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SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Science Procurement Directorate/Direction de l'acquisition de travaux scientifiques
11 Laurier St. / 11, rue Laurier
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Title - Sujet GROUND SEGMENT SOLUT. (MEOSAR PROJ)	
Solicitation No. - N° de l'invitation W8474-16ME03/A	**Amendment No. - N° modif.** 024
Client Reference No. - N° de référence du client W8474-16ME03	**Date** 2016-12-02
GETS Reference No. - N° de référence de SEAG PW-$$ST-005-29512	
File No. - N° de dossier 005st.W8474-16ME03	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin **at - à 02:00 PM** **on - le 2016-12-09**	**Time Zone** **Fuseau horaire** Eastern Daylight Saving Time EDT
F.O.B. - F.A.B. **Plant-Usine:** ☐ **Destination:** ☐ **Other-Autre:** ☐	
Address Enquiries to: - Adresser toutes questions à: Byrnes, Ashley	**Buyer Id - Id de l'acheteur** 005st
Telephone No. - N° de téléphone (873) 469-4453 ( )	**FAX No. - N° de FAX** ( ) -
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Vendor/Firm Name and Address **Raison sociale et adresse du fournisseur/de l'entrepreneur** **Telephone No. - N° de téléphone** **Facsimile No. - N° de télécopieur**	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) **Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)** **Signature**	**Date**

Canada

This amendment serves to publicize:

1 – responses to questions posed by vendors;

2 – the second MEOSAR Ground Segment Summary of Feedback and Outcomes document, which summarizes the feedback received on a full slate of draft Request for Proposal (RFP) documents;

3 – the decks presented during the vendor visits to the MEOLUT sites at Riverbend, AB and Goose Bay, NL; and

4 – questions posed and answers provided during the vendor visits to the MEOLUT sites at Riverbend, AB and Goose Bay, NL.

Question: We understand that RFs surveys will be provided in the RFP. Can you confirm if special attention will be placed on signals received from the DGPS emitter at Goose Bay. For example will you confirm; the emitter is transmitting at its maximum power; there is only one antenna configuration for the emitter, and will you provide high fidelity frequency sweeps in the vicinity of 1544 Mhz depicting the DGPS emissions?

Answer: No, Canada did not consider Differential Global Positioning System (DGPS) reference stations in the RF survey, if any exist in the Goose Bay area.

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Industry Engagement Process for

MEOSAR Ground Segment W8474-16ME03/A

Summary of Feedback and Outcomes #2

www.pwgsc-tpsgc.gc.ca

Table of Contents

1. **Introduction**
2. **Industry Engagement Process**
3. **Acronym List**
4. **Summary of Feedback and Outcomes**
5. **Conclusions**
6. **Next Steps**

1. Introduction

Public Works and Government Services Canada (PWGSC) released a Price and Availability notice (W8474-13MSGS/A) on May 8, 2013 as a first step to inform industry of a potential procurement of a ground segment solution for the Medium Earth Orbit Search and Rescue (MEOSAR) project on behalf of the Department of National Defence (DND), as well as to seek industry input on a cost estimate for the pricing of both definition and implementation phases of the requirement.

Subsequently, PWGSC released a Request for Information (RFI) on September 28, 2015 to gain additional industry input in developing this procurement. With this RFI, PWGSC sought to:

- further inform industry of DND's MEOSAR ground segment requirement;
- obtain industry input for the refinement of the procurement strategy;
- obtain industry input on the methods of leveraging economic benefit for Canada; and,
- obtain industry input for the development and refinement of the MEOSAR ground segment requirement.

An Industry Day and one-on-one meetings held in Ottawa, Ontario, as well as one-on-one site visits to the Canadian Mission Control Centre (CMCC) in Trenton, Ontario, were conducted as part of the engagement activities. In addition, vendors were given the opportunity to comment on a full slate of draft Request for Proposal (RFP) documents, including statements of work, evaluation plans and terms and conditions. Vendors were also given the opportunity to visit the two proposed MEOLUT sites in Riverbend, Alberta and Goose Bay, Newfoundland and Labrador.

2. Industry Engagement Process

Price and Availability	The P&A was posted on May 8, 2013, and required that responses be submitted by July 2, 2013. Three firms responded to the P&A. Responses were received from: • Honeywell Global Tracking • Orbit • TSi
Industry Engagement Period	• Posting of RFI: September 28, 2015 • Industry Day: November 12, 2015 • One-on-one meetings: November 13, 2015 • RFI Responses Requested: December 10, 2015 • One-on-one CMCC site visits: February 16 and April 13, 2016 • Posting of draft solicitation documents: June 3 to September 2, 2016 • One-on-one site visits to Goose Bay: October 13-14, 2016 • One-on-one site visits to Riverbend: October 26-27, 2016 • Concludes with the publication of a notice to Buy and Sell (buyandsell.gc.ca) advising industry that the period has ended or, should an RFP be issued, date of publication of the RFP.

Information disclosed under the RFI	• Preliminary information on the project background, objectives, and requirement • COSPAS-SARSAT documents applicable to the project • Draft documents – Statements of Work, Evaluation Plan, Terms and Conditions • Sites for the two MEOLUTs – Goose Bay, Newfoundland and Labrador and Riverbend, Alberta
Participants	Twelve respondents participated in the engagement process, as well as Government of Canada MEOSAR Project team members (DND/PWGSC/Innovation, Science and Economic Development Canada [ISED]).
Participants at the Industry Day	Twelve firms were represented at the Industry Day: • ADGA Group • Com Dev International • DRS Technologies • General Dynamics • Honeywell Global Tracking • Lockheed Martin • McMurdo • MDA Corporation • Orbit • Thales Alenia • Thales Canada • Rheinmetall
Participants at the one-on-one meetings	Nine firms participated in a one-on-one meeting: • ADGA Group • DRS Technologies • General Dynamics • Honeywell Global Tracking • McMurdo • MDA Corporation • Orbit • Thales Alenia • Thales Canada
Questions and Answers from Industry	Excluding those posed during the CMCC and MEOLUT site visits, Canada provided responses and/or clarification to 164 queries from industry.
RFI responses submitted	Four firms submitted responses to the RFI:

