



To: COMMITTEE OF THE WHOLE

Section: Corporate Services – Solid Waste Management

Item Number: CCW 16-165

Meeting Date: May 24, 2016

Subject: Solid Waste Management Infrastructure Projects – Development Strategy

Recommendation:

THAT the process for obtaining Planning and Ministry of the Environment and Climate Change approvals for the Materials Management Facility (MMF) and Organics Processing Facility (OPF) at 2976 Horseshoe Valley Road West, Springwater, proceed in accordance with the Development Strategy presented within Item CCW 16-165, dated May 24, 2016; and

That the procurement of design and construction of the Materials Management Facility proceed in accordance with the Development Strategy presented within Item CCW 16-165; and

That the procurement of technology, design, and construction of the Organics Processing Facility proceed in accordance with the Development Strategy – Option 2 (expanding procurement to consider all processing technologies, revising timeline) presented within Item CCW 16-165.

Executive Summary:

Following direction from County Council on March 22, 2016 to further the development of the Materials Management Facility and Organics Processing Facility at 2976 Horseshoe Valley Road West, Springwater, this Item presents an updated project work plan and timeline for development of the co-located facilities. A Development Strategy was prepared to consider four key paths – Planning approvals, Environmental Compliance Approval, procurement of design and construction of the MMF, and procurement of processing technology and construction of the OPF. This plan considers the following:

- that this site will require amendments to the County Official Plan as well as the Township of Springwater Official Plan and Zoning By-law;
- additional studies are required to confirm site conditions and support Planning applications; and
- the MMF and OPF, although co-located, will have different project delivery methods and procurement processes. The MMF project will be advanced first due to its relative lack of complexity and straightforward design requirements.

The Planning approvals process is the critical development path – noting that approvals will be required from the Ministry of Municipal Affairs and Housing (MMAH), the County, and the Township of Springwater. Advancing work associated with submission of the Environmental Compliance Approval (ECA) application to the Ministry of the Environment and Climate Change (MOECC) and procurement, design, and construction of both the MMF and OPF must consider the timing of obtaining Official Plan and zoning amendments. Further to this, the Development Strategy considers submission of Planning applications this fall and allowing 180 days from the date of submission (as per the Planning Act) for approvals (this timing does not provide additional contingency should the approvals not be received immediately following this period). In preparation for these submissions, an initial series of studies have currently been initiated to confirm the property's suitability for the infrastructure. If these studies confirm positive site conditions, additional Planning and Engineering studies will follow. This phased approach will be undertaken as a measure to ensure prudent spending on consulting services.

In consideration of varying methods of processing organics and proprietary technology, the OPF procurement process will be longer and more complex than procuring the MMF, a simple building. It is recommended that the MMF be advanced following a traditional Design-Bid-Build (DBB) procurement process. Further discussion on project delivery methods and potential contractual arrangements for the OPF, however, will be presented to County Council for their consideration later this summer. In preparation for this, direction is now being sought on organics processing technology and two potential timelines for advancing the OPF are outlined herein. Option 1, as was originally presented to County Council in early 2014, would seek the procurement of aerobic composting technology only. This would be in keeping with the approved project plan. Alternatively, Option 2 would open procurement to all organic processing technologies, such as anaerobic digestion, at this time. Should this be the direction of County Council, subsequent amendments to the procurement process and a revised timeline will be necessary.

Background/Analysis/Options:

The purpose of this item is to provide an overview of the process and updated project work plan for development of a co-located Materials Management Facility (MMF) and Organics Processing Facility (OPF) at 2976 Horseshoe Valley Road West, Springwater. With County Council's direction on March 22, 2016 to proceed with development at this location, the County's consultant, GHD Limited has prepared a detailed, site-specific Development Strategy and timeline. This plan considers synergies between the two projects, opportunities for cost savings, and timing of progressing their development concurrently.

Development of these two projects was recommended in the County's Solid Waste Management Strategy, approved in 2010. The MMF will provide a location for consolidation and transfer of waste and recycling from multiple collection vehicles for more economical shipment to other disposal or processing locations, the potential to co-locate a fleet servicing facility, and future potential for recycling processing. The OPF will provide a location where organics (green bin material, potentially materials such as leaf and yard waste, pet waste, and diapers) are processed and converted into other valuable products, such as compost or fertilizer.

