Kent County Council

County Hall

Sessions House

County Road

Maidstone

Kent

ME14 1XQ

DATE: 21th June 2019

Dear Sirs

**RFQ for IP19014 - Flood Risk Management through Blue-Green Infrastructure**

Kent County Council is inviting you to Bid for the above contract and accordingly has enclosed a Request for Quotation.

Your RFQ response should be submitted via the Kent Business Portal no later than 12pm on 15th July 2019.

You are advised to read all sections carefully before Bidding. Should you have any difficulty with the RFQ, please contact via the Kent Business Portal

Yours faithfully

Kent County Council



**Kent County Council**

**Request for Quotation:**

**Flood Risk Management through Blue-Green Infrastructure**

# Introduction

The Flood and Water Management (FWM) Team at Kent County Council (KCC) delivers the county’s role as Lead Local Flood Authority (LLFA) for Kent. As part of delivering this role the FWM Team look for opportunities to drain surface water more sustainably in urban areas to reduce the risk of flooding downstream and improve the capacity of combined sewers cost-effectively.

Previous projects that we have undertaken have in involved retro-fitting of sustainable drainage systems (SuDS), which may discharge water to a more sustainable destination, for instance in to the ground or a local watercourse instead of a sewer, or they may attenuate water before it enters a sewer so that the peak flow is reduced.

There are a number of techniques available to us, including swales, rain gardens, tree pits etc. These measures also have the benefit of providing green infrastructure in urban areas that help support other KCC objectives, such as improving open space and providing habitat to support biodiversity. Delivering multiple objectives through Blue-Green Infrastructure (BGI) in this way helps us to gain support for drainage improvements and may unlock other funding and support.

To support the delivery of these sorts of schemes, Kent County Council is a City Partner of BEGIN – ‘Blue Green Infrastructure through Social Innovation’ which is funded by the North Seas Region Interreg programme. BEGIN recognises that cities are particularly susceptible to extreme weather conditions caused by climate change. Blue Green Infrastructure (BGI), such as green corridors, permeable paving, bio-swales and rainwater harvesting is needed to better adapt to this situation and improve the liveability of cities. It is BEGIN’s aim to find and show improved climate adaptation solutions in urban areas, to identify the benefits and to have measures installed and maintained by social initiatives.

Previous BGI projects that the FWM Team has undertaken have been driven by the need to solve specific, localised problems downstream. However, many urban areas are at risk of a general lack of drainage capacity in extreme events that single interventions alone cannot solve, but more widespread integration of BGI in these areas may be able to facilitate drainage and flood risk management improvements as well as delivering other benefits.

In order to identify the potential for BGI in urban areas within Kent, the FWM Team first needs to identify potential BGI sites. As such we are looking to commission a suitably qualified consultant to help us to identify appropriate areas of the urban environment that would be appropriate for BGI interventions or retrofits and that could increase local drainage capacities or provide an additional flood risk management function in two pilot areas. This will also form part of Work Package 7 of the BEGIN project to map BGI opportunities.

The study area is the two towns of Tunbridge Wells and Gravesend in Kent. The approximate study area is shown in Figure 1, Figure 1a is the approximate urban extent of Gravesend and Figure 1b is the approximate urban extent of Tunbridge Wells.

# Objective

The project study area will be the towns of Tunbridge Wells and Gravesend, Kent. The objectives of this project are as follows:

1. To identify the key flood risk hotspots in the study area and delineate the drainage sub-catchments associated with these hotspots
2. To identify any green infrastructure pressures or requirements in the study area
3. To identify available areas within open space, the highway boundary and public realm that are suitable for BGI measures within the study area
4. To identify what BGI measures would be applicable in these spaces, taking into account all possible blue and green benefits
5. To identify the constraints to the delivery of BGI in these spaces
6. To determine how, if at all, each BGI opportunity contributes to alleviating the issues identified in (i) and (ii), including quantitative benefits where applicable and appropriate (eg potential storage volume, area of open space)
7. To qualitatively categorise each opportunity according to the ease of deliverability and the benefits they deliver

Some of the catchments and surveys may need to include areas outside of the urban extent of the two towns in the study area. The study area may need to be adjusted to accommodate this.

