed route alignment would require re-profiling of land / potential introduction of retaining wall along the southern boundary of the Oakley Football Fields.	

New constraints and possible impacts on routes B & C

➤ Archaeology

Desk top study and site investigation in connection with the Flood Alleviation Scheme has revealed archaeological features. We understand a full report of the site work has now been completed and will be circulated shortly. The information provided to date has been mapped onto the constraints plan and can be seen to coincide with a significant section of route C. County Archaeologist Charles Parry advised at a meeting at CBC's offices 20.01.17 that a recommendation had been made for an archaeological impact assessment to be carried out for both route B & C options but that given knowledge gathered from the site work, it would be likely that a desk based assessment and mitigation measures would be required for route C and a watching brief only for route B. Mitigation measures to route C could possibly include raising levels of the road to avoid excavating through features, limiting the width of any services trenches or archaeological investigation to expose and record features prior to construction.

➤ Housing Scheme

We have been made aware of proposals for future housing in the fields to the south of the existing cemetery. Proposals are likely to either constrain or be constrained by any route C alignment.

➤ **Flood Alleviation Scheme Design**

Revisions to the proposed Priors Farm Flood Storage Area may impact on feasible alignment, levels and number and complexity of culvert structures required for route C. It is expected based on sight of re-design options to date that route B will remain as a single culvert across the FSA incoming ditch although the location may be subject to change.