#### **Engineering Consultancy Services Charter**

#### Principles of a Capable Owner Model "How will we operate?"

- 1. Alignment: We will align our goals with project and programme objectives.
- 2. Collaboration: We will value teamwork and external partnerships.
- 3. Talent: We will provide and retain skilled capable professionals.
- 4. Value-Driven Approach: We will prioritize value over cost.
- 5. Complex Systems: We will manage complex systems effectively.
- 6. Stakeholder Perspectives: We will consider customer and operational viewpoints.

#### Our Goals "What are the outcomes we will achieve?"

- 1. To bring PR24 to life using our globally leading expertise.
- 2. To recognise budgetary constraints and deliver the Minimum Viable Solution.
- 3. To identify, develop and promote high impact innovation.
- 4. To provide solutions which are safe and constructable.
- 5. To achieve consistent, efficient handover to Design & Build delivery partners.

# "Our ECS purpose"

As the ECS Framework, we will undertake front-end feasibility and optioneering work for the capital programme and supporting standalone investigations.

### Welsh Water's Values "What are Welsh Water's needs?"

- 1. Customer Focus: We will prioritize customer needs.
- 2. Environmental Stewardship: We will protect and enhance the environment.
- 3. Innovation: We will embrace creative solutions.
- 4. Collaboration: We will work closely with stakeholders.

### Measures "How we will measure progress?"

- 1. Monitor staff satisfaction through surveys.
- 2. Seek continuous improvement through regular communication and feedback channels.
- 3. Meet quarterly to review collectively, capturing success, identify blockers to remove & share lessons learnt.

### Safety First "How will we make AMP8 the safest AMP yet?"

- 1. We will make safety the core principal around which our designs are formed.
- 2. We will hold ourselves and each other accountable for the safety of our designs.
- 3. We will be generous and proactive in sharing safety learning with others.



#### Personal commitments "What will I commit to in order to make this work?"

- 1. Put safety at the forefront of everything I do.
- 2. Sharing my experience from elsewhere but also listen and learn from others.
- 3. Follow through on my actions. Do what I say I am going to do and take responsibility.
- 4. Be trusted and accountable to deliver my role expectations.
- 5. Lead by example and demonstrate a can-do approach. "We are in this together".
- 6. Bring positivity and help keep things move in the right direction.

#### **Behaviours**

"What are the key behaviours we will demonstrate to make the ECS a success?"

- 1. "One Team" ethos.
- 2. We support each other "when one fails we all fail, no one gets left behind".
- 3. Agility ability to re-focus with the changing needs of the programme.
- 4. Demonstrable accountability at all levels.
- 5. Openness and inclusivity we will value new ideas and thinking styles.
- 6. Being willing/open to challenge.
- 7. Commitment to continuous improvement.









#### **Engineering Consultancy Services Partner Contact Details**

#### **DCWW Mission** "Our ECS purpose"

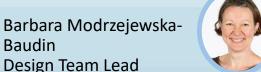
As the ECS Framework, we will undertake front-end feasibility and optioneering work for the capital programme and supporting standalone investigations.



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## **Arup + InfoTiles® I&I Solution**



Quickly quantify inflows & infiltration (I&I) in your catchment



Help make better informed investment decisions with AI insights

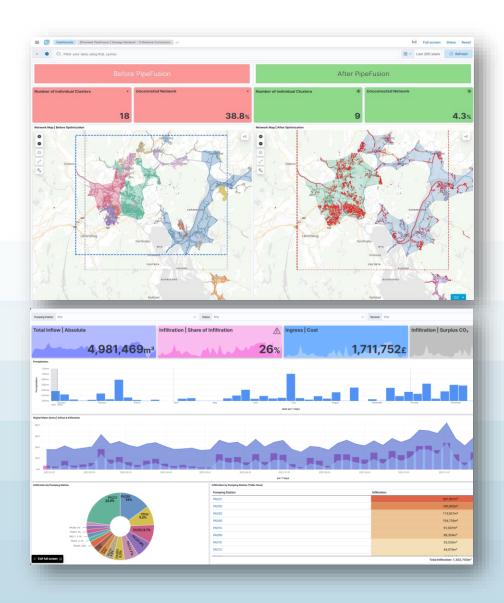


Track benefits of your investments post intervention



Our solution is hardware agnostic and uses your existing catchment data first to draw insights.

