10. Better investment planning ("IPAC")



Situation

The Investment Planning and Costing Tool or IPAC system allows third parties acting on behalf of NI Water to build up Project Costs in a standardised way. Previous Price Control submissions were subject to external consultancies utilising their own cost information data to price up whatever projects they were assigned. This leads to varying approaches being taken, and differing costs being used within the single Price Control submission.

Action

To meet regulatory expectations, NI Water set out to develop a tool which would implement a common set of data in a standard way no matter who the end user was. IPAC works as a front-end interface to a single set of cost curves owned by NI Water and is developed and hosted internally with a secure external interface.

The master cost curve list includes 503 capital cost curves, opex and carbon algorithms. During the build-up of a project within IPAC the user not only develops the capital cost, but also the opex cost (for example Power, Labour, Goods & Services and Chemicals) requirements as well as the embodied and operational carbon. The outputs include the production of the whole life cost and carbon (embodied, operational and whole life in line with our developing Climate Change Strategy. NI Water can update the cost curves as new data comes in following the completion of capital schemes or to apply inflation indices and special factors if required to uplift the original scheme costs. NI Water can update the cost curves as new data comes in following the completion of capital schemes or to apply inflation indices and special factors if required to uplift the original scheme costs.

This IPAC interface simplifies and standardises the methodology for pricing up a Capital Project, working in a similar way to online shopping where several items are selected and sized. This will then give Total Capital Cost, Whole Life Cost, High Level Carbon Cost and so forth.