# Consultant Services

The Consultant should have experience of SuDS design and delivery and good knowledge of BGI principles to successfully complete this project.

## Problem identification

The consultant shall identify the key flood risk hotspots in the study area. This should be a relatively high-level assessment of the available data from previous studies, flooding incidents and flood maps to identify the most significant issues. The sub-catchments that drain to these hotspots should be identified. Flood risk modelling is not expected to be undertaken for this project.

The consultant shall identify any pressures or needs for green infrastructure in the study area. This should also be a relatively high-level assessment of local planning policy and other relevant documents. Issues could include quality open space, specific habitats (eg pollinators, great crested newts), green corridors, air quality improvements, etc.

This assessment is intended to provide input into the prioritisation exercise later, to provide a qualitative prioritisation of BGI based on how it can contribute to known issues in the study area.

## Mapping of opportunity areas

The consultant will review the available mapping of the area and identify suitable spatial opportunities for the implementation of BGI.

Suitable spaces could include, but are not limited to, the following:

* Roadside verges and green spaces
* Wide roads or footways
* Pedestrianised areas
* Parks and recreation grounds
* Avenues and tree-lined roads,
* Publicly owned land, eg schools, highway boundary, hospitals etc
* Disused land, eg abandoned railways

The consultant will then assess the areas to identify their potential for BGI. This assessment will include:

* The appropriate drainage and/or flood risk management techniques for the location, for instance infiltration, attenuation, conveyance etc.
* The appropriate green infrastructure opportunities for the location, for instance, tree-pits, raingardens, ponds etc.

Each opportunity area will be mapped, to show the extent of the BGI, and attributed with the appropriate BGI techniques for the site. Some opportunity areas may be able to support more than one technique. All potential techniques should be identified.

Output: a GIS layer with agreed attributes for each opportunity area

## Assessment of feasibility and potential benefit

Once these opportunity areas have been identified it is expected that site visits will be undertaken to the site area by a suitably qualified and experienced engineer to assess the feasibility of each opportunity area and the practicality of delivering the identified BGI in that space.

Each opportunity area will l be assessed for its potential to provide flood risk management and green infrastructure benefits appropriate to the study area. For the current study, this will a high-level assessment. For each opportunity area, a realistic assessment of the BGI opportunity will be made, including appropriate technique(s) and the potential volume of surface water which can be managed with the proposed intervention (e.g. any associated storage volume) will be estimated (this may differ for different techniques).

Consideration shall be given to relevant practical considerations in delivering BGI in these sites, including local levels, gradients, kerb lines, road cambers, general highway arrangement, utilities, existing trees and any other recognisable constraint.

Opportunity areas will be ranked on feasibility or difficulty of deliverability. This will help to prioritise the identified areas.

Output: a table of opportunity areas including the benefits they can provide and an assessment of their feasibility

## Determination of BGI benefits

The final stage of the study should assess how the identified opportunities contribute to reducing the flood risk in the study area and to delivering green infrastructure requirements.

The opportunity areas should be compared with the issues identified in the Problem Identification task to determine how they deliver a benefit to the study area. The hotspot sub-catchment that the BGI site is in (if any) should be identified along with the flood storage that it can provide to the sub-catchment (where there is no hotspot, opportunities should still be included as issues may arise in future or there may be a need to provide general drainage capacity). The green infrastructure benefits that it delivers should be identified and how they contribute to the needs of the study area.

The consultants should, in liaison with the FWM Team, sort the BGI opportunities according to their deliverability and benefits. This sorting should not be a rank, but it should be clear where measures are both deliverable and beneficial, either deliverable or beneficial and neither deliverable nor beneficial.

Where a site is suitable for more than one BGI technique the final output should include the details for each potential BGI techniques, which may have different benefits and deliverability.

Output: a final report setting out the methodology for the study and a table of the opportunity areas showing the type of BGI, the storage potential, an indication of the deliverability of the measure, what flood risk issues it benefits, what green infrastructure issues in the study area it benefits.

## Presentation of findings

The findings of this assessment should be presented as a GIS layer of the areas, plotted as polygons with attributes that describe findings of the study

The consultants should also prepare a final report that sets out the methodology for the study and detailing the findings an includes a table of the opportunities summarising the findings of the study.