A comprehensive siting process for both the MMF and OPF was undertaken in 2015/early 2016 which included the evaluation of 502 potential sites. A short list of sites was presented for public, Aboriginal, and stakeholder consultation in fall 2015, followed by a detailed comparative evaluation completed by the County's consultant. This evaluation was also extended to consider the option of co-locating both facilities on a single site. On March 22, 2016, County Council approved furthering development of a co-located MMF and OPF at 2976 Horseshoe Valley Road West, Springwater.

For reference, previous staff reports, communication material from public information and consultation sessions held in June 2014, December 2014, October 2015, and April 2016, and minutes of Community Engagement Committee meetings can be found at www.simcoe.ca/opf and www.simcoe.ca/mmf.

Advancing a Co-located Facility

With direction to co-locate the two facilities at 2976 Horseshoe Valley Road West, Springwater, GHD Limited (GHD) was retained to provide an updated work plan that considered the more complex project delivery of two facilities at one location. The resulting Development Strategy and conceptual timeline was based on GHD's experience in development of similar facilities. It was noted that this timeline is expected to be a living document and will likely evolve over time as various milestones are completed. For reference, the document entitled *Development Strategy for Co-Located OPF and MMF* (GHD Limited, May 11, 2016) is provided for reference as Schedule 1.

As outlined, the project plan was updated to consider the following:

- developing infrastructure at this location will require amendments to the County Official Plan as well as the Township of Springwater Official Plan and Zoning By-law not anticipated in the original timeline endorsed by County Council in January 2014;
- additional studies are required to confirm site conditions and support Planning applications. These studies will be undertaken in a conservative and prudent manner – that is, a series of preliminary studies will be completed prior to investment on more advanced design-related Planning and Engineering studies; and
- the MMF and OPF will be advanced with different delivery methods. Co-location must consider the timing of both procurement processes, timing of the business case for the OPF, obtaining an Environmental Compliance Approval (ECA), and construction of two facilities on the same footprint.

To summarize, development of the co-located facilities will incorporate four key paths which, although interconnected, will have distinct milestones and timing:

- Planning approvals process
- Environmental Compliance Approval process
- MMF – procurement of design (with updated costing), design, and construction
- OPF – procurement of technology (with business case), design, and construction

The two proposed timelines outlined in the Development Strategy – Option 1 and Option 2 – are presented graphically in Schedules 2 and 3, respectively. Again, these timelines are approximate and meant as guideline for moving forward. As will be discussed further below, the two options relate to the procurement process for the OPF and differ based on the type of technology sought for organics processing.

Planning Approvals

Development of the OPF and MMF at 2976 Horseshoe Valley Road West, Springwater, will require amendments to the County Official Plan as well as the Township of Springwater Official Plan and Zoning By-law. Consideration must be placed on the timing of obtaining these approvals, as advancing work on procurement or submission of the ECA application must follow. GHD has noted that the Planning approvals process will be the critical path to developing the project.

As such, the Development Strategy has outlined that four initial studies – an Environmental Impact Study (EIS), Traffic Impact Study, Geotechnical/Hydrogeological Study, and Archeological Assessment – will be undertaken immediately to determine if the site is viable to host the facilities (noting that field work for the EIS has already been initiated to consider winter and spring conditions). Following the initial findings and with confirmation of positive site conditions for development, a second series of Planning studies (outlined by GHD in Schedule 1) will be furthered later this summer and included with the Planning applications, to be submitted by the end of September (assuming no additional field work is required in the fall).

Advanced alongside the Planning work will be a series of Engineering studies that will allow for definition of the projects on the site, determine how the two facilities will interrelate, and define the conceptual and detailed design (and subsequent costing) for both the MMF and OPF. Proceeding with these studies prior to the Planning approvals does introduce some risk to the County (noting that only a portion of this work could be translated to an alternate site should that be required). Again, risk will be minimized by advancing studies in a phased approach – confirming positive site conditions first. As outlined by GHD in the Development Strategy, following the initial Planning studies, there will be a good indication of the likelihood of receiving the Planning approvals for 2976 Horseshoe Valley Road West, Springwater. It is only after this has been assessed that additional funds be spent on furthering engineering work.