	• General Dynamics • McMurdo • Orbit • Thales
Participants at the one-on-one CMCC Site Visits	Six firms participated in the one-on-one CMCC site visits: • DRS Tech • GD • McMurdo • MDA • Orbit • Thales
Comments on draft RFP documents	Four firms submitted comments on the draft documents: • General Dynamics • McMurdo • Thales Alenia Space • Thales Canada
Participants at the MEOLUT Site Visits	Four firms participated in the MEOLUT site visits: • GD • Honeywell Global Tracking • McMurdo • Thales

3. Acronym List

CMCC	Canadian Mission Control Centre
DBAC	Design, Build and Commissioning
DND	Department of National Defence
EED	Environmental Effects Determination
ISED	Innovation, Science and Economic Development Canada
ISS	In-Service Support
ITB	Industrial Technological Benefits
MEOLUT	Medium Earth Orbit Local User Terminal
MEOSAR	Medium Earth Orbit Search and Rescue
P&A	Price and Availability
PWGSC	Public Works and Government Services Canada
R&O	Repair and Overhaul
RFI	Request for Information
RFP	Request for Proposal
SOW	Statement of Work

4. Summary of Feedback and Outcomes

This summary of feedback and outcomes specifically addresses feedback received on the draft RFP documents. Information on feedback received for earlier engagement activities can be found in the first *Summary of Feedback and Outcomes* document posted on May 13, 2016 on Buy and Sell as Amendment 006 to Request for information W8474-16ME03/A.

Topic 1 – Proposed Contract Period

With respect to the optimal proposed contract period, feedback from vendors was reviewed and considered by the project team. Canada has determined that one 5-year period of In-Service Support (ISS), with the option for one additional 5-year period of ISS, will be required; the RFP documents will clearly identify this information.

Topic 2 – Customer and Technical Support Services

With respect to feedback on technical support response time, vendors proposed many approaches to address the initial and technical support models that could be utilized. Given that the search and rescue system - an operational requirement - is being used and monitored 24/7 for 365 days a year, Canada has determined that the technical support help desk, initial response and initial troubleshooting times proposed in the draft ISS Statement of Work (SOW) are appropriate and consistent with the COSPAS-SARSAT system availability requirements. These detailed investigation and resolution times will be updated and reflected in the final RFP documents. Furthermore, Canada decided that authorization for the commencement of the initial ISS period may only be given once both ground segment systems have been accepted and commissioned. In addition, Repair and Overhaul (R&O) services for unserviceable and repairable sub-assemblies will not be required unless specifically requested by Canada. Finally, Canada changed its annual refresher training strategy such that the vendor will only be providing on-site technical assistance to a Canada-led and Canada-delivered course for operators and maintenance personnel.

Topic 3 – Updates to the Ground Segment system as required for compliance with all COSPAS-SARSAT approved changes

Several vendors provided feedback on strategies for the implementation of any updates to the systems as mandated by the COSPAS-SARSAT community. After careful consideration, Canada decided to include the system updates required to maintain compliance with approved COSPAS-SARSAT requirements and standards as part of the ISS scope. The implementation of new capabilities not currently defined in existing COSPAS-SARSAT requirements or standards documents will be excluded and will be tasked separately by Canada. Vendors are reminded that current versions of all applicable COSPAS-SARSAT standards, specifications, and requirements documents can be obtained from cospas-sarsat.org.

Topic 4 – Second Generation Beacons

After careful consideration of feedback received from several vendors, Canada has chosen to include the integration of Second Generation Beacons, specified in COSPAS-SARSAT document T.018, as part of the scope of the Design, Build, and Commissioning (DBAC) SOW. The DBAC SOW will clearly identify COSPAS-SARSAT document T.018 as an applicable document.

Topic 5 – Backup Power Infrastructure
Several vendors inquired about backup power infrastructure; such infrastructure will not be provided by Canada at either ground segment site. While the requirement does not prescribe the provision of any specific backup power solution, vendors must provide a solution that meets Canada's availability and reliability requirements 24 hours per day, 7 days a week, 365 days per year.

Topic 6 – Environmental Assessments
Although the draft DBAC SOW stated that vendors would be required to perform environmental assessments for each ground segment site prior to obtaining approval to start construction activities, Canada has chosen to remove this requirement. Results of Environmental Effects Determination (EED) studies conducted at each of the two sites will be provided in the RFP as appendices to the DBAC SOW; mitigation measures provided will need to be adhered to by the vendors during construction activities.

5. Conclusion

Overall, the feedback received was very valuable in contributing to the development and refinement of the procurement strategy and the technical requirement. Recent input received from industry prompted the re-examination of the project goals and led to a number of changes, including:

- that the potential contract period will be increased by an additional 5-year optional period of ISS;
- that ISS will not begin until specifically authorized by Canada, following the commissioning and acceptance of both ground segment systems;
- that COSPAS-SARSAT mandated system updates will be included in the scope of the ISS SOW;
- that the integration of second-generation beacons, as specified in COSPAS-SARSAT document T.018, will be included in the scope of the DBAC SOW; and
- that vendors will not be required to perform environmental assessments at each ground segment site; rather, the RFP will provide results of EED studies conducted at each site.

Apart from the modifications discussed herein, the requirement will remain largely unchanged. Responses from the initial RFI led Canada to establish that the Industrial and Technological Benefits Policy would not be applied for the MEOSAR Phase II Ground Segment; that the Canadian Content Policy will be employed in order to leverage economic benefit to Canadians; that two MEOLUT sites in Canada would be required; and that the existing CMCC would be retained. Since this time, Canada selected two sites for the MEOLUTs and has established that only one contract will be issued to fulfill the needs of both the DBAC and ISS requirements of the MEOSAR Phase II Ground Segment.

6. Next Steps

The Government of Canada MEOSAR Project team members thank all participants for taking part in this Industry Engagement Process.

