

Deltek

Marketplace Partner



**EHAB Platform:
Brochure**

**Using weather intelligence to make the energy, oil,
gas, and construction industries climate resilient**

Weather, an industry wide problem



45% of projects suffer delay due to weather.



on average these delays increase the length of a project by 21%.



This means 9.5% of the global output of construction is a cost associated with weather.

What are the biggest pain points?



**Difficulty assessing
risk at bid stage**

**Inability to optimize
weather sensitive
activities in the long term**



**Trouble reassessing weather
risk as the project shifts for
other reasons**

**Losses not covered by
contracts or insurance**

**Planning weather windows
for critical activities**

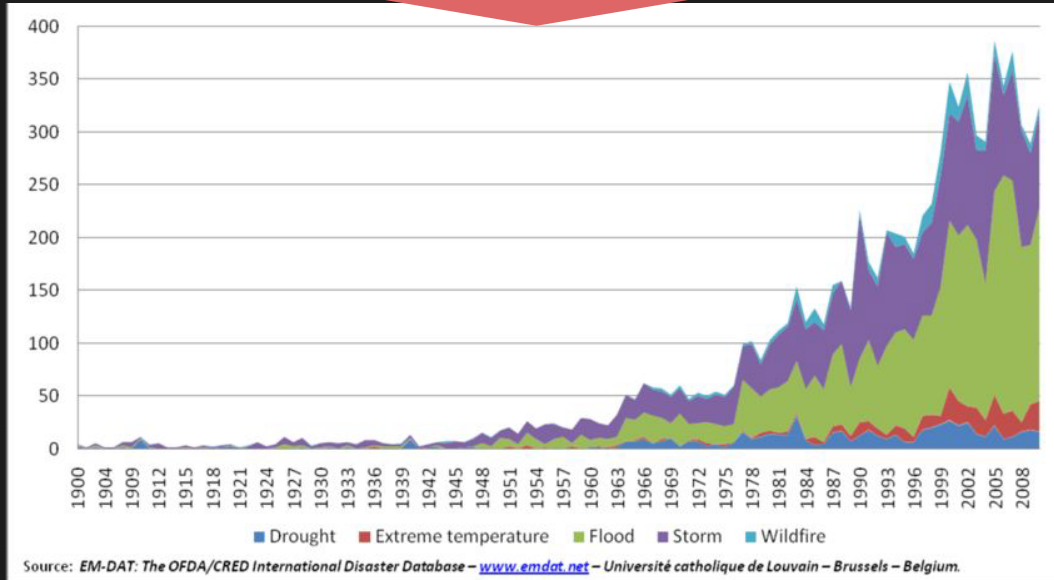
Construction has already faced significant changes

Our analysis compared a project as if conducted in 1990 vs 2020

	Change +/-
Expected duration of project (Down days)	+8.4%
Standard deviation of project's duration (Volatility)	+9%
Likelihood of project running 200 days late due to weather (Extreme delay)	1450%

These risks are only set to get worse in the future, and the industry isn't prepared.

Extreme weather is escalating due to the climate crisis.



According to the  Met Office

Six of the ten wettest years across the UK have occurred since 1998.

The number of days where rainfall totals exceed 95% and 99% of the 1961-1990 average have increased in the last decade.

As have rainfall events exceeding 50 mm.

It's paramount you get adequate support for making the best decisions to avoid mounting delays and cost overruns related to bad weather.

Climate resilience will be **as important as Net Zero** in the next 3 years.



Are you ready?



EHAB

The first weather risk management platform for energy, oil, gas, and construction