Following submission of the Planning applications, the approvals process will follow the established path set out in the Planning Act. It is noted that the Development Strategy has been based on the assumption that direction on the Planning applications will be received within 180 days from the date of a complete submission (as mandated by the Planning Act). The timeline does not consider that decisions may be deferred to the Ontario Municipal Board (OMB). Should this occur, or approvals be otherwise delayed, staff will seek County Council direction on how to move forward and provide additional details on the impact to the timeline and budget and, in addition, how the County will secure contracted services for transfer of garbage and recycling and organics processing in the interim.

Environmental Compliance Approval

Although no approvals are required under the Environmental Assessment (EA) Act, operations at the MMF and OPF will be regulated by the MOECC under the Environmental Protection Act (EPA). The licence to operate the site, issued by the MOECC, is called an Environmental Compliance Approval (ECA). The ECA for the site will outline specific operational requirements (such as the amount of materials permitted on-site, hours of operation, environmental monitoring and reporting, etc.) and encompass how waste is managed at the MMF and OPF and regulate air (odour), noise, and the management of process water and stormwater. Studies to support this application will include a Design and Operations Report, Stormwater Management Report, Hydrogeological Study, Waste Analysis Plan, and odour and noise-related studies. Work undertaken this summer/fall to support the Planning applications will be applied to ECA application process, with more detailed work occurring following the Planning approvals in spring 2017.

As the delivery method and timing will be different for the MMF and OPF, it is anticipated that the application will be submitted to the MOECC to first consider the MMF and transfer operations – noting again that the design and operation of the MMF will be much simpler than that of the OPF. As the process for obtaining ECAs is lengthy, this allows for advancement of the approvals while procurement of organics processing technology is being undertaken. The initial ECA application for the MMF would be submitted with the understanding that the facility could potentially house an OPF in a second stage of development (pursuant to County Council's direction). It is anticipated that further discussions with the MOECC will include this concept of staging the ECA process.

Formal pre-consultation with the MOECC is set to continue this fall (2016), with formal submission of the first application to occur following the Planning approvals process currently, estimated for June 2017. In regard to timing, the Development Strategy has allowed for this two-stage application process and almost a full year for the MOECC to review each application (initially for the MMF, then as an amendment for the OPF) and provide approvals. This timing will be contingent on the Ministry – noting that the County will receive further direction from them on advancing the ECA process and their anticipated timing for approvals during upcoming pre-consultation.

MMF – Procurement of Design and Construction

Although both the MMF and OPF will manage waste at the new facility, development of the OPF will be a more complex process, requiring additional time and resources to deliver. Processing involves some form of specialized equipment whereas the MMF is quite simply a building for temporary storage and consolidation of garbage and recycling. Design work for the MMF will primarily consider management of material on-site, whereas design of the OPF will consider many variables such as feedstock, end products, odour control, expansion ability and other design features. As such, the delivery method and timing for the MMF and OPF, although undertaken concurrently at the same location, will be considered separately.

The Development Strategy for the MMF and OPF differ from the outset as furthering the procurement of organics processing technology is necessary for County Council to be provided a comprehensive and accurate business case for the OPF (as will be discussed further in this item). Given the basic function of the MMF and the County's experience in developing other similar infrastructure projects, estimated costs (not site-specific) have already been determined for this facility. In 2014, County Council was presented with a financial analysis in regard to development of transfer infrastructure (*Item CCW 14-253 – Transfer Facility Assessment*, August 12, 2014), with a discounted cash flow analysis completed for a 20-year period. It compared the current system of contracting transfer services against costs associated with development of a County facility and considered changes in tonnages from growth, consideration of increased export of garbage with closure of County landfills, capital costs of the building and equipment, and estimated annual operating expenses. Based on this initial analysis, the payback period for a County facility was estimated to be approximately 5.5 years (with funding).

County Council has provided direction to commence necessary work to develop this infrastructure and funds were allocated accordingly in the Capital budget and set aside in the Environmental Reserve. The amount in Reserve for this project has considered that approximately \$1.15 M (based on a percentage of the Blue Box-related costs) has been secured for this project from the Continuous Improvement Fund (CIF). With secured funding, the siting process now complete, and Council direction, the process and timing to deliver the MMF at 2976 Horseshoe Valley Road West, Springwater, is outlined in GHD's Development Strategy. Again, development of the MMF considers that positive site conditions are to be confirmed with initial Planning studies to be undertaken this summer and the timing of key milestones is contingent on obtaining both the Planning and ECA approvals within the timeframe outlined.