Contracting Authority:
Alan Chan
Public Services and Procurement Canada
Acquisitions Program

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Email: alan.chan@tpsgc-pwgsc.gc.ca
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Medium Earth Orbit Search and Rescue Project

Ground Segment

Riverbend Industry Site Visit

26-27 Oct 2016

Overview of Brief

- Welcome and introduction
- Site Description
- Government Furnished Infrastructure
- Rules of Engagement
- Riverbend First Line Support

Team Members

- LCol Gabriel Doré
  - MEOSAR Deputy Project Manager
  - Ground Segment Team Leader
- Alan Chan
  - PWGSC
  - MEOSAR Contracting Authority
- Edmund Karl
  - 3 CDSG Signal Squadron
- Chi Uong
  - MEOSAR Systems Engineer

Agenda

Item	Time	Location
Briefings	08:30 - 09:00	Riverbend Building
Vendor #1 Site Visit	09:00 – 12:00	Riverbend
Break	12:00 – 13:00	
Vendor #2 Site Visit	13:00 – 16:00	Riverbend

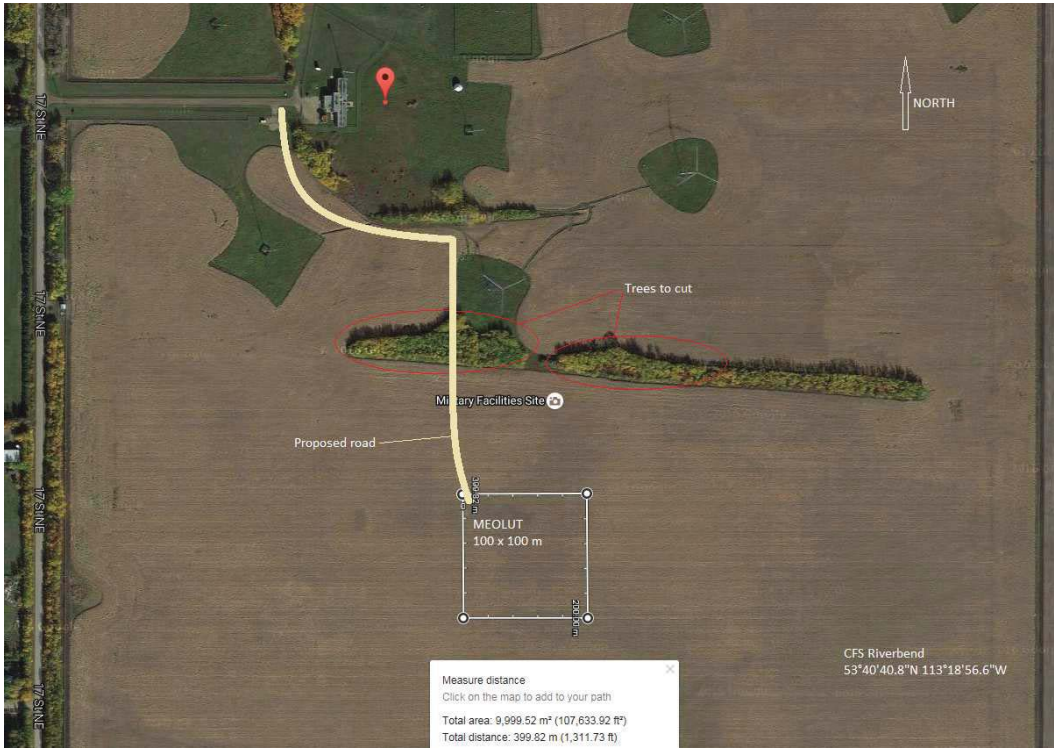
Agenda

Item	Time	Location
Briefings	08:30 - 09:00	Riverbend Building
Vendor #3 Site Visit	09:00 – 12:00	Riverbend
Break	12:00 – 13:00	
Vendor #4 Site Visit	13:00 – 16:00	Riverbend

Project Site Visit

- Performed by Project Office on 24-25 May 2016
- Assessed Government Furnished Infrastructure requirements
  - Power & communications trenching
  - Site security & access
  - Tree clearing for line-of-sight

Riverbend MEOLUT Site



Existing Power Infrastructure

- Utility service
  - Rating: 60 kVA at 80% transformer rating
  - Spare capacity: 30 kVA estimate at 80% rating

Communications

- Main communications
  - Bandwidth available: 1.98 Mbps
- Backup communications
  - None at present
  - Options are being explored

Site Security & Access

- Site security
  - Property is gated and enclosed by security fencing
  - Manned during normal working hours
- Road access
  - Existing gravel road to Riverbend Building
  - DND will build access road to MEOLUT

Tree Clearing

- DND will clear trees <u>outside</u> the 100m x 100m area for 5° line-of-sight clearance
- Vendor will remove vegetation <u>within</u> the 100m x 100 m area