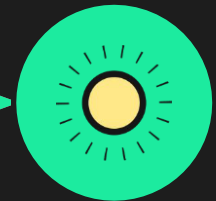
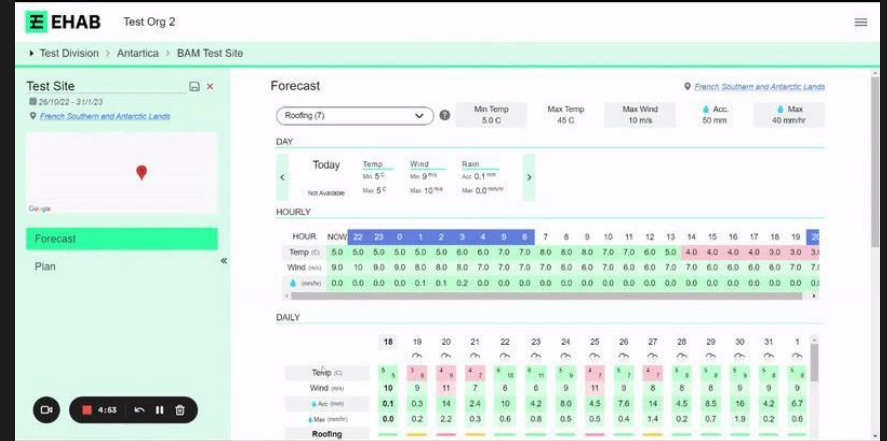
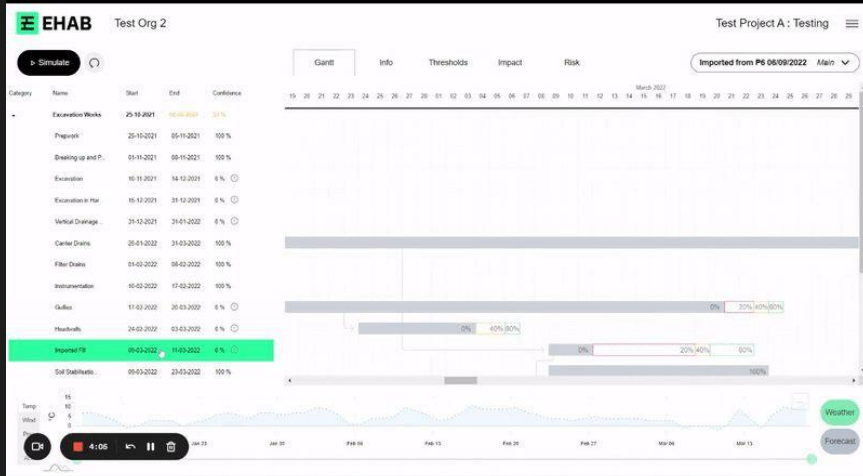


How our model works

1. Build micro-climate

2. Correlate with plan

3. Offer actionable insights



How our model works

1. Build micro-climate

- Get 40-70 years of historical data
- In a specific location 9x9km grid
- Run climate trend analysis so we know what is changing in your location

2. Correlate with plan

- Match your plan to our risk matrix, which contains info on how concrete is affected by temperature and cranes are impacted by wind speed
- Use activity codes, UDF fields or smart ai assisted matching

3. Offer actionable insights

- Run our own bespoke Monte Carlo simulation 1000+ times
- Get probability data for impact on every activity and the plan
- Push this data into several dashboard



7 use cases

1 Accurate TRA

Give every project more accurate pricing and risk assessments

2 Accurate QSRA

Give your largest projects state of the art weather analysis

3 Risk Drivers

Identify the key bottlenecks in your project

4 Mitigations

Understand the cost benefit of all weather mitigations, identify hidden savings

5 Short Term Planning

Plan weather windows, avoid cancelled shifts, save time

6 Variance Analysis

Re-price correctly throughout project and communicate changes in the baseline



7 Automated Weather Insurance

Protect your margins and manage cashflow

Accurate Time Risk Allowance is Essential for a Profitable Job

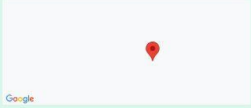
EHAB Test Org 2

Test Division > Antarctica > Trial project

Trial project  

25/10/21 - 14/3/23

French Southern and Antarctic La...



Forecast

Plan <<

TRA & QSRA

Mitigations

Variance

Exports

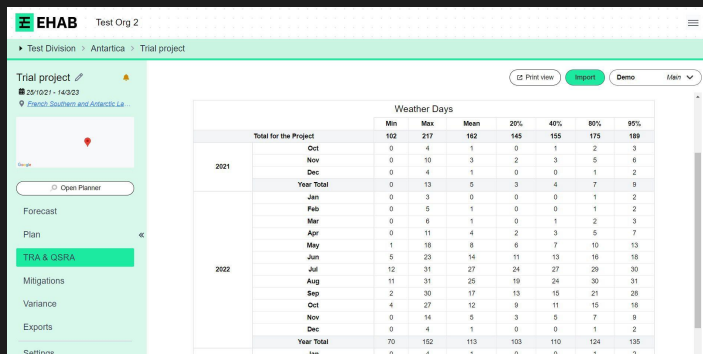
Settings

Weather Days

	Min	Max	Mean	20%	40%	80%	95%
Total for the Project	102	217	162	145	155	175	189
2021	Oct	0	4	1	0	1	2
	Nov	0	10	3	2	3	5
	Dec	0	4	1	0	0	1
	Year Total	0	13	5	3	4	7
2022	Jan	0	3	0	0	0	1
	Feb	0	5	1	0	0	1
	Mar	0	6	1	0	1	2
	Apr	0	11	4	2	3	5
	May	1	18	8	6	7	10
	Jun	5	23	14	11	13	16
	Jul	12	31	27	24	27	29
	Aug	11	31	25	19	24	30
	Sep	2	30	17	13	15	21
	Oct	4	27	12	9	11	15
	Nov	0	14	5	3	5	7
	Dec	0	4	1	0	0	1
Year Total	70	152	113	103	110	124	
Jan	0	4	1	0	0	1	