Project Delivery Method (MMF)

As with other similar County projects, it is recommended that work be initiated to deliver the MMF through a simple Design-Bid-Build (DBB) procurement method. This has historically been the most common method for developing municipal infrastructure projects and will involve the County retaining an engineering firm to develop detailed design and specifications for the MMF (including the tipping floor, fleet servicing portion, and administration/education space) and prepare the ECA application. The detailed design and specifications will form part of a tender package to obtain bids from

contractors, with the contractor selected through the tender process and subsequently retained to construct the facility in accordance with the bid specifications, price, and schedule. Following commissioning, it is anticipated that given the straightforward and routine nature of waste transfer operations, that operation and maintenance of the MMF would be undertaken by the County.

The Development Strategy outlines that procurement of an engineering firm to design the MMF and further the ECA process would be undertaken this fall (2016), with the actual design work undertaken upon receipt of the Planning approvals (spring/summer 2017) for release of the construction tender in fall 2017. Given this timing for receipt of the Planning approvals, construction would be initiated in 2018, with commissioning of the facility mid-2019. Again, this timeline has considered conservative advancement of consulting and design work and securing a contractor only after receipt of the site-specific Planning approvals. There will be opportunity at key milestones to update County Council on the revised capital costs for the MMF once site-specific studies and design are undertaken and the costs for supporting site works (such as road improvements) are known.

OPF – Procurement of Technology, Design, and Construction

Procurement of the OPF will be a detailed, multi-staged process led by GHD who have experience with this type of process. The process will determine the organics processing technology best suited for the County and associated costing. From this, site-specific development costs and a detailed business case will be prepared for County Council's consideration and direction. This business case will consider environmental full cost accounting methodologies – commonly referred to as the “triple bottom line” approach. Beyond analysis of forecasted capital and operating expenditures, the social, environmental, and financial aspects of the project will be considered for a more comprehensive study on the net benefits of this infrastructure.

Procurement Considerations (OPF)

How best to advance procurement of the OPF in consideration of co-location with the MMF and site-specific considerations for 2976 Horseshoe Valley Road West was a key component of the Development Strategy and discussed at length with GHD and the Project Team. Of note are two major considerations for the OPF:

- i. During the consultation process for siting, discussion on the type of technology for this facility has indicated some interest to revisit and explore the potential of anaerobic digestion. County Council's current direction is a phased development approach, initiated by construction of a 20,000 tonne/year aerobic composting facility to process green bin material and potentially pet waste (*Item CCW 14-025 – Central Composting Facility Update*, January 28, 2014). It is recommended by our current consultant, in consideration of changing market conditions and feedback received from both County Council and the public, that the procurement process be open at this time to consider more advanced technological solutions, such as anaerobic digestion, which may offer the ability to recover energy in some form and the potential to process diapers and sanitary products.
- ii. Procurement of the OPF has been complicated by uncertainties with timing of the Planning approvals required for development at 2976 Horseshoe Valley Road West. Stability in regard to utilization of the preferred site will be crucial to ensure that the County's investment in time and funds will not be wasted with little or no response to a Request for Proposal (RFP) for processing technology. Advancing the procurement process must consider that technology vendors will be investing great time and resources into their full proposals (our project consultants indicate the vendors would conservatively spend over \$400,000 in preparing full RFPs for this type of facility). A good response to this complex procurement opportunity will be contingent on perceived certainties that this project will come to fruition. That is, as a measure to minimize risk, vendors

will be more apt to respond with solid costing to an opportunity that has comprehensive site information, secured project details and timing, and Planning approvals in place.

Given the above, GHD has provided the County two options – presented as Option 1 and Option 2 – for furthering development of the OPF at this location. For reference, Table 1 below provides an overview of each:

Table 1: Procurement Options – Organics Processing Technology

Option	Technology Considered	Key Milestones in Procurement Process	Advantages	Disadvantages
1	<p><i>aerobic composting</i></p> <ul style="list-style-type: none"> current direction 20,000 tonnes/year SSO phased approach to development 	<ul style="list-style-type: none"> RFPQ released – summer 2016 RFP released – fall 2016 business case – early 2017 	<ul style="list-style-type: none"> maintains approved project plan simpler procurement process 	<ul style="list-style-type: none"> no Planning approvals prior to commencing procurement of technology limits technology to aerobic composting potential requirement for honorariums to potential vendors
2	<p><i>aerobic composting</i> <i>anaerobic digestion</i></p> <ul style="list-style-type: none"> technology neutral 20,000 tonnes/year SSO anticipated (will be finalized through procurement process) 	<ul style="list-style-type: none"> three-stage procurement process (RFI, RFPQ, RFP) RFP released following securing Planning approvals preliminary business case – early 2017 business case – with RFP results in early 2018 	<ul style="list-style-type: none"> opens procurement to all technology potential to include materials such as diapers and sanitary products considers potential to recover energy 180 day Planning period considered would secure Planning approvals for procurement process preliminary market sounding business case presented to County Council in early 2017 	<ul style="list-style-type: none"> lengthens the OPF procurement process defers full business case until 2018

Option 1 would limit technology to aerobic composting and keep with the original direction from County Council. The OPF would be delivered in accordance with the original project plan, with the business case presented in early 2017 (noting that the timeline was amended slightly to avoid public consultation during the summer months as was discussed in *Item CCW 15-055 – Organics Processing Facility – Siting Methodology and Evaluation Criteria*, February 26, 2015). Given simpler, known technology which has already been developed in Ontario, the cost for vendors to prepare a response to the RFP could be minimized by adding engineering specifications completed pre-RFP. This would minimize the

cost to potential vendors, limit risk, and allow for the procurement process to proceed during the Planning approvals process.

As a measure of security, it should be noted that honorariums (up to \$150,000/vendor) may be required to ensure some response to the RFP and demonstrate the County's commitment to this project. A pre-qualification step (RFPQ – Request for Pre-Qualification) is recommended to identify a select group of vendors who would be chosen, following an evaluation process for the RFPQ, to prepare a response to the full RFP. In consideration of a staged ECA application for the co-located facilities and phased advancement of construction (based on GHD's Development Strategy), Option 1 would have commissioning of the OPF in spring 2021.

Option 2 would be "technology neutral" and open the process to aerobic composting and anaerobic digestion. As outlined in Schedule 3, additional time would be required as procurement would follow receipt of Planning approvals. In this scenario, procurement of technology could consider energy recovery and potentially the addition of materials such as diapers and sanitary products at this time. Given the varied technologies and construction requirements, it would, however, limit the pre-RFP engineering work that could be completed upfront. Increased costs to potential vendors to do this individually will necessitate receipt of Planning approvals to provide some measure of security and reduce the risk to vendors as discussed above. It is proposed that Option 2 have an added procurement step in addition to a pre-qualification RFPQ and RFP. In order to obtain additional information and preliminary cost estimates, a market sounding Request for Information (RFI) would be undertaken this fall and the results presented to County Council in the form of a preliminary business case in early 2017. In consideration of delaying the RFPQ/RFP step until the Planning approvals are secured, staging the ECA application, and phased construction of the MMF and OPF, Option 2 would have commissioning of the OPF in spring 2021.

Project Delivery Method (OPF)

Common project delivery methods for developing organic processing facilities are consistent with other municipal infrastructure development models. This includes conventional Design-Bid-Build (DBB) as outlined previously for the MMF, as well as a range of alternative delivery and public-private partnership (PPP or P3) options. A common arrangement (as is the case for the City of Toronto's Disco Road facility and the Cities of Guelph and Hamilton's composting facilities), is a Design-Build-Operate (DBO) model – a turnkey project delivery method in which the owner contracts with a single vendor to design, construct, operate, and maintain capital infrastructure. As each project and municipality are unique, there is no set method for delivery.

Given the above and the potentially complex nature of the OPF, advantages and disadvantages of various options will be outlined further by GHD in an upcoming memorandum to the County. It will examine the range of delivery methods, various ownership and financing options, and risks associated with each for County Council's consideration and direction. Following this, there will be an opportunity for public engagement as more information will be known on the Development Strategy and delivery methods for both the OPF and MMF.

Consideration of Bill 151 – Waste-Free Ontario Act

On November 26, 2015, the Minister of the Environment and Climate Change introduced Bill 151 – Waste-Free Ontario Act (the Act). The Act includes provisions to transition from the current waste system (in which municipalities collect, process, and seek funding) to the new EPR system (in which responsibility and cost is shifted to producers). An accompanying Strategy was also introduced with the Act that establishes the goals to achieve zero waste and zero greenhouse gas emissions from the

waste sector in Ontario. Although specific details will be outlined in forthcoming regulations, it is expected that this legislation will have impacts most notably on two facets of the County’s system – collection of Blue Box recyclables and increasing the volume of organics.