EL POIG E PAC Projec Records 1 M Proj. No 1928		н 🗆 РОИ 🗆 Та	ining/Texaing 🗆 In	Progress 🗆 🛙	and a D	Complete 🗆 No	rlind	
Records 1) Proj. No	o 180							
Proj. No								
10.58	Luciecz.	Owner	Price Control	Status	Reg.	Lev.		
	Grange (Taylorstown)	Nichsel McClean	PIC21	Complete	Yes	0 3	2	- P
1010	Doubaness WeTW	Nichael McClean	P021	Complete	Yes	0 🕈 🛎 👘	2	
1648	Antrine DA Glenovy Ro	Conner Morgan	P021	Complete	Yes	LI 🕈 🏧	7	3
1154	Longhmeeting Treatab	Any Black	P021	In Progress	Yev	□ ₹ 6	2	- D
1053	Keedy Arnaph DA Arn	Connor Morgan	PC21	Complete	Yes	0 🕈 🐃	2	4
1004	Ballyrickard BA Upper	Conner Morgan	PC21	Complete	Yes	0 🕈 🛎 👘	2	
1056	Neira DA Waringfield	Conner Morgan	P021	In Progress	X96	口 🕈 🐃	2	3
11.55	Dvryhelv DA - Brompt	Contor Morgan	P021	Complete	Yes	🗆 🕈 🌤	2	- D
10.2	Culmore UA - Heighen	Connor Morgan	PC21	Complete	Yes	0 🕈 🏷	2	
1004	Tannanism DA Clorin	Conner Morgan	PC21	Complete	Yes	0 🕈 🛎 👘	2	
1068	Donnybrower DA Eglin .	Conner Morgan	P021	Complete	Mac	LL 🕈 🛼	2	3
11.66	Arbin DA Neilsbreck	Contor Morgan	P021	Complete	Yex	🗆 🕈 🏊	2	- E
11/1	Warrangoint WeitWiP	Michael McClean	PC21	Complete	Yes .	0 🕭	2	
1622	Reinfriend Drumlough	Conner Morgan	PC21	Complete	Yes	0 🕈 🐃	2	
1073	Upgrade to Killyhovilo	Any Black	P021	In Pingmas	Mark	L 🕈 🕭		3
	1146 1155 1155 1155 1155 1155 1155 1155	 1046 Ansin DA Georg Re., 1333 Conferences Involution 1422 Reary Armsph DA Anno. 1423 Reary Armsph DA Anno. 1424 Rahystant DA Workgfold 1535 Damyfold DA Heampt. 1425 Colmone DA Volkern 1426 Danoghown DA Cleme 1426 Danoghown DA Figlion 1428 Anthine DA Woldbackture 1422 Rathrideed Da Inlangt. 	164 Analis DA Stenary Ro., Connet Margan 1835 Looginnacray Involute. Ang Blad. 1836 Main DA Waring Fall Connet Margan 1835 Danyfelde DA Stanpt. Connet Margan 1835 Danyfelde DA Stanpt. Connet Margan 1835 Calman DA Fraginac. Connet Margan 1836 Anter Da Paginac. Connet Margan 1836 Anter DA Netlakock Connet Margan 1836 Anter DA Netlakock Connet Margan 1837 Warmoodit Wart Wr.W. M. Market McCleart 1832 Warmoodit Wart Wr.W. Market McCleart 1832 Warmoodit Wartwice. Connet Margan 1833 Lippada in Kilywin. Ang Blade	164 Ansine DA Granoy Ro. Conner Morgan P021 1535 Longimenton Invaluto. Any Black P023 1535 Longimenton Invaluto. Any Black P023 1535 Kwely Aming DA Anni. Concer Morgan P023 1516 Making DA Anni. Concer Morgan P023 1516 Making DA Morking MA Concer Morgan P023 1517 Danyfack DA - Bonglia. Concer Morgan P023 1525 Danyfack DA - Bonglia. Concer Morgan P023 1525 Danyfack DA - Bonglia. Concer Morgan P023 1526 Culman UA - Honglian. Concer Morgan P023 1526 Anshen DA - Boljia. Concer Morgan P023 1527 Marragolin Wei WH W. Mchael McHael Wei Wei W P023 1522 Salthfield Danshough Concer Morgan P023 1523 Bathfield Danshough Concer Morgan P023 1524 Warragolin Wei WH W. Mchael McHael Wei Mellow P023 1525 Bathfield Danshough Concer Morgan P023 1524 Bathfield Danshough Any Black P033	164 Auslie DA Stewary Ro., Connel Morgan PC21 Complete 1828 Looginnecrary Treader. Ang Black. PC21 In Program 1828 Looginnecrary Treader. Ang Black. PC21 In Program 1828 Looginnecrary Treader. Connel Morgan PC21 Complete 1829 Main DA Warkgöld Connel Morgan PC21 Complete 1825 Danyfade DA Brangt. Connel Morgan PC21 Complete 1825 Carlynaw DA Program. Connel Morgan PC21 Complete 1825 Carlynaw DA Program. Connel Morgan PC21 Complete 1826 Carlynaw DA Program. Connel Morgan PC21 Complete 1826 Carlynaw DA Float Connel Morgan PC21 Complete 1826 Arbier DA Moldwork JL. Connel Morgan PC21 Complete 1826 Arbier DA Moldwork JL. Connel Morgan PC21 Complete 1827 Warmstoold Worldwork JL. Connel Morgan PC21 Complete 1828 Arbier DA Moldwork JL. Connel Morgan PC21 Complete 1829 Warmstoold Worldwork JL. Connel Morgan PC21 Complete 1822 <th>1646 Ansine DA Benary Re. Connect Marger P021 Canglate. Yes 1535 Longitmeetrap Investo. Any Black P021 In Program Yes 1535 Longitmeetrap Investo. Any Black P021 In Program Yes 1535 Longitmeetrap Investo. Concel Marger P021 Congilere Yes 1535 Longitmeetrap Investo. Concel Marger P021 Congilere Yes 1536 Marks DA Waringfold Concel Marger P021 Congilere Yes 1535 Danyfinke DA Bampit. Concel Marger P021 Congilere Yes 1535 Danyfinke