Take targeted action

Accurate Time Risk Allowance is Essential for a Profitable Job



Baseline your risk

Give every project more accurate pricing and risk assessments

Features

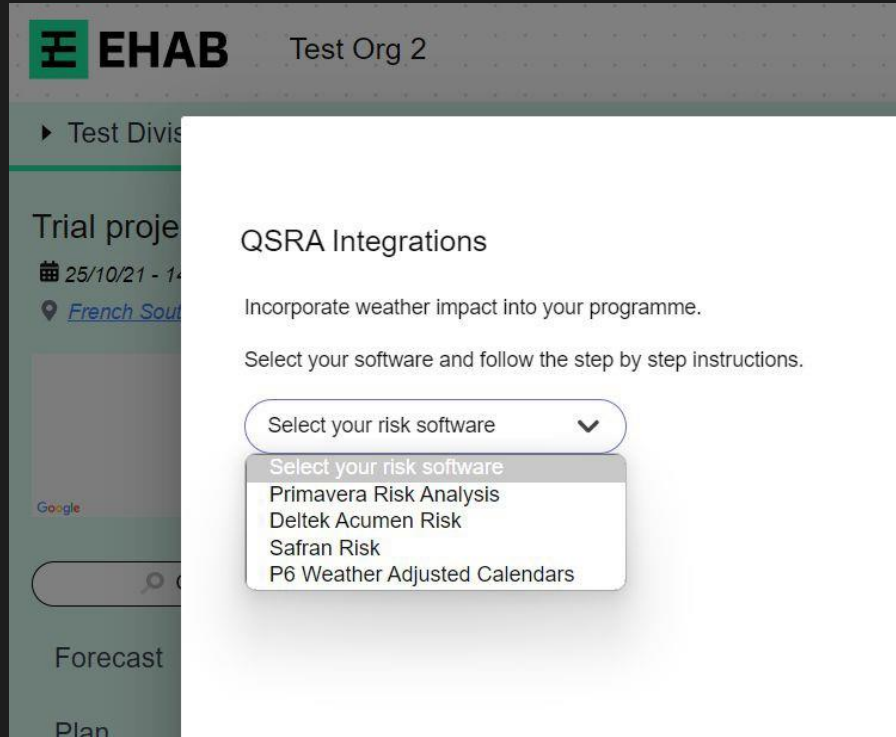
- Confidence in your plan metric
- Pie chart displaying main weather impacts
- Heat map highlighting where over the course of your project most risk sits

Benefits

- Get a quick, high-level analysis of the robustness of your plan
- Export a baseline report to include in your bid (for smaller projects)
- Know which section of the project to focus mitigations on

Take targeted action

Ensure the best data for your QSRA process



EHAB Test Org 2

Test Divis

Trial proje

25/10/21 - 14

[French Sou](#)

Google

Forecast

Plan

QSRA Integrations

Incorporate weather impact into your programme.

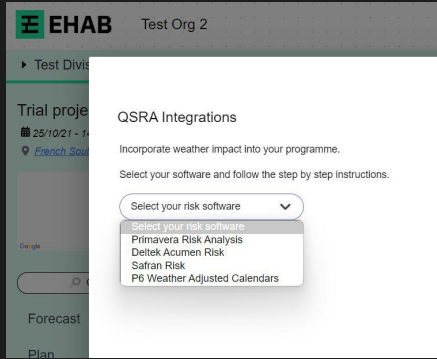
Select your software and follow the step by step instructions.

Select your risk software ▼

- Select your risk software
- Primavera Risk Analysis
- Deltek Acumen Risk
- Safran Risk
- P6 Weather Adjusted Calendars

Get the correct amount of risk in the pot

Ensure the best data for your QSRA process



Accurate QSRA

Give your largest projects state of the art weather analysis

Features

- Export high quality risk data into your QSRA
- Export to
 - Acumen Risk
 - Primavera Risk Analysis
 - P6 Weather Calendars
 - Nodes & Links (coming soon)
 - Safran (coming soon)

Benefits

- Put the correct amount of risk in the risk pot
- Have more money in the pot agreed with your client

Get the correct amount of risk in the pot

Identify key risk activities with the risk drivers features

EHAB Test Org 2

Test Division > Scotland Trial > Scottish Trial Project

Scottish Trial Project
25/10/21 - 14/3/23
Arran Rd., Perth PH1 3DZ, UK

Open Gantt View

Forecast
Plan
TRA & QSRA
Risk Drivers
Mitigations
Variance
Exports
Settings

Displaying **P-80**

Project end date: 22/8/23
Activities Impacted: 0
Individual Activity weather days: 0