As such, the implications of Bill 151 on development of this infrastructure have been considered. It is expected that the necessity, projections, and timing for developing the MMF will be impacted very little as this facility will provide a location for the transfer of curbside and facilities garbage with the closure of County landfills (anticipated to occur between 2023 and 2025). Management of garbage will still be the responsibility of the municipality. In regard to Blue Box recyclables, funding for this portion of the facility (up to \$2,187,840) has been secured through CIF – regardless of the status of the legislation. As the Province’s Blue Box program is quite complex, it is anticipated that any changes to it will take years and that the County will be responsible for the collection and transfer of these materials beyond the anticipated payback period of the MMF (approximately 5.5 years with funding).

In regard to organics, the Province has been quite clear that this Act will focus on diversion of more waste from disposal and this will be accomplished, in part, by developing an Organics Action Plan to reduce the volume of organic material going to landfill, implementation of disposal bans, and additional plans for landfill use and management. The MOECC has a definitive mandate to reduce greenhouse gas emissions and a local OPF would reduce the need for trucking of this material outside the County and provide local processing capacity. Development of this infrastructure, set to secure capacity for the County’s material and allow for future expansion of the program should the Province mandate disposal bans, is seen to align with the intentions of Bill 151.

Staff are continuing to watch the progression of this important legislation and will report back to County Council the nature of its impact to our programs and infrastructure as this becomes clearer with the evolution of the proposed Act.

Financial and Resource Implications:

Over the next year, consulting work for developing these projects will be undertaken in a phased approach as outlined above (confirm site conditions → submit Planning applications → receipt of Planning approvals → undertake procurement and design). A summary of the estimated costs (consultants have not been retained for all studies at this time) associated with this preliminary consulting work is outlined below in Table 2.

Table 2: Estimated Preliminary Consulting Costs

<i>Phase I – initial studies for Planning approvals (to confirm site conditions)</i>	
Environmental Impact Study	
Geotechnical/Hydrogeological Study	
Traffic Impact Study	
Archeological Assessment	
	\$200,000

<i>Phase II – secondary studies for Planning approvals, preliminary Engineering studies</i>	
Additional Planning studies required for OPA application (Noise Assessment, Odour Impact Assessment, etc.)	
Site-specific design and engineering 2976 Horseshoe Valley Road West, Springwater	
Pre-engineering studies for organics processing technology	
	\$550,000 (75% MMF, 25% OPF)
<i>Consulting services – Planning Approvals</i>	
Planning Justification Report	
Preparation of Planning applications	
	\$100,000
<i>Consulting services – Procurement of Organics Processing Technology</i>	
Consultant report – project delivery method	
RFP/RFPQ process (includes consideration for RFI)	
Business case and review of final report	
	\$300,000

Costs associated with the above work will to be expended over 2016-2017 and the funds are included in 2016 & prior Solid Waste Management Capital Budgets and the Long Term Financial Plan. As the projects progress and site-specific costs are known, County Council will be presented with an updated financial analysis for the MMF and a business case for the OPF (noting that should Option 2 be furthered, a preliminary business case would be submitted in early 2017). Costs related to the design work for the MMF will be provided to County Council following the procurement of these services in 2017.

Relationship to Corporate Strategies:

In regards to long-term processing of organics, the Solid Waste Management Strategy (Strategy) recommended development of a centralized composting facility within the County. Public input indicated support for in-County processing as well as for the addition of pet waste and diapers to the program. This item also supports the Strategy recommendation to develop transfer capacity infrastructure to manage garbage and recyclables generated within the County.

Reference Documents:

Organics Processing Facility project webpage
www.simcoe.ca/opf

Materials Management Facility project webpage
www.simcoe.ca/mmf

Attachments:

for CCW 16-165
Schedule 1.pdf



for CCW 16-165
Schedule 2.pdf



for CCW 16-165
Schedule 3.pdf

Schedule 1: *Development Strategy for Co-Located OPF and MMF* (GHD Limited, May 11, 2016)

Schedule 2: Development Strategy – Option 1

Schedule 3: Development Strategy – Option 2

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Approvals:**Date**

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