Other Infrastructure

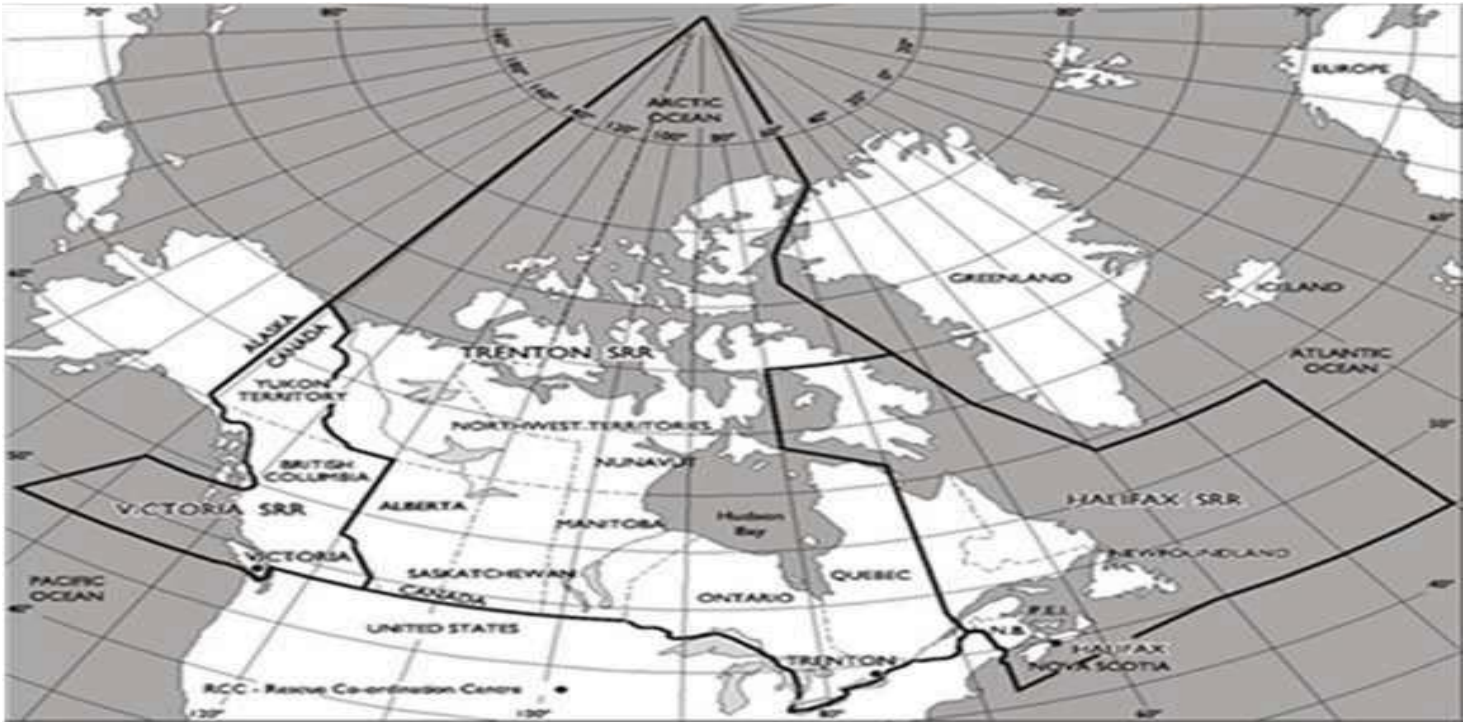
- RF survey completed by DND
- Environmental Effects Determination (EED)
  - DND will commission for and provide EED report with mitigating measures
  - Protected wetland habitat identified but not near MEOLUT site

Other Infrastructure (Cont'd)

- Grounding – soil used for farming
- Future development
  - No future users anticipated
  - Urban encroachment but RF noise deemed negligible
  - Highway expansion should not conflict

Canadian SAR Area of Responsibility

The Ground Segment must provide full coverage of the Canadian SAR Area of Responsibility



Rules of Engagement

Presented by:

Public Works and Government Services Canada (PWGSC)

Point of Contact

PWGSC Contracting Authority is the point of contact for MEOSAR requirements.

Alan Chan
Public Works and Government Services Canada
Acquisition Branch
Telephone: 873-469-4457
E-mail: Alan.Chan@tpsgc-pwgsc.gc.ca

Questions?

Riverbend First Line Support

Presented by:
Edmund Karl

Questions?

Questions?

Riverbend Medium Earth Orbit Local User Terminal Site Visit 26-27 Oct 2016
Vendor Questions and Answers

1. **Who provides the road?**
   The Department of National Defence (DND) will build the access road up to the demarcation point. The vendor will be responsible for building its own road, if required, from the Medium Earth Orbit Local User Terminal (MEOLUT) buildings and other structures to connect to the DND road.

2. **Will the GPS coordinates of the four corners be provided?**
   Yes, DND will provide the coordinates in a site drawing.

3. **Where is the power and communications demarcation point?**
   It will be at the demarcation line of the 100 m x 100 m area. The vendor will be responsible for trenching power and communications from the MEOLUT buildings and other structures to this demarcation point.

4. **Is it fibre for communications?**
   Yes, fibre is used for the Low Earth Orbit (LEO) and Geosynchronous Earth Orbit (GEO) LUTs collocated at the site. A GPNet connection is currently available and Canada will provide sufficient bandwidth at the site to support the requirements defined in the vendor's specification. The only backup connection currently available is 56 kbps copper modem.

5. **Will there be backup communications?**
   Canada will provide backup communications, and determine its bandwidth in support of the Medium Earth Orbit Search and Rescue (MEOSAR) capability at the site. Exact backup communications specifications are unknown at this time.

6. **What is the main communications bandwidth?**
   Only 1.98 Mbps is currently available. Canada will provide additional bandwidth to support the vendor's design.

7. **Are crops grown and of what type?**
   Yes, the crops grown are rotated between canola, barley and wheat. DND will ensure that the MEOLUT area is excluded from farming before the construction begins.

8. **Will there be a temporary fence for construction?**
   Canada will not provide a temporary fence. This is a Contractor's responsibility if deemed necessary depending on the type of construction activity required (e.g. digging) for safety purposes.

9. **Will the 5 degree line-of-sight clearance be maintained?**
   Yes, the Contractor is required to design the site to maintain a 5 degree line-of-sight. This MEOLUT location at the centre of the property was found to have optimal line-of-sight clearance.

10. Will a geotechnical survey be conducted?
No, the vendor is responsible for conducting a geotechnical survey.

11. Will permanent fencing be required?
Fencing will not be required for the final installation as the site is already considered to be an Operations Zone.

12. Are there electrical storms?
Electrical storms occur occasionally, which is typical prairie weather.

13. Is there a requirement for radomes?
This will be left to the vendor's discretion. It should largely be for protection from ice and snow. DND routinely has to clean the snow from the GEO antenna, which does not have a radome.

14. What is the height of the antenna towers?
The height of the towers currently near the proposed MEOLUT site range between 60 and 90 feet.

15. Is there a reason for the generator to be in the shed?
Diesel fumes were problematic when the generator was in the basement of the Riverbend building. Housing it in the shed was easier for construction and spill control.

16. How often do power drops occur?
Since the generator does not have a counter, the frequency of power failures cannot be precisely ascertained. However, power drops are not uncommon.