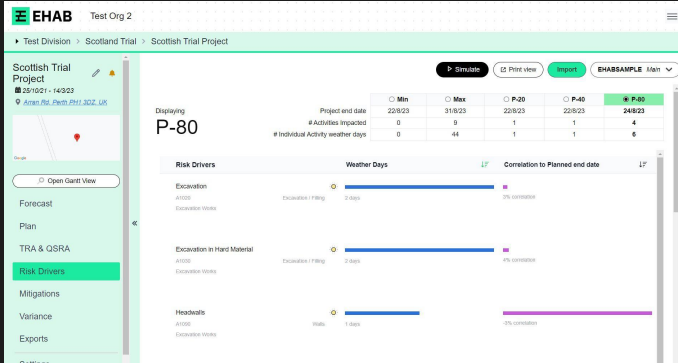
	Min	Max	P-20	P-40	P-80
Project end date	22/8/23	31/8/23	22/8/23	22/8/23	24/8/23
# Activities Impacted	0	9	1	1	4
# Individual Activity weather days	0	44	1	1	6

Risk Drivers

Risk Driver	Weather Days	Correlation to Planned end date
Excavation A1020 Excavation Works	Excavation / Filling 2 days	3% correlation
Excavation in Hard Material A1030 Excavation Works	Excavation / Filling 2 days	4% correlation
Headwalls A1090 Excavation Works	Walls 1 days	-3% correlation

Take rapid & focused action

Identify key risk activities with the risk drivers features



Risk Drivers

Identify the key bottlenecks in your project

Features

- Use our tornado chart to filter activities with the most weather days
- Use the tornado chart to filter activities with the greatest correlation to the end date

Benefits

- Spot key risks early on
- Leverage the data to create strategies on how to mitigate the risks

Take rapid & focused action

Assess mitigations

EHAB Test Org 2
☰

▶ Test Division > Test Project A > Demo Project

Demo Project ✎

📅 25/10/21 - 15/4/23

📍 [Unnamed Road, Roshin, Co. Donegal, Ireland](#)

Google

Forecast

Plan

Mitigations

Variance

🔍 Open Planner

Plan April 2023
Main ▾

Mitigations

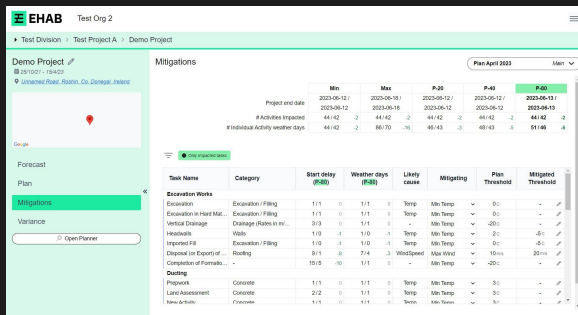
	Min	Max	P-20	P-40	P-80					
Project end date	2023-06-12 / 2023-06-12	2023-06-18 / 2023-06-18	2023-06-12 / 2023-06-12	2023-06-12 / 2023-06-12	2023-06-13 / 2023-06-13					
# Activities Impacted	44 / 42	-2	44 / 42	-2	44 / 42	-2	44 / 42	-2		
# Individual Activity weather days	44 / 42	-2	86 / 70	-16	46 / 43	-3	48 / 43	-5	51 / 46	-5

☰
● Only impacted tasks

Task Name	Category	Start delay (P-80)	Weather days (P-80)	Likely cause	Mitigating	Plan Threshold	Mitigated Threshold
Excavation Works							
Excavation	Excavation / Filling	1/1 0	1/1 0	Temp	Min Temp ▾	0 c	-
Excavation in Hard Mat...	Excavation / Filling	1/1 0	1/1 0	Temp	Min Temp ▾	0 c	-
Vertical Drainage	Drainage (Rates in m/...	3/3 0	1/1 0	-	Min Temp ▾	-20 c	-
Headwalls	Walls	1/0 -1	1/0 -1	Temp	Min Temp ▾	2 c	-5 c
Imported Fill	Excavation / Filling	1/0 -1	1/0 -1	Temp	Min Temp ▾	0 c	-5 c
Disposal (or Export) of ...	Roofing	9/1 -8	7/4 -3	WindSpeed	Max Wind ▾	10 m/s	20 m/s
Completion of Formatio...	-	15/5 -10	1/1 0	-	Min Temp ▾	-20 c	-
Ducting							
Prepwork	Concrete	1/1 0	1/1 0	Temp	Min Temp ▾	3 c	-
Land Assessment	Concrete	2/2 0	1/1 0	Temp	Min Temp ▾	3 c	-
New Activitv	Concrete	1/1 0	1/1 0	Temp	Min Temp ▾	3 c	-

