**Project scope document**

**[Arduino – Remote control valve operation]**

**[20/02/2018]**

**Project scope statement**

Create a website which provides staff the status of the valve at all time; counting the number of times it has opened; when it was last tested; control over valves open/ close status by March 2018

**Introduction / Background to project**

Company staff are currently required to work dangerously close to valves to check the status or open and close valves. To improve the efficiency as well as working conditions it was decided to replace the current system with a website which will provide the same functions but remotely. With an added feature to control more than one valve at a time

**Business case**

The client is a petroleum company who has requested the development of a remote-control valve operation. The current system in place does not provide the staff with remote access and control. Therefore, requiring staff members to work dangerously close to valves to manually check the status or open and close valves. To improve the efficiency and working conditions it was decided to replace the current system with a website which will provide the same functions but remotely. With an added feature of controlling more than one valve at a time. The Installation of the new remote valve control system will decrease costs for the company as it will eliminate the need for staff member to be present to check the status of valves as well as opening and closing them.

**Deliverables**

The successful installation of the:

* Arduino Sensor to interpret and send valve status/level
* RBG LEDS on the Arduino sensor to display valve status
* Router to relay status readings from Arduino sensor to website
* Motors on every valve to allow remote opening/closing commands
* Database system to store commands, valve status and test count
* Website to allow remote valve control, status checking and alert receiving

**Constraints**

The project will need to be completed and installed by the 7 March 2018 within the maximum budget of £5000.

Regarding future improvements, we will not be integrating capacity readings of valves and website log in page in our system as it will not contribute to the completion of the project. It will also increase the work load and cost of the project enough to push us beyond our constraints

**Key people / Key stakeholders**

You could list here the main people involved and their responsibilities on this project - internal and external, as appropriate.

**Project manager**

[Iman Hussain, 07402626879]

Responsible for organising and conduct meetings while also drawing up an agenda; keeping a track of member of the team expected and apologies; topics to be discussed and outstanding actions from previous meetings. They will also be assessing any current or future risks such as, long-term illnesses; loss of files; finding solution and keeping track of the impact on the project.

**Business Analyst**

[Muhammad Sadique, 07762049069]

Responsible for relaying and interpreting the clients wants, needs and messages to team members; establishing and writing up the project’s requirements; write up the projects scope by establishing boundaries; assist with functional testing by:

* designing a detailed test plan
* performing functional testing

**Embedded Developer**

[Adam Pearson, 07773911449]

[Mohamed Maaroufi, 07980107792]

Responsible for designing and implementing software of embedded devices and systems, from requirement to production and commercial deployment. The designs should consist of: Circuit; diagrams; flow diagram showing interactions. Implementation and software should be in line with the agreed specification and design.

**Web Developer**

[Will Baker, 07592052214]

[Ryan Singh, 07507537846]

Responsible for implementing the specification provided by the business analyst. This is to be completed by, choosing the best technologies suitable for the project; Justification for chosen technologies, including risk and limitation; Implementing technologies in accordance to functional requirements; Bug fixing with business analyst during testing stage

**Database Analyst**

[Abdurrahman Dafiri, 07340630446]

Responsible for creating a Entity Relationship diagram that identifies the entities require by our project and how they relate to one another; implementing the database using a suitable database management system; taking performance enhancing and security measures to ensure the database runs efficiently and securely.

**Client**

[Steve Garner, S.Garner@wlv.ac.uk]

Responsible for overseeing the project is completed within the requirements, such as deadline date; budget and functionality.

**Project administration, monitoring and reporting**

Project meetings will be Held Twice a week. 11:00 am on a Wednesday and 12:00 noon on a Friday. All members are required to attend. If a member cannot attend or will be late, they must notify the Project Manager stating their reasons why. Progress reports are to be given every Friday by each member, which will then be summarised and uploaded to basecamp by the Project Manager or Business Analyst.