17. Is the requirement just for one generator?
The backup power requirements are left to the vendor to assess in order to meet Canada's performance and availability requirements. Canada will not specify nor restrict the number of generators to be provided.

18. What is the power quality?
Line conditioning is presently being used by DND at the site.

19. Is there a preference for colour for the MEOLUT?
No.

20. Are there any issues with the general public?
There have been incidents of vandalism.

21. Will toilet facilities be required?
There is no requirement for toilet facilities and water to be supplied to uninhabited buildings such as any buildings and structures to be provided as part of the MEOLUT site. However, if the vendor installs chemical toilets, DND would have to maintain at an associated cost.

Alternatively, DND can temporarily offer a portable toilet for use by the vendor during prolonged corrective or preventative maintenance activities.

22. **How is grounding?**
    Soil conditions are such that grounding is not expected to be an issue.

23. **Who is responsible for the Environmental Assessment (EA)?**
    DND will conduct an Environmental Effects Determination (EED) study and will include the resulting mitigation requirements as part of the Request for Proposal (RFP) package. The vendor will not need to conduct an EA. DND will conduct an in-house Species at Risk survey before construction is allowed to commence. This sweep of the area would look for sensitivities such as bird nesting.

24. **Are emergency services easily accessible?**
    The hospital located in NE Edmonton is not far. The response time of fire services is within 4 minutes.

25. **What is the farmer's role? Due to concerns with electrical noise, how close can farming equipment approach?**
    The farmer has a key to the south gate. Farming activity would involve spraying twice a year and the use of a combine harvester that respects the marked buffer around structures on the property.

26. **Will support be part of the RFP?**
    Yes, the In-Service Support (ISS) scope of work for the contract will focus on troubleshooting third line issues and corrective maintenance. DND will assist the vendor in performing first line maintenance at the MEOLUT within the capability of the technicians employed at the site.

27. **Will the entire system be on the Canadian Forces Supply System (CFSS)?**
    All equipment, including the spare parts, provided by the vendor at the site will be held against a Supply Customer Account (SCA) in CFSS. The account will be managed by personnel assigned to the Riverbend site. The vendor will be expected to provide all consumables, support equipment, and tools required to conduct corrective and preventative maintenance activities.

28. **What is the minimum response time for service support?**
    The minimum response time is to be derived by the vendor based on performance and availability requirements defined in the RFP.

29. **What is the length of the ISS scope of work on the contract?**
    It is anticipated that the initial period of ISS for the MEOSAR capability will be 5 year with an option for another 5 years.

30. **Will the trees be removed?**

A large number of trees within the middle of the property have already been removed. There are still a few patches remaining, and these can be cleared if necessary based on the vendor's approved design and site plan. Trees outside the property do not belong to Canada and cannot be removed.

31. Will there be mention of first line support details in the RFP?
DND will conduct first line maintenance of the buildings and associated mechanical components (e.g. HVAC) provided by the vendor. DND will also maintain the electrical and communication infrastructure connected to the MEOLUT. The vendor will be responsible for all other first line maintenance requirements as part of the corrective maintenance scope of work. The DND personnel assigned to the Riverbend property may be able to assist the vendor within the limit of their technical abilities and other tasks.

32. Are there any humidity requirements?
Yes, the specification included in Canada's RFP will include humidity conditions under which the system is expected to perform. The Riverbend site is normally within the limits provided as part of the specification.

33. Will a ditch be built alongside the road?
No, only the road will be built.

34. What is the soil depth?
It is approximately 3 feet deep, although precise data will require a complete geotechnical survey that will not be provided by DND.

<u>Additional information provided by DND:</u>

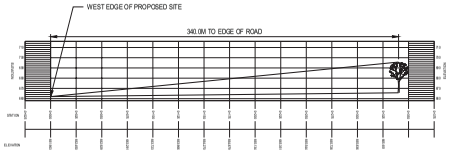
35. Snow removal.
Snow removal is on contract with other sites of higher priority. The new access road can be included as part of this contract and the priority can be adjusted if deemed necessary once the site is operational.

36. Construction Season.
It is possible for the construction season to extend into late December. For example, it depends on movement of the concrete pads, and how the work is covered from the elements.

37. RF Survey.
DND will provide the RF survey test plan and accompanying annex containing the recorded raw data for Riverbend.

PROPOSED SITEPLAN

SCALE: 1:2000 M



PROFILE VIEW FROM WEST EDGE OF MEOSAR SITE TO EAST EDGE OF EXISTING ROAD

SCALE: 1:2000 M

Government of Canada | Gouvernement du Canada

LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ
TO BE REVIEWED | À ÊTRE RÉVISÉ

#	YYYY/MM/DD	REVISION DESCRIPTION	X.X
NO.	DATE	REVISION	APPR.

SCALE | ÉCHELLE: 1:2000 (10 0 50 100 m)

LOCATION | EMPLACEMENT
ADDRESS | ADRESSE
CITY | VILLE
PROVINCE

PROJECT | PROJET
MEOSAR PROJECT
RIVERBEND RECEIVER SITE

TRADE | MÉTIER	DATE
CIVIL	2016/08/08

SUBJECT | SUJET
PARTIAL SITE PLAN SHOWING PROPOSED LOCATION AND LINE OF SIGHT

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: R FENTON	ENG O | O ING: R FENTON	DES O | AGENT CONC
DRAWN | DESSINÉ: D SKRABA	CUSTOMER | CLIENT	PROJ MGR | GEST PROJ: R FENTON
CHECKED | VÉRIFIÉ	SECT OC | CMDT CSG: MAJ GEEN	DES MGR | GEST CONC
COORDINATION		FIRE | INCENDIE

WBS NO. | NO. OTP: C.003012
PF NO. | NO. DP:

DWG. NO. | NO. DESSIN: L - E15/18 - 8731 - 21 - 601

Canada

Sheet 1 of 1

2016/Oct/26, 7:02am skrabda.dgn B1 1000 x 707_E S:\Engineer\Draft\Plans\PROJECTS\SITES\Riverbend\MEOSAR\2016_ENG_WORK\PROPOSED_SITEPLAN2.dwg