Make quantifiable savings

Assess mitigations



Mitigations

Understand the cost benefit of all weather mitigations, identify hidden savings

Features

- View a list of all activities which are pushing your end data
- Simulate mitigations and see the impact on end date
- See the Min, Max, P-20, P-40 & P-80 results

Benefits


- Identify the best opportunities for mitigation
- Understand the time benefit on the end date for that mitigation
- Take the best mitigation options to increase float and limit impact on end date
- Use data to backup and justify mitigation options to your client

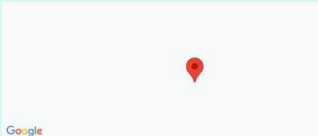
Make quantifiable savings

Plan weather windows

EHAB Test Org 2



▸ Test Division ▸ Antarctica ▸ Trial project


Trial project 
 📅 26/10/22 - 31/1/23
 📍 [French Southern and Antarctic Lands](#)





Forecast Draft ▾

DAY


Mon



 Temp
 Min 3 °C
 Max 5 °C


 Wind
 Min 10 m/s
 Max 15 m/s


 Rain
 Acc 7,5 mm
 Max 0,8 mm/hr

HOURLY

Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Temp (C)	5.0	5.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0
Wind (m/s)	15	15	14	14	15	14	13	12	12	13	13	13	13	14	13	12	12	12	12	12	13	12	11	10
Rain (mm/hr)	0.6	0.8	0.7	0.4	0.4	0.4	0.5	0.6	0.4	0.3	0.3	0.5	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	

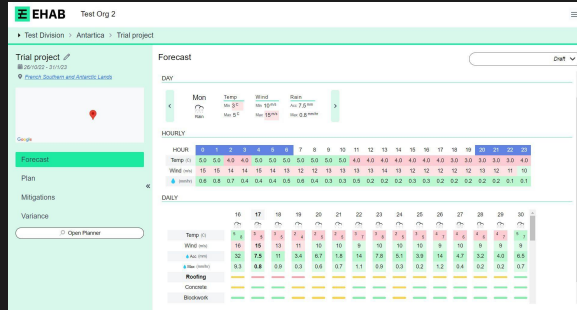
DAILY

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Temp (C)	5 8	3 5	3 5	2 4	2 5	2 5	3 7	3 8	2 5	3 5	4 7	4 6	4 6	4 7	5 7
Wind (m/s)	16	15	13	11	10	10	9	10	10	10	9	10	9	9	9
Acc (mm)	32	7.5	11	3.4	6.7	1.8	14	7.8	5.1	3.9	14	4.7	3.2	4.0	6.5
Max (mm/hr)	9.3	0.8	0.9	0.3	0.6	0.7	1.1	0.9	0.3	0.2	1.2	0.4	0.2	0.2	0.7
Roofing	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡
Concrete	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡
Blockwork	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡

Open Planner

Avoid downtime

Plan weather windows



Short term planning

Plan weather windows, avoid cancelled shifts, save time

Features

- Get hourly data, 15 days out, for your specific location
- Identify weather windows, highlighted in green, for when specific activity types can go ahead
- Receive a daily email to notify you of issues in time for your stand up meeting

Benefits

- Have all weather data in one place to save time looking at various sources
- See exactly what time of day activities can take place, helping proactively plan the coming days
- Keep the whole team in the loop with an automated email with key data
- Avoid cancellation fees

Avoid downtime

Manage change as the project shifts

EHAB Test Org 2

Test Division > Antarctica > Trial project

Trial project

25/10/21 - 14/3/23

French Southern and Antarctic La...

Open Planner

Forecast

Plan

TRA & QSRA

Mitigations

Variance

Exports

Settings

Variance

Print view Import Demo Main

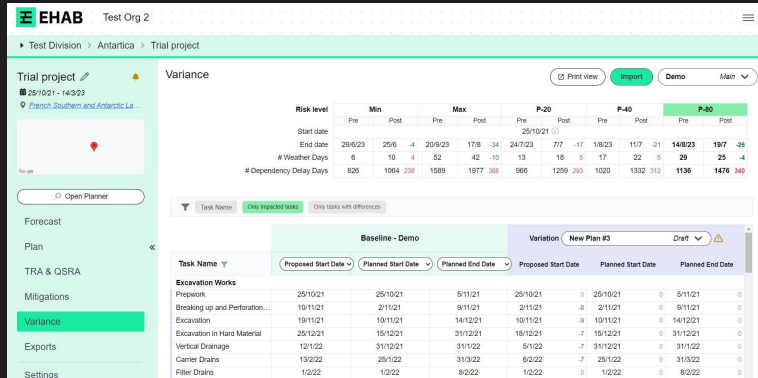
Risk level	Min			Max			P-20			P-40			P-80		
	Pre	Post		Pre	Post		Pre	Post		Pre	Post		Pre	Post	
Start date	25/10/21														
End date	29/6/23	25/6	-4	20/9/23	17/8	-34	24/7/23	7/7	-17	1/8/23	11/7	-21	14/8/23	19/7	-26
# Weather Days	6	10	4	52	42	-10	13	18	5	17	22	5	29	25	-4
# Dependency Delay Days	826	1064	238	1589	1977	388	966	1259	293	1020	1332	312	1136	1476	340