DA Bampit. Concel Marger P021 Congilere Yes 1535 Danyfinke DA Bampit. Concel Marger P021 Congilere Yes 1535 Danyfinke DA Bampit. Concel Marger P021 Congilere Yes 1545 Anshee DA Fallin Concel Marger P021 Congilere Yes 1545 Anshee DA Fallin Concel Marger P021 Congilere Yes 1545 Warmgohn Well WH Michael Holderer P021 Congilere Yes 1525 Warmgohn Well WH Marger Marger P021</th> <th>1646 Ansire DA Benary Re. Connect Marger PO21 Complete Yes T 1535 Looginewrap Insido, Ang Black PO21 In Program Yes T T 1535 Looginewrap Insido, Ang Black PO21 In Program Yes T T 1535 Looginewrap Insido, Ang Black PO21 In Program Yes T T 1616 Make DA Marsing DA Jena, Concert Morgan PO21 Conglete Yes T</th> <th>1646 Arabia DA Sensoy Ro. Correst Margan PC21 Complete: Yes T T 1835 Looginewatery Invalue. Ang Black PC21 In Programs Yes T T 1835 Looginewatery Invalue. Ang Black PC21 In Programs Yes T T 1835 Looginewatery Invalue. Correst Margan PC21 Complete: Yes T T 1836 Marke DA Arm. Correst Margan PC21 Complete: Yes T T 1836 Marke DA Vaningfald Correst Margan PC21 Complete: Yes T T 1835 Danyleke DA - Frangel. Correst Margan PC21 Complete: Yes T T 1835 Danyleke DA - Frangel. Correst Margan PC21 Complete: Yes T T 1835 Culman UA - Frangeles. Correst Margan PC21 Complete: Yes T T 1835 Culman UA - Frangeles. Correst Margan PC21 Complete: Yes T T 1836 Anthes DA Netliacek Correst Margan PC21 Complete: Yes T T 1836 Anthes DA Netliacek Correst Margan PC21 Complete: Yes T T</th>	1646 Ansine DA Benary Re. Connect Marger P021 Canglate. Yes 1535 Longitmeetrap Investo. Any Black P021 In Program Yes 1535 Longitmeetrap Investo. Any Black P021 In Program Yes 1535 Longitmeetrap Investo. Concel Marger P021 Congilere Yes 1535 Longitmeetrap Investo. Concel Marger P021 Congilere Yes 1536 Marks DA Waringfold Concel Marger P021 Congilere Yes 1535 Danyfinke DA Bampit. Concel Marger P021 Congilere Yes 1535 Danyfinke DA Bampit. Concel Marger P021 Congilere Yes 1535 Danyfinke DA Bampit. Concel Marger P021 Congilere Yes 1535 Danyfinke DA Bampit. Concel Marger P021 Congilere Yes 1545 Anshee DA Fallin Concel Marger P021 Congilere Yes 1545 Anshee DA Fallin Concel Marger P021 Congilere Yes 1545 Warmgohn Well WH Michael Holderer P021 Congilere Yes 1525 Warmgohn Well WH Marger Marger P021	1646 Ansire DA Benary Re. Connect Marger PO21 Complete Yes T 1535 Looginewrap Insido, Ang Black PO21 In Program Yes T T 1535 Looginewrap Insido, Ang Black PO21 In Program Yes T T 1535 Looginewrap Insido, Ang Black PO21 In Program Yes T T 1616 Make DA Marsing DA Jena, Concert Morgan PO21 Conglete Yes T	1646 Arabia DA Sensoy Ro. Correst Margan PC21 Complete: Yes T T 1835 Looginewatery Invalue. Ang Black PC21 In Programs Yes T T 1835 Looginewatery Invalue. Ang Black PC21 In Programs Yes T T 1835 Looginewatery Invalue. Correst Margan PC21 Complete: Yes T T 1836 Marke DA Arm. Correst Margan PC21 Complete: Yes T T 1836 Marke DA Vaningfald Correst Margan PC21 Complete: Yes T T 1835 Danyleke DA - Frangel. Correst Margan PC21 Complete: Yes T T 1835 Danyleke DA - Frangel. Correst Margan PC21 Complete: Yes T T 1835 Culman UA - Frangeles. Correst Margan PC21 Complete: Yes T T 1835 Culman UA - Frangeles. Correst Margan PC21 Complete: Yes T T 1836 Anthes DA Netliacek Correst Margan PC21 Complete: Yes T T 1836 Anthes DA Netliacek Correst Margan PC21 Complete: Yes T T

Results

As IPAC has been used to cost up all PC21 Capital Projects it has the additional advantage of allowing benchmarking to be carried out, as evidenced in the recent Batch 1 of Regulatory Scope Certainty projects. The individual elements of each project which were submitted within the Business Plan were directly compared to the most up to date project data, highlighting changes and increases in the scope, as well as the resultant change in costs. This tool was described by the NI Water Board Assurance Team as 'as good as they have seen in the industry.' Going forward, IPAC is to be used for pricing up all Capital Works Projects, delivering a Baseline Target Cost to which efficiency challenges would be applied and may be further developed to better meet the changing needs of NI Water.