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Medium Earth Orbit Search and Rescue Project

Ground Segment

Goose Bay Industry Site Visit

13-14 Oct 2016

Overview of Brief

- LCol Gabriel Doré
  - Welcome and introduction
  - Government furnished infrastructure
- Alan Chan
  - Procurement
- Maj Mike Campbell
  - Goose Bay first line support

Team Members

- LCol Gabriel Doré
  - MEOSAR Deputy Project Manager
  - Ground Segment Team Leader
- Maj Mike Campbell, Goose Bay WLEO
- Alan Chan, PWGSC
- Chi Uong, MEOSAR Systems Engineer

Agenda 13 Oct

Item	Time	Location
Briefings	08:15 - 08:45	Building 354, Main conference room 233
Escort to MEOLUT Site (Vendor #1)	08:45 – 09:00	Proceed from Building 354
Vendor #1 Site Visit	09:00 – 12:00	Building 1236 and surrounding area
Break	12:00 – 12:45	
Escort to MEOLUT Site (Vendor #2)	12:45 – 13:00	Meet first at 5 Wing main gate
Vendor #2 Site Visit	13:00 – 16:00	Building 1236 and surrounding area

Agenda 14 Oct

Item	Time	Location
Briefings	08:15 - 08:45	Building 354, Main conference room 233
Escort to MEOLUT Site (Vendor #3)	08:45 – 09:00	Proceed from Building 354
Vendor #3 Site Visit	09:00 – 12:00	Building 1236 and surrounding area
Break	12:00 – 12:45	
Escort to MEOLUT Site (Vendor #4)	12:45 – 13:00	Meet first at 5 Wing main gate
Vendor #4 Site Visit	13:00 – 16:00	Building 1236 and surrounding area

Project Site Visit

- Performed by Project Office on 21-22 June 2016
- Assessed Government Furnished Infrastructure requirements
  - Power & communications trenching
  - Site security & access
  - Tree clearing for line-of-sight

Goose Bay – Site Near Building 1236

Existing Power Infrastructure

- Utility service (Bldg 1236)
  - Rating: 37.5 kVA single-phase
  - Pole mounted transformer
  - Spare capacity: 27.5 kVA estimate
- Diesel generator
  - Rating: 31.25 kVA, power factor of 0.8, 120/240 V single-phase, 130 A
  - Spare capacity: 20 kVA estimate

Communications

- Main communications
  - Bandwidth available: 11.13 Mbps
- Backup communications
  - None at present
  - Options are being explored

Site Security & Access

- Site security
  - Bldg 1236 is not manned
  - No security fencing – DND will install
  - Area accessible by general public
- Road access
  - Existing paved road to Bldg 1236
  - DND will build access road to MEOLUT

Tree Clearing

- DND will clear trees <u>outside</u> 100 x 100 m area for 5° line-of-sight clearance
- Vendor will clear trees and remove stumps <u>within</u> 100 x 100 m area

Other Infrastructure

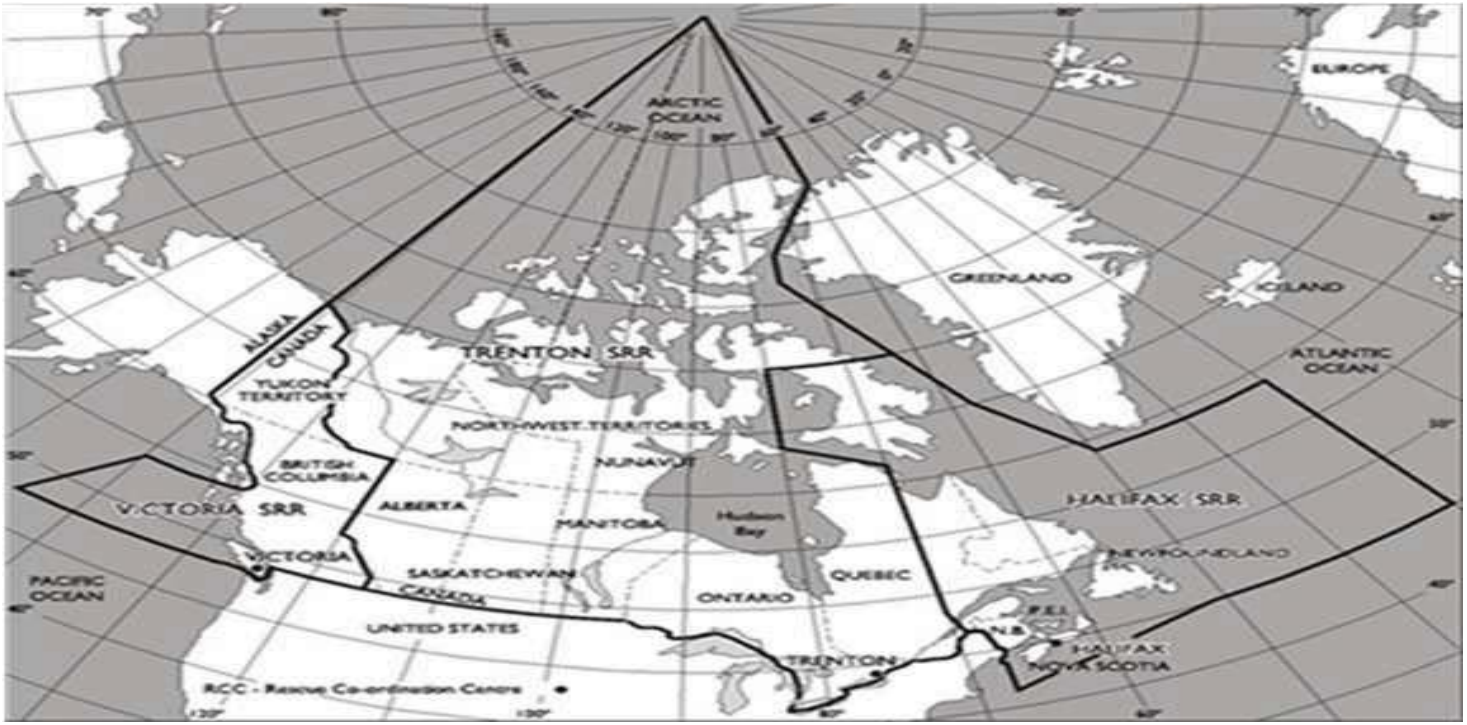
- RF survey completed by DND
- Environmental Assessment (EA)
  - Vendor to do EA
  - No species at risk
  - Historical contamination but minimal impact

Other Infrastructure

- Grounding – sandy soil
- Future development – no future users anticipated

Canadian SAR Area of Responsibility

The Ground Segment must provide full coverage of the Canadian SAR Area of Responsibility



Questions?