Task Name Only impacted tasks Only tasks with differences

Task Name	Baseline - Demo			Variation <input type="text"/> New Plan #3 <input type="text"/> Draft		
	Proposed Start Date	Planned Start Date	Planned End Date	Proposed Start Date	Planned Start Date	Planned End Date
Excavation Works						
Prepwork	25/10/21	25/10/21	5/11/21	25/10/21	0	25/10/21 0 5/11/21 0
Breaking up and Perforation...	10/11/21	2/11/21	9/11/21	2/11/21	-8	2/11/21 0 9/11/21 0
Excavation	19/11/21	10/11/21	14/12/21	10/11/21	-9	10/11/21 0 14/12/21 0
Excavation in Hard Material	25/12/21	15/12/21	31/12/21	18/12/21	-7	15/12/21 0 31/12/21 0
Vertical Drainage	12/1/22	31/12/21	31/1/22	5/1/22	-7	31/12/21 0 31/1/22 0
Carrier Drains	13/2/22	25/1/22	31/3/22	6/2/22	-7	25/1/22 0 31/3/22 0
Filter Drains	1/2/22	1/2/22	8/2/22	1/2/22	0	1/2/22 0 8/2/22 0

Gain assurance throughout the project

Manage change as the project shifts



Features

- Compare 2 versions of your plan
- Easily compare change in weather days and in end dates
- See the Min, Max, P-20, P-40 & P-80 results

Variance analysis

Re-price correctly throughout project and communicate changes in the baseline

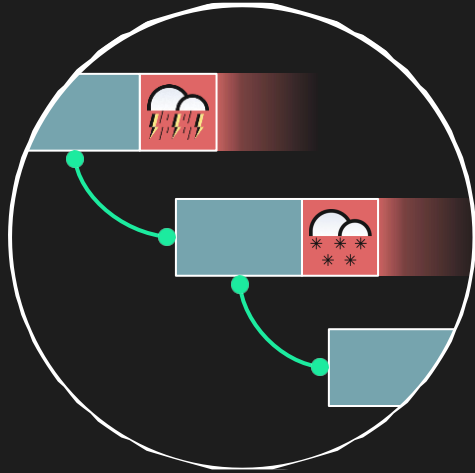
Benefits

- Understand changes to baseline, allowing forward planning of mitigations
- Re-price contract changes accurately to ensure you maintain your margin
- Use data to communicate more effectively with project team
- Use data to identify the best methodologies