Come and chat with us today for a live demo of our I&I solution co-developed with InfoTiles®







# **AtkinsRéalis: Ely Catchment Approach**

- Minimal Viable Solution (MVS) Success.
- Coslech WwTW Driver a 0.25 mg/l Total Phosphorus permit Conventional solution would require a tertiary solids removal (TSR) plant treating 100% of flow.
- Analysing site sampling data reduced plant requirements to 50% of flow.
- MVS reduced AMP7 costs of £23m down to AMP8 cost of £12.5m.
- Progressed with opportunity of catchment permitting at the site –
   tightening phosphorus permits upstream to relax Coslech's permit.
- Current feedback is that this is looking likely to result in a relaxation to 0.5 mg/l which will result in no TSR being required and further cost savings.

lo.	Treatment works	Impact in Apem?	DWF [MLD]		Low Carbon P limits Scenarios [mg/l]	WINEP v8 Permit scenario [mg/l]		Low Carbon P limits Scenarios Load [kg/d]	WINEP v8 load scenario [kg/d]
1	Coslech	Yes	12.9759	2	0.45	0.25	26.0	5.8	3.2
2	Duffryn Isaf	Not included	6.97722	2	0.45	0.25	14.0	2.2	1.7
3	Rhiwsaeson	Yes	3.3063	2	0.75	2	6.6	2.5	6.6
4	Creigiau <sup>β</sup>	Yes	1.14536	4.3	0.75	1	4.9	0.9	1.1
5	Rhydlafar	Yes*	0.79207	3	0.75	1	2.4	0.6	0.8
6	Drope Westbury	Might	0.4429	6.4	6.4	6.4	2.8	2.8	2.8
7	Peterston Super Ely	Might	0.20806	3.2	3.2	3.2	0.7	0.7	0.7
8	St. Fagans	Yes*	0.14111	2.9	2.9	2.9	0.4	0.4	0.4
9	Drope	No	0.01648	2.6	2.6	2.6	0.0	0.0	0.0
10	Leckwith STW	Yes	2 <del>5</del> 2	=	ke k	1 <del>2.</del> 1	=	≅:	io <del>s</del> ti
TOTAL [kg/d]			8=8		868		57.8	15.9	17.5
OAD REMOVED			( <del>-</del> )	≅	isti.		0	41.9	40.3
IRSHARE LOAD o be removed			8 <del>-</del> 8	-	(-)		34.3	34.3	34.3







## **Mott MacDonald: Better Outcomes Through Innovation and Excellence**





**PROJECT** 

Groes Bronallt 90 population equivalent WwTW site with WFD prevent deterioration and ammonia drivers.

**CHALLENGES** 

- Remote works surrounded by woodland.
- Limited power supply.
- Large site boundary, small footprint.
- Extension of the process may encroach in the woodland.

**OUTCOMES** 

Modular aerated reed bed solution:

- Reduced footprint
- Offsite construction
- No excavation necessary
- 1 day installation period
- Solution generated £90k saving versus comparable design

635 Local staff 3275 National staff

Offshore staff

MOTT М M **MACDONALD** 

**TREATMENT** 

Local: 16

National: 163 Offshore: 17

**HYDRAULIC** MODELLING

Local: 8

National: 92 Offshore: 3

BUILDING **SERVICES** 

Local: 209 National: 226

National: 539

Local: 106

**BIODIVERSITY &** 

SUSTAINABILITY

Local: 25 National: 310

DAMS &

**GEOTECH** 

**PROGRAMME MANAGEMENT** 

Local: 271

National: 1542



## **Nature-based Solutions from Stantec**

Aerated rushbed design for Southern Water's Lavant Wastewater Treatment Works

- Lavant's aerated rushbed design is up to ten times more efficient than a conventional wetland, reducing storm discharges even on dry days.
- Leveraging the co-value benefits of the NbS design, WINEP obligation fulfilment, storm overflow discharge reduction (key drivers), with microbial and nutrient benefits (key advantages)
- This project unlocks the potential for scaled integrated systems and the benefits they can deliver.