Procurement Process

Presented by:

Public Works and Government Services Canada (PWGSC)

Point of Contact for MEOSAR Project

PWGSC Contracting Authority is the point of contact for MEOSAR requirements.

Alan Chan
Public Works and Government Services Canada
Acquisition Branch
Telephone: 873-469-4457
E-mail: Alan.Chan@tpsgc-pwgsc.gc.ca

Questions?

Goose Bay
First Line Support

Presented by:
Maj Mike Campbell

Questions?

Goose Bay Medium Earth Orbit Local User Terminal Site Visit 13-14 Oct 2016
Vendor Questions and Answers

1. **Will the demarcation point be up to the white line shown in the site layout provided in the Statement of Work (SOW)?**
   Yes. Trenching of power and communications will be up to the demarcation point.

2. **What is the area within the box?**
   The Medium Earth Orbit Local User Terminal (MEOLUT) area is 100 m x 100 m.

3. **Will the vendor provide the MEOLUT building?**
   Yes.

4. **What is connection for power and communications at the demarcation point?**
   The Department of National Defence (DND) will conduct the trenching and cabling for power and communications to the demarcation point, where a manhole-type pull pit will be provided for access. The communications fibre cable can be a wound-up spool if there are concerns with signal loss.

5. **What are the specifications of the site transformer?**
   The pole transformer supplying Building 1236 is rated at 37.5 kVA single-phase. DND will upgrade the utility service, if required, once the power requirements of the final design is known.

6. **Will the vendor provide the Auxiliary Power Unit (APU) e.g. diesel generator?**
   Yes, if an APU (e.g. generator) is required, it must be provided by the vendor.

7. **How long are the power outages?**
   The outages are typically a few minutes to a few hours. The vendor will need to clean or condition the power as it is known to be "dirty" (i.e., transients, voltage fluctuations, etc.).

8. **Will there be site security, including cameras and lighting?**
   DND will fence and secure the site. The vendor will be responsible for securing the structures and buildings inside the 100 m x 100 m MEOLUT area. This includes providing outdoor safety lighting and security cameras.

9. **Will there be physical security?**
   DND will provide fencing along the perimeter of the MEOLUT. Note that the perimeter fence will be adapted to the final design if the area is smaller than 100 m x 100 m. Within the MEOLUT area, the vendor will be responsible for security, including network security.

10. **Is there historical contamination?**
    The vendor will not have to complete an Environmental Assessment (EA). DND will conduct an Environmental Effects Determination (EED) study for the entire site, within and outside

the demarcation line. This report will address historical contamination, if any, and will be provided to the vendors as part of the Request for Proposal (RFP) when it is released.

11. Are there species at risk?
The Wing Environment Officer will provide this information. Any resulting mitigation measures will be included in the EED provided as part of the RFP.

12. What is the role of Defence Construction Canada (DCC)?
The Service Level Agreement (SLA) is not yet in place but DND's intent is to have DCC provide on-site project management. DCC will provide guidance to DND with regards to construction requirements, will review the Contractor's construction design, and will inspect the Contractor's work at the site to ensure compliance with requirements, including local and national building codes.

13. What is the level of In-Service Support (ISS)?
No comment as this is not the forum to discuss this particular topic.

14. Will first line support be through Serco?
No comment as this is not the proper forum to discuss this particular topic.

15. What is the timeline in terms of project schedule (i.e., RFP)?
As stated in the Request for Information (RFI), the Full Operational Capability (FOC) date of Dec 2020 has not changed.

16. Can any information be provided on Dome Mountain?
It is 1000 feet above sea level, and at an elevation angle of about 5 degrees as viewed from the proposed MEOLUT site.

17. Are there transmit towers nearby?
The Airport Surveillance Radar (ASR) is situated on Dome Mountain. The Ionosphere Research Array is a small distance away transmitting at 415 – 20,000 kHz. The transmitters next to Building 1236 are between 150 and 400 MHz.

18. Is there fibre at the site?
There are 12 single mode fibres at Building 1236, although the status of the unterminated fibre box containing these 6 pairs remains unknown at this time.

19. Will GPNet be available?
Yes. The MEOLUT will be connected to the SARNET, which is a subnet of the GPNet.

20. What is the topography of the land?
DND does not have any topographical maps of the MEOLUT area.

21. What are the GPS coordinates of the MEOLUT area?
The coordinates for the four corners of the 100 m x 100 m area are:

1) 53.312918, -60.468226
2) 53.312918, -60.466729
3) 53.313831, -60.466746
4) 53.313828, -60.468248

Note that DND will not be providing any site drawings for Goose Bay.

22. Was a Radio Frequency **(RF) survey performed?**
Yes, DND will provide the test plan and accompanying annex containing the recorded raw data from the Goose Bay RF survey.

23. Is the site close to water?
No, the proposed MEOLUT site in Goose Bay is not close to water.

24. Are there any industrial benefits?
No comment as this is not the proper forum to discuss this particular topic.

25. Can a revisit be arranged?
Yes, please submit site visit requests to the attention of Mr. Alan Chan at Public Works and Government Services Canada (PWGSC).

26. Where does the access road end?
It will end at the demarcation point and will be routed as conveniently as possible to the MEOLUT site and associated buildings.

27. What is known underground?
Any underground issues that require mitigation will be identified in the EED. DND will not provide geotechnical data for the proposed MEOLUT site.