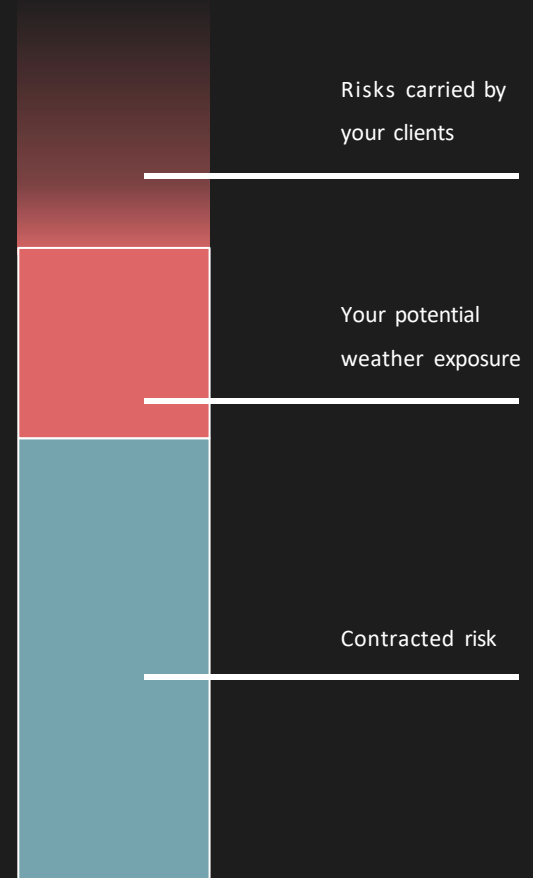
Gain assurance throughout the project

7 Automated weather insurance

Project risks aggregated

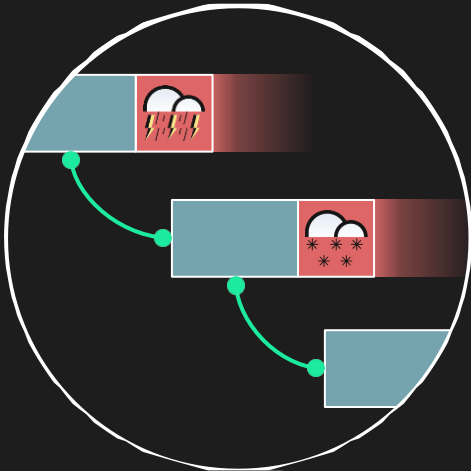


Project risk pot



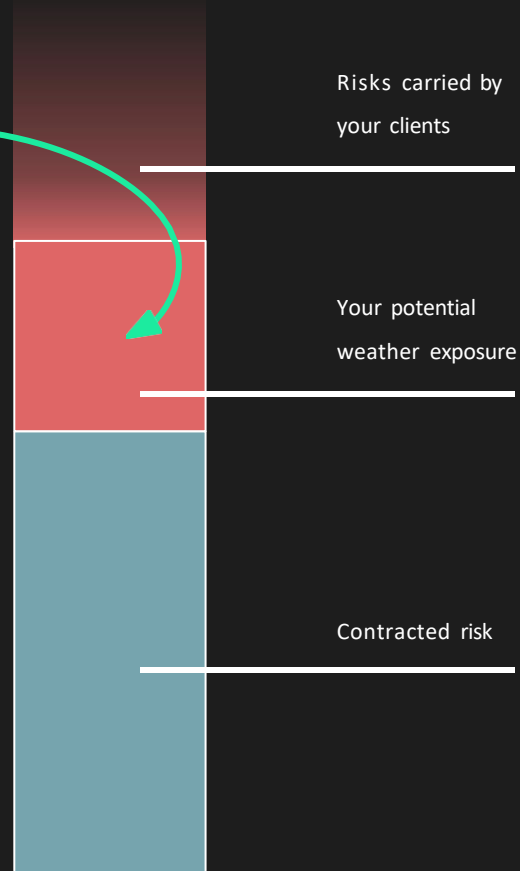
7 Automated weather insurance

Project risks aggregated



We pay out automatically when you reach here.

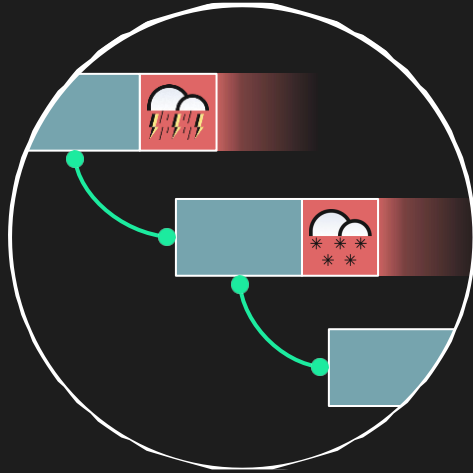
Project risk pot



7 Automated weather insurance

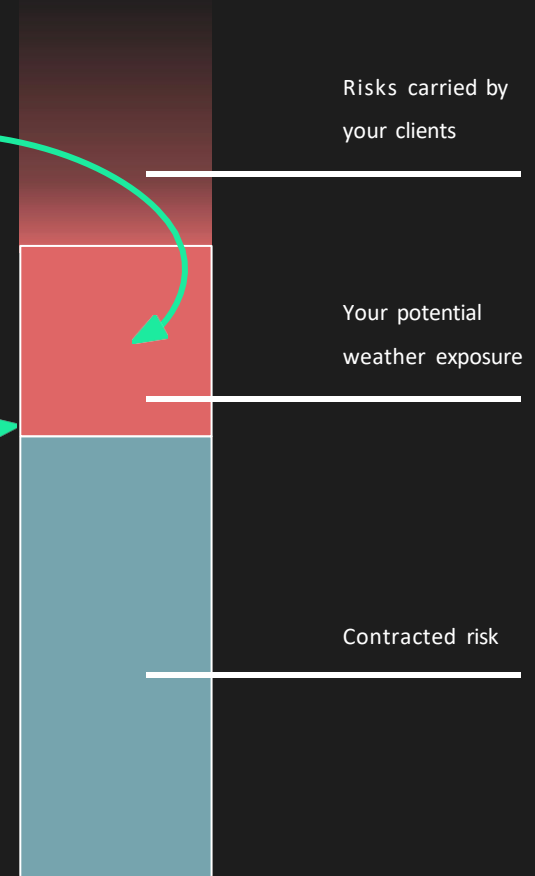
Project risk pot

Project risks aggregated



We pay out automatically when you reach here.