## Liaison with the FWM Team

The consultant is expected to liaise closely with the FWM Team in delivering this project to ensure that any actions are able to be delivered by KCC, that the methodology considers matters relevant to KCC and delivers findings that are beneficial to us.

Meetings with the FWM Team should be held at the following stages of the project:

* Start-up – to confirm the project objectives and outputs and agree data provision.
* Mapping of opportunity areas – to review the preliminary findings and agree the process for assessing their potential and identifying benefits.
* Assessment of potential – the FWM Team may accompany the Consultant on a site visit to provide guidance on what we are looking for.
* Presentation of findings – to review the draft findings and agree the presentation of the project results.

Meetings need not always be face-to-face, teleconferences may be appropriate for some meetings.

# Existing Information

On contract award the following existing GIS information for the study area will be made available to the consultant:

* OS Mastermap
* BGS Geology
* Southern Water Sewers
* Highway drainage
* Historic flooding incidences
* uFMfSW

# Specifications, standards and format

GIS results should be presented as ArcMap shapefiles.

# Constraints on how the Consultant is to Provide the Services

Intellectual ownership of all items produced under this commission will rest with KCC.

The Consultant and his/her employees and sub-consultants will in all aspects of this commission act in a co-operative and professional manner bringing the full benefit of his/her knowledge and experience to bear on the issues outlined here.

# Timing, programme and completion

A high-level programme has been developed, as per table below, however this will subject to discussion with the appointed consultant.

|  |  |  |
| --- | --- | --- |
| Project Stage | Indicative dates | Task |
| Tender process | 21/06/2019 | Tender issue |
| 15/07/2019 | Tender submission |
| 22/07/2019 | Appointment |
| Project delivery | 29/07/2019 | Start-up meeting |
| 1/11/2019 | Project completion |

The consultant is welcome to propose an alternative timetable for the project and to provide more details on the delivery of the tasks within it.

# Quotation

The consultants shall provide a proposal to undertake this work that outlines how they will deliver the project, including where they will add value, their experience of undertaking similar projects, and provides a fixed price quotation.

The quotation should include a short breakdown of activities and an outline timetable for completion of the work, stating if the resource is available to complete the work within the timescale outlined above.

Quotations should be returned by **12pm 15 July 2019**.

# Tender review

Tenders will be evaluated according to the quality/price ratio. The quality will be scored according to the criteria below, this score will be divided by the price to give a quality/price score. The highest quality/price ratio will be awarded the project.

Tenderers will be required to achieve a minimum quality mark of 60 out of 100 to be considered. All tenders that achieve this quality mark will be included in the evaluation process. The quality/price ratio will then be applied to determine the most economically advantageous tender.

The quality assessment of the tender will be based on the following criteria:

1. Evidence of successfully undertaking the identification of blue/green infrastructure opportunities or similar and evidence of designing sustainable drainage systems retrofits (30%). This factor will be evaluated based on evidence of relevant experience provided in the tender submission. The contact details for previous examples should be provided for reference checks, if needed.
2. Experience of key personnel (30%). This factor will be evaluated based on evidence of relevant experience set out in the CVs of the key identified personnel. The role of each key member of the project team should be made clear in the tender submission, including the proposed number of hours they will spend on the project.
3. Appropriate and robust methodology and programme proposed for the completion of the project (40%). This factor will be evaluated based on information provided in the tender submission.

The assessment methodology that will be used to assess each of these criteria will be as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 |
| Fails to meet the minimum requirements. | Basic compliance only | Generally of a good standard with some reservations. | Good standard. | High standard. |

The scores will be scaled by following amounts and then added to give the quality mark for the tender:

|  |  |  |
| --- | --- | --- |
| **CRITERIA** | | **SCALE FACTOR** |
|  | Experience | 7.5 |
|  | Key personnel | 7.5 |
|  | Proposed methodology | 10 |

# Conditions of Engagement

KCC do not bind themselves to accept the lowest or any quotation submitted, nor will they be responsible for or pay for any expenses or losses incurred by the consultants in the preparation and presentation of the quotations.