28. Are there any known electrical or gas cables?
No, the shooting range is 500 m away and there is an underground cable near that location.

29. Will digging permits be required?
Yes. 5 Wing Goose Bay will issue dig permits for the proposed MEOLUT site.

30. How long is the construction season?
The typical construction season in Goose Bay is from June to October.

31. What is this corner shown at the site visit chosen for the power demarcation?
DND can bring power to another part of the demarcation line for the 100 m x 100 m MEOLUT area if it is more convenient once the site plan has been approved.

32. Is there information on the geotechnical loading?
No, DND will not be providing geotechnical data for the site. The vendor is responsible for conducting its own geotechnical survey.

33. What level of service is expected during the winter?
DND will maintain and refuel the generator (if one is provided), and maintain all provided buildings and air conditioning systems. The vendor will be responsible for maintaining the RF equipment, including the Uninterruptible Power Supply (UPS), network and antenna domes.

34. What is the level of winter access at the site?
Given the current operations near the proposed MEOLUT site, the priority for snow removal is LOW (i.e. PRI 4). The site's priority level may be adjusted should frequent access be deemed necessary once the site is built, testing, accepted, and commissioned.

35. Will there be a water supply and washroom?
No to both, but during construction there will be portable toilets.

36. Is the vendor responsible for the transformer, or can the vendor use the one servicing Building 1236? What are the transformer requirements?
The vendor can use the existing transformer supplying Building 1236. DND will upgrade the transformer if its spare capacity is found to be insufficient.

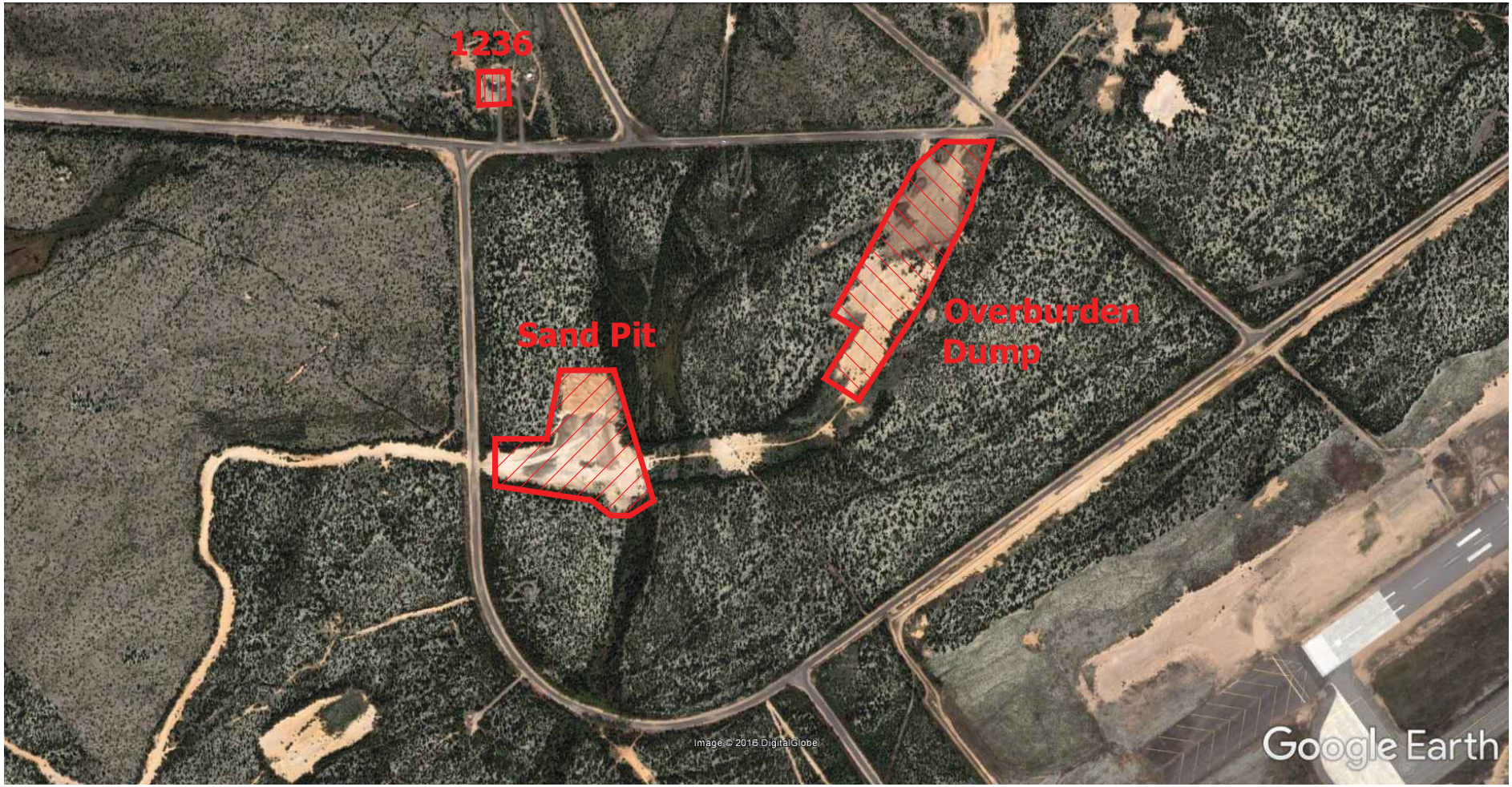
37. Where is the power coming from?
The power supply will likely be from Building 1234 rather than Building 1236.

38. With the Environmental Assessment, does the Contractor need to maintain the view?
Yes and the EED study report provided by DND will cover the details.

39. Who has to approve digging activities?
5 Wing Goose Bay will approve all digging and engineering activities. This service is normally performed by Serco on behalf of DND and DCC in Goose Bay.

<u>Additional information provided by DND:</u>

40. The sand pit and the DND landfill site are marked on the attached map for the vendor's convenience.


1236
Sand Pit
Overburden
Dump
Image © 2016 DigitalGlobe
Google Earth