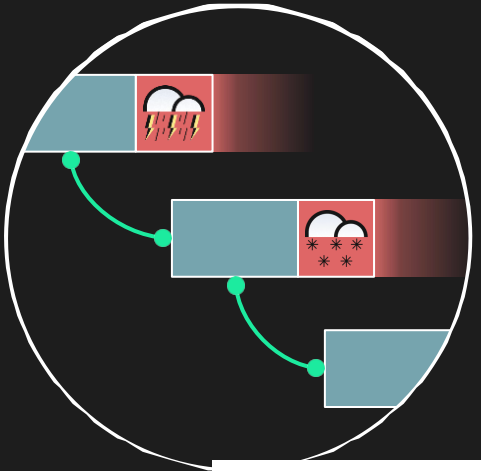
An agreed sum per additional day above this line



7 Automated weather insurance

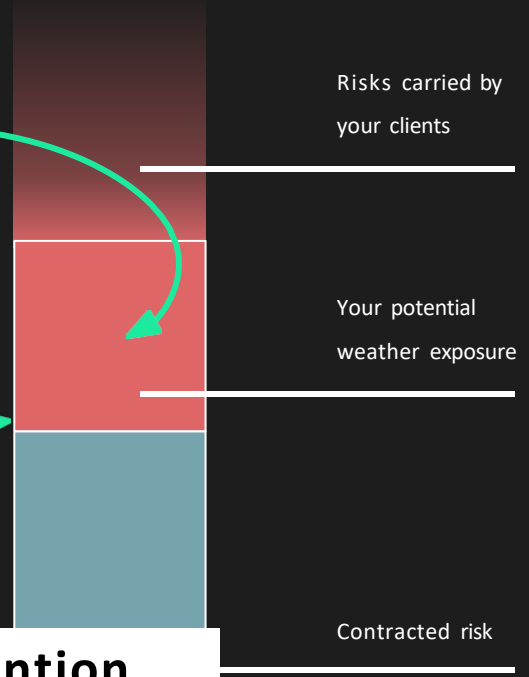
Project risk pot

Project risks aggregated



We pay out automatically when you reach here.

An agreed sum per additional day above this line



This allows you to increase your retention, save on traditional side & get enhanced cover

We can make you a **climate resilient contractor**

Optimize
your project.

Proactively manage
weather risks.

Consistent approach
to climate risk.

The Result:

- Save thousands in avoided down days and improved utilisation
- Win more work
- Make better risk decisions and reduce project by as much as 16%
- Save money on your insurance renewal
- Avoid loss from extreme weather

Who are EHAB?

EHAB is a UK based tech company founded on cutting edge research funded by the UK government. Since 2020 they have worked with BAM Nuttall, Ferrovial and other leading contractors on some of the largest infrastructure projects in Europe. These range from HS2, to large road building schemes for National Highways, to complex energy projects with National Grid.

The EHAB mission is to help the construction industry adapt to the climate crisis and make the industry resilient to the incredibly difficult conditions that are already, and will be, thrown its way.



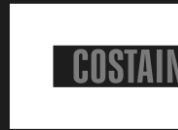
“Agile and fresh partners such as EHAB can objectively examine the way we do things in the industry and work on how to overcome the embedded behaviours and practices that are stifling productivity growth.”

Colin Evison, Head of Innovation, BAM Nuttall

Enhancing Smart Motorways Alliance

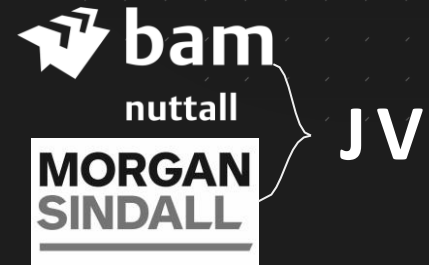


Integrating with QSRA
for better long term
decision making



Balfour Beatty

**Improving weather
allocation in
contract risk pot**



**Being used on 96 km of
new road schemes
across the UK**
(1,176 km by project end)

Augmenting Dawlish Warren Sea Defences



**Within 3 months during
the construction phase**

**£18,500 saved in avoided
cancellation fees & down time**

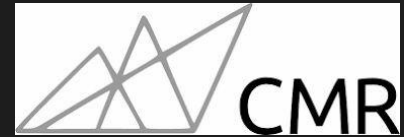
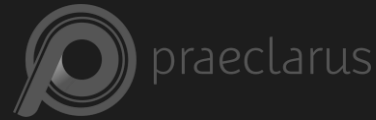


Who we work with

Customers



Consultant Partners



Insurance Partners





Precision Weather
& Risk Assessment
Forecasts



Deltek

Marketplace Partner

**Want to work with EHAB to solve
weather risk on your next project?**

[Book a 30 minute demo](#)